West Virginia University is a land-grant research institution founded in 1867. WVU is a student-centered learning community meeting the changing needs of West Virginia and the nation through teaching, research, service, and technology.

The West Virginia University Health Sciences Catalog 2010-2012 is a general source of information about course offerings, academic programs and requirements, expenses, rules, and policies. In order to reach the goals and fulfill the mission of the University, the courses, requirements, and regulations contained herein are subject to continuing review and change by the West Virginia Higher Education Policy Commission, the WVU Board of Governors, University administrators, and the faculties of the schools and colleges. The University, therefore, reserves the right to change, delete, supplement, or otherwise amend the information, course offerings, requirements, rules, and policies contained herein without prior notice. The indicia depicted are registered trademarks of West Virginia University. Copyright © West Virginia University, 2010.

http://www.hsc.wvu.edu
West Virginia University Calendar
2010–2011*

**Fall Semester 2010**

August 18, 19, 20 ............................................................................................................. New Student Orientation
August 20 ......................................................................................................................... General Registration
August 23 .............................................................. On-Campus First Day of Classes
August 23 ......................................................................................................................... Late Registration Fee in Effect for All Students
August 27 .............................................................. Last Day to Register, Add New Courses, Make Section Changes, Change Pass/Fail and Audit

September 6 .................................................................................................................. Labor Day Recess
September 9 .................................................................................................................. Eid-al-Adha (Day of Special Concern)
September 10 .............................................................. Eid-al-Fitr End of Ramadan (Day of Special Concern)
September 18 .................................................................................................................. Yom Kippur (Day of Special Concern)
October 5 ......................................................................................................................... Mid-Semester
October 14 at noon ....................................................................................................... Mid-Semester Reports Due
October 29 ..................................................................................................................... Last Day to Drop a Class
November 2 .................................................................................................................. Election Day
November 11 .................................................................................................................. Veterans’ Day (Day of Special Concern)
November 12 .................................................................................................................. Birth of Baha’u’llah (Day of Special Concern)
November 16 .................................................................................................................. Eid-al-Adha (Day of Special Concern)
November 20 thru Sunday, November 28 .............................................................. Thanksgiving Recess
December 9 .................................................................................................................... Last Day to Withdraw from University
December 10 .................................................................................................................. Last Day of Classes
December 12 .................................................................................................................. December Convocation
December 13 thru Saturday, December 18 .............................................................. Final Examination Week
December 19 .................................................................................................................. Winter Break Begins
December 28 .................................................................................................................. Degree Conferring Date

**Spring Semester 2011**

January 5, 6, 7 ............................................................................................................... New Student Orientation
January 7 ............................................................................................................................ General Registration
January 10 ......................................................................................................................... On-Campus First Day of Classes
January 12 .......................................................................................................................... Late Registration Fee in Effect for All Students
January 14 .......................................................................................................................... Last Day to Register, Add New Courses, Make Section Changes, Change Pass/Fail and Audit

January 17 ..................................................................................................................... Martin Luther King’s Birthday Recess
February 3 .......................................................................................................................... Chinese New Year (Day of Special Concern)
February 25 ..................................................................................................................... Mid-Semester
March 3 at noon ............................................................................................................. Mid-Semester Reports Due
March 18 ......................................................................................................................... Last Day to Drop a Class
March 19 thru Sunday, March 27 ....................................................................................... Spring Recess
March 21 .......................................................................................................................... Naw-Ruz (Day of Special Concern)
April 19 ............................................................................................................................ Passover (Day of Special Concern)
April 21 ............................................................................................................................ Feast of Rividan (Day of Special Concern)
April 22 ............................................................................................................................ Friday before Easter Recess
April 28 ............................................................................................................................ Last Day to Withdraw from University
April 29 ............................................................................................................................ Last Day of Classes
May 2 thru Saturday, May 7 ............................................................................................. Final Examination Week
May 9 ................................................................................................................................. Grade Reports for all Graduates Due in Deans’ Office
May 14 .............................................................................................................................. Alumni Day
May 15 ............................................................................................................................... Commencement

Note: All Baha’i, Islamic, and Jewish observances begin at sundown the evening before the days stated above.

**Summer Semester 2011**

Monday, May 16 .................................................................................................................. Registration
Monday, May 16 .................................................................................................................. On-Campus First Day of Classes
Monday, May 30 .................................................................................................................. Memorial Day Recess
Friday, June 24 ................................................................................................................. Final Exam for First Six-Week Session
Monday, July 4 .................................................................................................................. Independence Day Recess
Friday, August 5 ................................................................................................................. Final Exam for Second Six-Week Session and 12-Week Session
Friday, August 12 ............................................................................................................ Degree Conferring Date (No Ceremonies)

*See http://calendar.wvu.edu/ for more calendars.
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**West Virginia Higher Education Governance***

Joe Manchin III, Governor

**West Virginia Higher Education Policy Commission**

Dr. Brian Noland, Chancellor
David K. Hendrickson, Esq., Charleston, Chairman
Dr. Bruce Berry, Morgantown, Vice Chairman
Kathy G. Eddy, Parkersburg, Secretary
John Estep, Morgantown
Dr. John Leon, Fairmont
David Richard Tyson, Esq., Huntington
Bob Brown, Ex-Officio, Charleston, Chair, WV Council for Community and Technical College Education
Kay H. Goodwin, Ex-Officio, Secretary of Education the Arts
Dr. Steven L. Paine, Ex-Officio, State Superintendent of Schools

**West Virginia University Board of Governors**

Ellen S. Cappellanti, Charleston
Dr. Thomas S. Clark, Bruceton Mills
James W. Dailey II, Martinsburg
Thomas V. Flaherty, Charleston
Raymond J. Lane, Menlo Park, CA
Diane Lewis, Morgantown
Carolyn Long, Little Birch, Chair
John T. (Ted) Mattern, Fairmont, Secretary
William O. Nutting, Wheeling
Andrew A. (Drew) Payne, III, Charleston, Vice Chairman
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Dr. Charles M. Vest, Washington DC
Jo Y. Morrow, Morgantown, Classified Staff Representative
Dr. Nigel N. Clark, Faculty Representative
Dr. Robert K. Griffith, Faculty Representative
Chris Lewellen, Student Representative

*Current as of June 2010.

West Virginia University is governed by the West Virginia University Board of Governors and the West Virginia Higher Education Policy Commission. James Clements is the 23rd President of West Virginia University.

West Virginia University is a member of the Higher Learning Commission. The University’s educational programs are accredited by the Higher Learning Commission (NCA) of Colleges and Schools and by the appropriate accreditation agencies for professional programs.

West Virginia University is an Equal Opportunity/Affirmative Action Institution. The University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color, or national origin in the administration of any of its educational programs or activities, or with respect to admission or employment. Further, faculty, staff, students, and applicants are protected from retaliation for filing complaints or assisting in an investigation under the University’s Equal Opportunity/Affirmative Action Plan. Inquiries regarding the University’s non-discrimination policy may be sent to the director, Affirmative Action Office/Equal Employment Opportunity Programs, West Virginia University.—Office of the President.
West Virginia University Administration

Senior Administrators

President, James P. Clements
Provost and Vice President for Academic Affairs and Research, Michele Wheatly
Chief of Staff, Jay Cole
Vice President, Administration and Finance, Narvel Weese
Associate Vice President for Planning and Treasury Operations, Elizabeth Reynolds
Associate Vice President, Facilities and Services, Joe Fisher
Assistant Vice President, Facilities Management, Randy Hudak
Vice President, Human Resources, Margaret Phillips
Vice President, University Relations, Christine M. Martin
Chancellor for Health Sciences, Christopher Colenda
Vice President, Student Affairs, Kenneth D. Gray
Vice President for Research and Economic Development, Curt Peterson
Associate VP for Research and Economic Development, Mridul Gautam
Associate VP, Research Administration and Director of Sponsored Programs, Alan Martin
Vice President, Legal Affairs, William H. Hutchens, III
Campus Provost, WVU Potomac State College, Kerry Odell
Campus Provost, WVU Institute of Technology Scott Hurst
Executive Officer for Social Justice, Jennifer A. McIntosh
Executive Officer for Policy Development, Jennifer Fisher
Senior Associate Provost, Russell K. Dean
Associate Provost for Undergraduate Academic Affairs, Elizabeth A. Dooley
Associate Provost for Graduate Academic Affairs, Jonathan Cumming
Associate Provost for Academic Personnel, C. B. Wilson
Associate Provost for Extension and Public Service, David Miller
Associate Provost for Information Technology, Rehan Khan
Associate Provost for International Academic Affairs, Michael Lastinger
Special Assistant to the Provost, Jessika Thomas
Associate Vice President for Finance, Dan Durbin
Vice President for Planning and Operations, HSC, Fred R. Butcher, Ph.D.
Chief Financial Officer for Health Sciences, Wendy King
Associate Vice President for Health Sciences—Charleston Division, L. Clark Hansbarger, M.D.
Associate Vice President for Health Sciences-Eastern Division, Mitch Jacques, M.D., Ph.D.
Associate Vice President and Dean of Students, David Stewart
Assistant Vice President, Student Affairs, Barbara Copenhaver-Bailey
University Registrar, Steve Robinson
Associate President of Student Affairs and Enrollment Management Services, Brenda Thompson
Assistant Vice President, Student Programs and Development, Barbara Copenhaver Bailey
Assistant Vice President for Student Health and Wellness, Cathy Yura
Assistant Vice President of Student Affairs, Michael Ellington
Associate VP for Integrated Marketing Operations, Tricia Petty
Associate VP for University Communications, Becky Lofstead
Associate VP for Branding and Creative Direction, Vincent Vernet
President and CEO, West Virginia University Alumni Association, Steve Douglas
President, West Virginia University Hospitals, Inc, Bruce McClymonds
Chair, West Virginia University Faculty Senate, Nigel Clark
Chair, West Virginia University Staff Council, Jo Morrow
President, West Virginia University Student Body, Chris Lewellen
Special Assistant to the Governing Board, Valerie Lopez
Special Assistant to the President, Sara A. Master
WVU Health Sciences Administration

Chancellor for Health Sciences, Christopher C. Calanda, M.D., M.P.H.
Vice President, Planning and Operations, Fred R. Butcher, Ph.D.
Chief Financial Officer, Wendy L. King
Associate Vice President for Health Sciences, Charleston, L. Clark Hansbarger, M.D.
Associate Vice President for Health Sciences, Eastern Div., C.H. Mitch Jacques, M.D., Ph.D.
Interim Dean, School of Dentistry, Louise T. Veselicky, D.D.S., M.D.S., M.Ed.
Dean, School of Medicine, Arthur J. Ross III, M.D.
Dean, School of Nursing, Georgia L. Narsavage, Ph.D., C.R.N.P., F.A.A.N
Dean, School of Pharmacy, Patricia A. Chase, Ph.D.
Vice President for Marketing and Planning, Gary Murdock
Vice President for Alumni Affairs, Lynda Nine
Vice President for Health Sciences Center Development, Julia Phalunas, Ed.D.
President, West Virginia University Hospitals, Bruce McClymonds, B.A.
President and CEO, Charleston Area Medical Center, David Ramsey
President, West Virginia United Health System, J. Thomas Jones
Assistant Vice President, Ann Chester, Ph.D.
Assistant Vice President, Faculty Development, Rashida Khakoo, M.D.
Executive Director of Communications, John T. Coughin
Director, Public Affairs, Amy Johns
Special Assistant to the Vice President, Norma L. Tennant
Director, Facilities Management, Leonard H. Lewis
Director, Health Sciences Library, Susan Arnold
Assistant Vice President for Information Technology, Laura Roth
Special Assistant for Fire and Life Safety, Jeff Kerns

Deans
College of Business and Economics, Jose V. Sartarelli
College of Creative Arts, Bernard Schultz
College of Engineering and Mineral Resources, Eugene V. Cilento
College of Human Resources and Education, Dee Hopkins
College of Law, Joyce McConnell
College of Physical Activity and Sport Sciences, Dana D. Brooks
Davis College of Agriculture, Natural Resources, and Design, Cameron R. Hackney
Dean of Students, David Stewart
Eberly College of Arts and Sciences, Robert H. Jones
Extended Learning, Sue Day-Perroots
Honors College, Keith Garbutt
Perley Isaac Reed School of Journalism, Maryanne Reed
School of Dentistry, Louise Veselicky (Interim)
School of Medicine, Arthur J. Ross III, M.D.
School of Nursing, Georgia Narsavage
School of Pharmacy, Patricia A. Chase
University Libraries, Frances O'Brien
Directors
AAO/EEO Program, ADA Compliance, Jennifer McIntosh
Accounting and Financial Systems, Anjali Halabe
Administrative Technology Solutions, Executive Director, Kate Hazen
Admissions, Marilyn Potts (Interim)
Alumni Association, Stephen L. Douglas
Athletics, Oliver Luck
Blanchette Rockefeller Institute of Neuroscience, D. Max Francis
Bureau of Business and Economic Research, Tom S. Witt
Career Services Center, David L. Durham
Center for Black Culture and Research, Marjorie Fuller
Center for Chinese Business, William B. Riley Jr.
Center for Women’s Studies, Ann Oberhauser
Center for Writing Excellence, Laura Brady
Center on Aging, Alan M. Ducatman (Interim)
Congressional Relations, Mary Bowman
Creative Design, Angela M. Caudill
Cultural Resource Management Program, Chad Proudfoot
Dining Services, David Friend
Economic Development, Russ Lorince
Environmental Health and Safety Office, Kathy Powell (Interim)
Financial Services, Lisa Lively
Financial Aid, Kaye Widney
Institute for Public Affairs, Kevin Leyden
Institute of Occupational Environmental Health, Christopher Martin
Institutional Research, Roberta Dean
Internal Auditing, William R. Quigley
Mary Babb Randolph Cancer Center, Scot C. Remick
Military Science, Air Force ROTC, Col. Edwin Parks
National Research Center for Coal and Energy, Richard Bajura
News and Information Services, John Bolt
Parents Club, Sabrina Cave
Physical Plant HSC, Leonard Lewis
Printing Services, Geraldine M. Ireland
Procurement Services, Philip Charneskie
Public Safety/Police Department, Robert E. Roberts
Regional Research Institute, Randall W. Jackson
Research Compliance, Daniel Vasgird
Research Communication, Gerrill Griffith
Sponsored Programs, Alan B. Martin
Student Health Services, Jan Palmer
Student Recreation Center, David H. Taylor
Technology Transfer, Bruce Sparks
Telecommunications, Timothy P. Williams
Television Productions, John E. Duwall
Undergraduate Academic Services Center, Anita Mayer
University Affiliated Center for Developmental Disabilities, Ashok Dey
Visitors Center, Danica Ann Wilburn
WVU Press, Carrie Mullen
Frequently Contacted Offices

Academic Programs
Provost and Vice President for Academic Affairs and Research
West Virginia University
P.O. Box 6203
Morgantown, WV 26506-6203
Phone: (304) 293-5701 Fax: (304) 293-7554
http://provost.wvu.edu

Office of Admissions
West Virginia University
P.O. Box 6009
Morgantown, WV 26506-6009
Phone: (304) 293-2121 or 1-800-344-WVU1
Fax: (304) 293-3080
http://adm.wvu.edu

Office of the University Registrar
West Virginia University
P.O. Box 6009
Morgantown, WV 26506-6009
Phone: (304) 293-2121
Fax: (304) 293-8991
http://registrar.wvu.edu

Graduate Programs
Office of Graduate Education and Life
West Virginia University
P.O. Box 6897
Morgantown, WV 26506-6897
Phone: (304) 293-7173 Fax: (304) 293-8657
http://www.wvu.edu/~graduate

Housing and University Apartments
West Virginia University
P.O. Box 6430
Morgantown, WV 26506-6430
Phone: (304) 293-4491 Fax: (304) 293-4825
http://housing.wvu.edu/

Scholarships, Work-Study, and Veterans Educational Assistance
Student Financial Aid Office
West Virginia University
P.O. Box 6004
Morgantown, WV 26506-6004
Financial Aid Phone: (304) 293-5242 Fax: (304) 293-4890
Scholarships Phone: (304) 293-4126 Fax: (304) 293-4544
http://finaid.wvu.edu

Student Life
Dean, Student Life
West Virginia University
P.O. Box 6411
Morgantown, WV 26506-6411
Phone: (304) 293-5611 Fax: (304) 293-7028
http://www.studentlife.wvu.edu
General Information

Health Sciences at West Virginia University
The West Virginia University Schools of Dentistry, Medicine, Nursing, and Pharmacy at the Robert C. Byrd Health Sciences Center offer a comprehensive range of undergraduate, graduate, and professional degree programs in health care and biosciences.

The center’s 29 degree programs provide West Virginia with accomplished professionals trained to meet the state’s diverse health care needs. More than 10,000 WVU Health Sciences Center alumni comprise the majority of the state’s physicians, dentists, and pharmacists, and many of its nurses, medical and dental technologists, and physical therapists.

A unique combination of state and federal support, income from patient care, charitable contributions from individuals and foundations, and investments by private corporations has enabled West Virginia University to build a superb environment for health education, research, and patient care.

Health Sciences Center research encompasses interdisciplinary and mission-based centers and institutes. These research hubs are led by world-renowned researchers who also serve as faculty members and mentors.

The Health Sciences Center has placed special emphasis on areas of multidisciplinary research. The West Virginia University Health Sciences includes campuses in Morgantown, Charleston, and the Eastern Panhandle. These locations offer students the opportunity to learn their profession in a setting that realistically reflects the conditions they will encounter after graduation. A recent $150 million expansion effort has changed the face of the Morgantown Health Sciences Campus and created some of the country’s most up-to-date facilities for education and research.

The Mission of West Virginia University
Founded in 1867, West Virginia University is the land-grant, doctoral degree-granting research university in the state of West Virginia. As such, the institution occupies a unique position within the state.

West Virginia University’s primary mission is to provide high-quality programs of instruction at the undergraduate, graduate, and professional levels; to stimulate and foster both basic and applied research and scholarship; to engage in and encourage other creative and artistic work; and to bring the resources of the University to all segments of society through continuing education, extension, and public service activities.

Opportunities to conduct pioneering research and scholarship help attract high quality faculty and students. Students and faculty work together to create exciting and productive paths for investigation and development. WVU nurtures these symbiotic interactions to build intellectual, social, and economic development for all of West Virginia.

WVU’s special responsibility is to seek out, challenge, educate, and help create opportunities for those West Virginia citizens who can benefit from its programs, especially those who have demonstrated high achievement or who possess excellent potential.

West Virginia University recognizes that diversity enriches the institution and the society it serves. The University is committed to social justice and to practicing the principles of equality of opportunity and affirmative action.

Government and Organization of WVU
Effective July 1, 2001, the West Virginia Board of Governors was vested by law with the authority for the control and management of the University. The board includes 13 lay members, two faculty members, one staff member, and one student member. The University president, appointed by the Board of Governors, is the chief executive officer of the University.

The West Virginia Higher Education Policy Commission is responsible for policy development and other statewide issues. The Commission consists of seven members appointed by the governor, the secretary of education and the arts, and the state superintendent of schools.

The Faculty Senate is the vehicle for faculty participation in the governance of the University. It is a legislative body with original jurisdiction over all matters of academic interest and educational policy that concern the entire University or affect more than one college or school. The senate’s decisions are subject to review and approval by the president and the Board of Governors. Senators are elected by members of the University faculty to represent their colleges and other constituencies. The senate is presided over by an elected chair.
The University Graduate Council is the representative body governing graduate education. The Council consists of elected faculty representatives from the schools and colleges offering graduate programs. This body formulates, reviews, and recommends University-wide graduate education policies and includes oversight of graduate programs both on and off campus.

The president meets regularly with the University’s administrative cabinet and monthly with the Faculty Senate Executive Committee, the Staff Council, and Student Administration. The University Faculty Assembly includes the president as presiding officer, professors, associate professors, assistant professors, instructors holding appointments on a full-time basis, and other persons engaged in full-time professional activities. The assembly meets once a year.

West Virginia University has a tradition of strong student administration, which represents student opinion to the administration and faculty. Student administration has three main units: the executive branch, the board of governors, and the judicial board. Students also serve on University-wide committees and on the Mountainlair Advisory Council.

The Staff Council is an advisory council to the president of the University and a means for all classified employees to express their opinions about job conditions, fringe benefits, employee relations, or other areas that affect their jobs.

Local 814 of the Laborers’ International Union of North America, AFL-CIO, represents employees throughout the University and its affiliates. These employees are in craft/maintenance, service, clerical, and technical job categories, with a wide variety of job classifications. Laborer’s Local 814 is the only recognized union at the University by agreement through the Memorandum of Accord.

Support Services

Clinical Education Facilities

The West Virginia University Health Sciences Center includes a diverse group of health care facilities, providing a training ground for patient care and research for students in the health professions. West Virginia University Hospitals, the Physician Office Center, the Mary Babb Randolph Cancer Center, Health South Rehabilitation Hospital, the Eye Institute, Health Works Rehab and Fitness, and the National Institute of Occupational Safety and Health (NIOSH) are modern facilities that advance medical research and accommodate the demands of contemporary medical, dental, nursing, and pharmacy care.

WVU Hospitals entered a new era in 1988 with the opening of a 376-bed tertiary teaching facility, Ruby Memorial, the primary teaching hospital for the Health Sciences Center. It is equipped and staffed to provide the most comprehensive and advanced care available in West Virginia, thus making it a superb clinical education site for students. Ruby also houses the Jon Michael Moore Trauma Center and WVU Children’s Hospital with their specialized care units.

The Physician Office Center, the Health Sciences Center’s outpatient facility for education and patient care, accommodates the largest multi-specialty group practice in West Virginia, with 60 primary and specialty care areas. Dental facilities, the eye center, and the outpatient pharmacy are integral parts of the Physician Office Center.

Chestnut Ridge Hospital, a 70-bed psychiatric hospital, is also part of the WVU Hospitals. It is staffed clinically by faculty from the School of Medicine and is the focal point of education in the behavioral and psychiatric sciences.

Health South Regional Rehabilitation Hospital provides unique educational opportunities for students in neurological disease, trauma rehabilitation, and physical and occupational therapy. Many WVU students experience part of their clinical training at the Charleston Division of the Health Sciences Center, which is affiliated with Charleston Area Medical Center. In addition, WVU students train at off-campus sites where they learn the demands of rural health care firsthand.

The School of Dentistry dental student clinic accepts patients who have particular problems of teaching value. Faculty members closely supervise those students assigned to clinic patients. The students get invaluable experience and several thousand patients receive a much-needed service.
Health Sciences Library

The WVU Health Sciences Library serves the Robert C. Byrd Health Sciences Center institutes, specialized care facilities, and programs, including the Schools of Dentistry, Medicine, Nursing, and Pharmacy; the Allied Health and graduate biomedical programs; WVU faculty, staff, and students; the West Virginia University Hospitals, and University Health Associates. The Health Sciences Library also supports the center’s activities in the Eastern and Charleston Divisions and at the Oman Medical College.

As the West Virginia state resource library in the National Network of Libraries of Medicine, the Health Sciences Library also supports the biomedical information needs of health professionals throughout the state, offering advanced information retrieval services and access to a collection of over 200,000 volumes, extensive holdings of multimedia materials, approximately 350 current print journal subscriptions, and health-related government documents. The library offers electronic access to biomedical literature through the Internet and locally mounted databases. MEDLINE (PubMed) and other National Library of Medicine databases, Web of Science, Clinical Pharmacology, CINAHL (Nursing and Allied Health), International Pharmaceutical Abstracts (IPA), MD Consult, HAPI (Health and Psychosocial Instruments), Health Source: Nursing Academic Edition, Health Source: Consumer Edition, the Cochrane Library, RefWorks, Up-To-Date, and numerous other electronic resources are available. The Health Sciences Library now provides access to over 5,100 electronic journals related to health and biological sciences. University-wide, the e-journal collection numbers over 35,000 titles.

The library is open an average of 96 hours per week for most of the year. Additional library services are available through the WVU Libraries system, a network of general and specialized libraries within a two-mile radius of the Health Sciences Library, from the Health Sciences Library located at the Charleston Division, and through interlibrary loan and the E-Z Borrow service.

The Health Sciences Library maintains a web presence at http://www.hsc.wvu.edu/library where library users can access many electronic resources, request online reference assistance (Ask A Librarian), document delivery (ILLiad), or other services, and keep up-to-date on new library materials and services.

Commitment to Social Justice

West Virginia University’s role as the doctoral degree-granting, research, land-grant University gives the institution a special responsibility as a leader in the area of social justice. The pursuit of truth underlying the University’s mission focuses attention on issues of diversity, power, and perspective, so that students, faculty, and staff may study and work in a climate of academic freedom and social responsibility, developing the skills, knowledge, and self-esteem necessary for participation as world citizens.

Equal opportunity is a fundamental goal in a democratic society, and WVU shares the responsibility for achieving that equity. The institution is committed, therefore, to ensuring that all persons, including women, people of color, persons with disabilities, veterans, and persons of different religions, sexual orientations, ages, and international, ethnic, and economic backgrounds benefit from the many opportunities the institution provides.

In keeping with this responsibility, members of the academic community are expected to demonstrate civility and mutual respect for all persons, understanding and appreciation for all persons, to express that perspective in every dimension of the institution’s life and mission, and to work cooperatively, representing not only the interests of their own groups but also those of the wider community.

Individuals believing they may have been illegally discriminated against by West Virginia University may file a complaint with the President’s Office for Social Justice, B 1 Stewart Hall. Additional information is also available on the WVU website http://socialjustice.wvu.edu/policies_and_training.

The importance of WVU’s social justice program goes beyond the benefits that accrue to any one person or group to strengthening the University itself and enhancing its ability to accomplish the missions entrusted to it by the people and the State of West Virginia.

The Range of University Activity

Currently, WVU, including the regional campuses of Potomac State College of West Virginia University, West Virginia University at Parkersburg, and West Virginia University Institute of Technology enrolls approximately 30,000 students. WVU has an annual combined budget of approximately $749 million.
# Academic Information

## Health Sciences Degree Programs

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<th>Master’s</th>
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<tr>
<td>Dental Hygiene</td>
<td>B.S.</td>
<td>M.S.</td>
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<tr>
<td>Dentistry</td>
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<td>D.D.S.</td>
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<tr>
<td>Dental Specialties</td>
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<tr>
<td><strong>School of Medicine</strong></td>
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<tr>
<td>Biochemistry and Molecular Biology</td>
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<td>Ph.D.</td>
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<td>Biomedical Sciences</td>
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<td>Cancer Cell Biology</td>
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<td>Ph.D.</td>
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<td>Cellular and Integrative Physiology</td>
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<td>Ph.D.</td>
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<td>Community Health Promotion</td>
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Undergraduate and Professional Programs

Admission
To apply for admission to the various schools of the Health Sciences Center, write to the Office of Admissions, 1170 Health Sciences North, P.O. Box 9815, Morgantown, WV 26506-9815, and ask for the appropriate application forms.

Because we are primarily a group of professional schools and most of our applicants are enrolled in undergraduate studies at a residential college or university, we remind students to include their permanent home address with requests for application forms.

Specific entrance requirements for all Health Sciences programs are detailed in the section pertaining to each program. For information about freshman, transfers, and international admission to West Virginia University, please refer to the WVU Undergraduate Catalog.

During the first semester of the first year at the WVU Health Sciences Center, we require that students complete certain prescribed immunization and diagnostic procedures.

Application Fees
Application fees for dental hygiene, medical technology, nursing, and occupational therapy are $25 for residents of West Virginia, and $40 for non-residents. Application fees for dentistry, medicine, doctor of physical therapy, and doctor of pharmacy are $50.

When accepted into one of our programs, students are asked to pay a deposit to make their acceptance official. These deposits are applied toward the first semester’s tuition. If a student pays a deposit but does not enroll, a written request for refund must be received. Deposit amounts and refund deadlines vary and are subject to change.

Second or Multiple Bachelor’s Degree
To earn a second baccalaureate degree, students must earn at least 30 credits beyond the requirements for the first degree. All requirements, departmental and otherwise, must be satisfied for the second degree. A second bachelor’s degree cannot be earned if a student has not met the University’s residence requirement. (See Residence Requirements.)

If a student wishes to earn two baccalaureate degrees at the same graduation date, then a student must satisfactorily complete a minimum of 158 credits and meet all requirements, departmental and otherwise, of both degree programs. Admission must be granted from both programs.

Academic Forgiveness Policy
WVU allows an academic forgiveness to some students who are not successful in their first attempt at higher education.

To be eligible, a student cannot have been enrolled at a West Virginia state system of higher education institution for at least five calendar years and cannot have been enrolled in any other institution of higher learning during those five years. In order to determine eligibility, students must complete the Academic Forgiveness Form which is available at the Office of Admissions.

The conditions and rules of the academic forgiveness policy are as follows:
• Admission to WVU under the Academic Forgiveness Policy is conditional upon satisfying the above stated non-enrollment period. In addition, a recommendation that the student be admitted under the academic forgiveness policy must be submitted by the dean of the college or school that the student plans to enter, and the recommendation must be approved by the Office of the Vice President for Academic Affairs.
• Upon admission to WVU under this policy, the student will be credited with the hours earned for courses completed with a grade of D or higher.
• Grades earned during any prior enrollment period will not be counted for purposes of calculating the student’s grade point average, but grades earned will remain on the student’s permanent record.
• The student must meet and complete all coursework required to meet the college or school’s requirements for graduation, but under no circumstances after the student has been admitted under the Academic Forgiveness Policy shall the student complete fewer than 64 credit hours prior to earning a degree.
• A student admitted to WVU under this policy will follow all regulations regarding probation, suspension, and expulsion.
Graduate Admission and Policies

Health Sciences Center Graduate Council
The Health Sciences Center Graduate Council advises the vice president for Health Sciences. In this role the council monitors and administers the graduate studies policies of the schools located at the Health Sciences Center.

Application and Admission
Prospective graduate students are urged to initiate application for admission as early as possible. The first step of a student interested in a degree program should be to ask for information from the department, division, school, or college offering the program desired; the reply to such an inquiry will include instructions for applying to the particular program.

In all cases, application must be made for admission to graduate study on standard forms provided by the WVU Office of Admissions. The completed form is to be returned to the Office of Admissions, and must be accompanied by payment of a nonrefundable special service fee of $50. Applicants who have attended another institution, other than WVU, must request that the registrar or records office of the college(s) attended send an official transcript directly to the Office of Admissions. No one is admitted to graduate study that does not hold a baccalaureate degree from an accredited college or university.

If the applicant meets the minimum admission requirements of WVU, a copy of the application is forwarded to the faculty of the program of interest. Any graduate degree program is permitted to set admission requirements which go beyond the minimum admission standards of the University. No one can pursue an advanced degree at WVU unless admitted to the appropriate degree program.

GRE
Many programs at WVU require Graduate Record Examination (GRE) scores from all applicants, but in no program is an examination score the sole criterion for admission. Some programs require both the general aptitude and the appropriate advanced test before considering an applicant for admission. All departments in the School of Medicine and School of Pharmacy require that all prospective students take the GRE test.

Reapplication
When students graduate or complete the program for which they applied, they must reapply and be readmitted before taking further coursework at WVU. This policy assures that the University is informed of students’ objectives and assigns them an appropriate advisor. Students are assessed a service fee for each new application.

When eight years have passed since initial coursework, a student must reapply. The application fee will be assessed.

Intra-University Transfers
To transfer from one school or department to another, a student may initiate a transfer request by contacting the Health Sciences Center Graduate Programs Office or his or her advisor. The advisor must contact the Health Sciences Center Graduate Programs Office, which will complete the transfer.

Credits
Credit toward a graduate degree may be obtained only for courses listed in the WVU Graduate Catalog and numbered 400–799, in which the grade earned is A, B, C, or S. No course in which the grade earned is D, P, F, or U can be counted toward a graduate degree.

Transfer Credit
To apply graduate-level credits from other accredited institutions toward a master’s degree at WVU, students must get permission from the individual schools or colleges. The standardized transfer application form must be approved and signed by a unit chairperson or designate, prior to the student’s enrolling in the course(s) to be transferred to WVU. The school or department submits the approved form to the Health Sciences Graduate Programs Office for final approval and submission to the Office of Admissions. It is the student’s responsibility to see that Admissions gets an original transcript
from the other institution. Only credit earned at institutions accredited at the graduate level may be transferred.

Graduate courses taken elsewhere will not be approved for transfer credit unless the transfer application form was approved before enrolling in them. When a school or department approves the form, it is sent to the Health Sciences Center Graduate Programs Office for approval. A maximum of 12 semester hours from other institutions will be accepted for credit at WVU in master’s programs requiring 30 to 41 semester hours. Eighteen semester hours will be accepted for master’s degree programs requiring 42 or more semester hours. Individual graduate programs may accept fewer credit hours.

**International Student Admission**

West Virginia University is authorized under federal law to enroll non-immigrant foreign nationals as students. International students wishing to enroll for graduate work at WVU must comply with the stated academic requirements for admission and with certain additional academic and nonacademic requirements.

International applicants should forward a letter of inquiry one year before they intend to begin study in the United States. The University receives a large number of applications from international students. For this reason and because of the time required for the student to make visa and financial arrangements, April 1 has been established as a deadline after which applications cannot be guaranteed consideration for fall admission. International students applying for admission to West Virginia University must submit the following:

- A completed international student admission application.
- Application service fee.
- The official results of the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). TOEFL or IELTS results must be sent directly to WVU by the testing service.
- Original or certified copies of the applicant’s official academic record in the original language of issue. Applicants who have studied in the United States are required to have the institutions send an official transcript directly to WVU.
- Original or certified copy of all certificates or diplomas in the original language of issue.
- Official English translations of the academic record and certificates/diplomas.

The items above should be sent to Admissions, West Virginia University, and P.O. Box 6009, Morgantown, West Virginia 26506-6009. All material must be received by the application deadline. If possible, all application materials should be submitted at one time (TOEFL or IELTS scores and official transcripts from United States institutions should be requested so that all material arrives at WVU close to the same date). Incomplete applications cannot be guaranteed consideration for the desired semester. Applicants are encouraged to contact the academic program of interest for information about requirements other than those listed above.

**Required Academic Credentials**

Applicants for graduate programs must submit academic records from all post-secondary education. In some cases, it may be necessary for graduate applicants to submit records from the secondary school.

West Virginia University requires that original academic documents or certified copies of the original academic documents from non-United States institutions be submitted. The required documents include the official academic record (showing course titles, dates taken, and grades received), and diploma(s) or certificate(s) showing the degree awarded. These documents must be in the original language of issue. Official English translations must be included. Translations must be literal, word-for-word translations and must indicate actual grades received, not an interpretation of the grades.

Documents received by WVU become the property of WVU and cannot be returned to the applicant. It is therefore recommended that students who receive only one original copy of credentials submit certified copies with the application.

Applicants who are currently enrolled in an institution and who cannot submit the final academic record and certification of degree may be granted admission if the incomplete record indicates that the applicant will unquestionably meet WVU admission standards. Final admission, however, cannot be approved until the complete academic record and certification of degree have been received and evaluated by the Office of Admissions.
English Language Proficiency

All applicants whose first language is not English must provide proof of English language proficiency. WVU uses the Test of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS) as measures of English language proficiency. A score of 213 on the computer-based TOEFL, 550 on the paper-based TOEFL, or 79 on the internet-based TOEFL or 6.5 on the IELTS is the minimum required of all such applicants. Applicants must make arrangements to take the TOEFL/IELTS well in advance of the desired date of enrollment at WVU. Information about registration for the TOEFL can be obtained by writing to: Educational Testing Service, P.O. Box 6154, Princeton, NJ 08541-6154, USA, or by contacting the local office of the United States Information Service (USIS).

Applicants who have received a high school diploma or a bachelor’s degree in the United States need not submit TOEFL/IELTS results. However, applicants only having a master’s degree from an accredited U.S. college or university must still provide acceptable TOEFL or IELTS scores.

Financial Documents and Student Visa

International students requiring a form I-20 or IAP-66 for student or exchange visa must provide certification of adequate financial resources in U.S. dollars. Generally, the student must provide an official bank statement showing the availability of the appropriate funds. If a private sponsor will be the student’s source of support, the sponsor must submit a letter showing intent to sponsor and an official bank statement showing the availability of the appropriate funds. Other forms of support could include sponsorship certifications from the student’s government or sponsoring agency. In all cases, original or certified copies of financial/sponsorship documents must be submitted before the I-20 or IAP-66 can be issued.

Intensive English Program

In some cases, it may be possible to consider applications for students who lack adequate TOEFL/IELTS scores and will enroll in the West Virginia University Intensive English Program. Such applicants must contact the Intensive English Program directly and notify the Office of Admissions of their intentions. Applicants for graduate programs should also notify the academic department of interest of their intentions. Admission to the Intensive English Program does not guarantee admission to the University or to a specific program of study. Applicants admitted to an academic program under the condition of successful completion of the Intensive English Program will be required to meet a certain level of English language proficiency before being permitted to begin the academic portion of their studies, e.g., a grade of B or better in ESL courses or a TOEFL score above 550 or its new TOEFL equivalent or an IELTS score of 6.5. Inquiries about the Intensive English Program should be directed to the Intensive English Program, Department of Foreign Languages, West Virginia University, and P.O. Box 6298, Morgantown, WV 26506-6298.

Classification of Students

WVU undergraduates are classified as freshmen, sophomores, juniors, or seniors. These classifications are based upon the number of hours completed. The classifications are as follows:

- Freshman classification: 1–28 hours, inclusive
- Sophomore classification: 29–58 hours, inclusive
- Junior classification: 59–88 hours, inclusive
- Senior classification: 89 or more semester hours

Regular graduate students are degree-seeking students who meet all the criteria for regular admission to a program of their choice. The student must possess a baccalaureate degree from an accredited college or university, must have at least a grade point average of 2.75 on a 4.0 scale, have met all the criteria established by the degree program, and be under no obligation to make up deficiencies.

A student may be admitted as provisional by any unit when the student possesses a baccalaureate degree from an accredited college or university but clearly does not meet the criteria for regular admission. The student may have incomplete credentials, deficiencies to make up, or may have an undergraduate scholastic record which shows promise, but less than the 2.75 grade point average required for regular admission.
An non-degree student is a student not admitted to a program. Admission as a non-degree student does not guarantee admission to any course or program. The reasons for non-degree admission may be late application, incomplete credentials, scholarship deficiencies, or lack of a degree objective. Even though a non-degree student has not been admitted to a graduate program, a unit may allow a non-degree student to enroll in its courses. To be admitted as a non-degree student, a student must only present evidence of a baccalaureate degree from an accredited college or university and a 2.5 grade point average, but the student must obtain a 2.5 grade point average on the first 12 credit hours of coursework and maintain this average as long as enrolled. To be eligible to enter a degree program, the student must maintain a minimum of a 2.75 grade point average on all coursework taken since admission as a graduate student.

The standards cited are the minimum standards established by the University. Individual academic units or graduate programs may establish higher standards.

Reclassification of Provisional Students

The provisions of a student's provisional status are specified by the graduate department or program, but also may include satisfactory performance in ESL courses. To be reclassified as a regular student, a student must meet the provisions stated by the department and achieve a minimum grade point average of 2.75 on all coursework taken during the provisional period. Individual degree programs may set higher grade point average requirements.

No later than the completion of the 18th credit hour, a unit must review the student's record and make a final decision on the student's admission. A student who has met the provisions of admission and achieved the required grade point average will be reclassified as a regular student. A student who fails to meet the provisions of admission or who fails to achieve the required grade point average will be suspended, but may be reinstated in order to transfer to another program or to non-degree status. The academic unit must notify the student and the Office of Admissions of its decision.

Upon notification by the appropriate academic unit, the Office of Admissions will prohibit the registration of all provisional graduate students who have reached the maximum of 18 credit hours. Registration will not be permitted until the student is reclassified as a regular student, an exception is granted by an academic dean, or the student is transferred. A student may be admitted as a provisional graduate student more than one time, but not by the same graduate program.

All credit hours taken since admission as a provisional graduate student or to be applied to a degree count in the 18th credit-hour limit, i.e., undergraduate or graduate credit, P/F, S/U, graded courses, credit by senior petition, and transfer credit.

Regular or Provisional to Non-Degree
- Regular and provisional students may become non-degree students by choice. This includes students who fail to meet admission or academic standards or who withdraw voluntarily.
- To change a student to non-degree status, the advisor must process a Graduate Studies Transfer/Status form through the Health Sciences Center Graduate Programs Office.

Non-Degree to Regular or Provisional
- Non-degree students who later wish to become degree candidates must transfer and present all the credentials required by the degree program. This requires the processing of a Departmental Decision Form by the student's advisor through the HSC Graduate Programs Office.
- For admission to a degree program, a non-degree student must have achieved a minimum grade point average of 2.75 on all coursework taken since admission as a graduate student.

Employed Graduate Students

Graduate students will be required by their advisors to limit their credit loads in proportion to the outside service rendered and the time available for graduate study. In general, persons in full-time service to the University, or other employer, will be advised to enroll for no more than six hours of work in any one semester and those in half-time service for no more than 12 hours. Maximum credit loads may be less for employed graduate students in some academic colleges, schools, and departments.
Non-Degree Graduate Students

A non-degree graduate student may accumulate unlimited graduate credit hours, but if the student is later admitted to a degree program, the faculty of that program will decide whether or not any credit earned as a non-degree student may be applied to the degree. Under no circumstances may a non-degree student apply more than 12 hours of credit toward a degree.

Academic Advising

When entering West Virginia University, students are assigned an academic advisor. The advisor assists preparing a schedule, assigning classes as required by the student’s degree program, and certifies the student’s study list to the University Registrar’s Office. The advisor is also expected to give advice and sympathetic guidance. Students are expected to meet with their advisor to discuss academic problems.

Students interested in medical technology, nursing, pharmacy, physical therapy, or occupational therapy may be admitted to a pre-program in order to complete entrance requirements for admission to the degree program. Students in these pre-programs are advised through the Undergraduate Academic Services Center. Students must apply for admission with an undergraduate application.

Baccalaureate Degrees

Student Responsibility

Students are responsible for their own academic well-being. Specifically, students are responsible for knowing their scholastic standing as it relates to the published regulations and standards of WVU. This responsibility includes the regulations of the college or school and the regulations of the department or division in which the student is earning a degree. In order to graduate, students must go to the academic dean’s office and complete an application for graduation and diploma. The application must be filed during the first month of the semester or summer session in which the student expects to graduate.

Regulations Affecting Degrees

All degrees are conferred by the West Virginia University Board of Governors as recommended by the faculties of the various colleges and schools. A degree is granted at the end of the semester or summer session in which the requirements for that degree are completed, provided that the student has submitted an application for graduation and diploma at the academic dean’s office.

Students become eligible to graduate when he or she completes the requirements of the University and college or school that were in effect at the time of first registration at that college or school. The student has seven years after your registration to complete the requirements. If not, the student will have to meet the requirements of a later catalog—one that is no more than seven years old when completed your studies. With the consent of the advisor and the dean, students may choose to meet the conditions published in a later catalog.

Students must observe any program changes that are enacted by the West Virginia University Board of Governors, the West Virginia Higher Education Policy Commission, or by local, state, or federal law.

WVU policy dictates that, in view of their professional responsibilities to the general public, the faculty of a professional school may recommend to the president of the University, in writing, that a student be removed from its rolls. The recommendation of the faculty must indicate that the student is not fit to meet the qualifications and responsibilities of the profession.

WVU will not confer a degree or issue a transcript to any student until payment of all tuition, fees, and other indebtedness to any unit of the University is made.

Credits Required

Each degree program is based upon a combination of required courses and electives. Certain University requirements are listed below. In addition, the various colleges and schools determine their own credit requirements and course grade averages for graduation. Total credits vary from 128 to 145. Required grade point averages range from 2.0 to 2.5. The determination to count ROTC courses as free electives or toward fulfillment of General Education Curriculum (GEC) requirements is the prerogative of the dean of the college awarding the degree.

No more than three credit hours of ROTC may count toward fulfillment of the GEC requirement in each objective area.
General Education Curriculum Description

For General Education Curriculum (GEC) definitions and the list of approved GEC/writing/capstone courses please see http://registrar.wvu.edu/current_students/general_education_curriculum.

Time Limits

Master’s Degree All requirements for a master’s degree must be satisfactorily completed within eight years immediately preceding the student’s graduation.

Doctoral Degree

The doctorate is a research or performance degree and does not depend on the accumulation of credit hours. The three requirements of the degree are admission to candidacy, residency, and completion and defense of the dissertation. The degree signifies that the holder has the competence to function independently at the highest level of endeavor in the chosen profession. Hence, the number of years involved in attaining or retaining competency cannot be readily specified. Rather, it is important that the doctoral student’s competency be assessed and verified in a reasonable period of time prior to conferral of the degree.

The qualifying examination is the method of assessing whether the student has attained sufficient knowledge of the discipline and supporting fields in order to undertake independent research or practice. It is expected that the examination will occur after all coursework has been completed and language or other requirements satisfied, and it consists of a series of examinations covering all areas specified in the plan of study. After the component parts of the qualifying examination have been successfully passed, the student is admitted to candidacy for the degree. It is sometimes called the candidacy examination because no one can be called a doctoral candidate until this first requirement for the degree has been met.

Because the qualifying examination attests to the academic competence of the student who is about to become an independent researcher or practitioner, the examination should not precede the degree by too long a period of time. Consequentially, doctoral candidates are allowed no more than five years in which to complete remaining degree requirements. In the event a student fails to complete the doctorate within five years after admission to candidacy, an extension of time can be obtained only by repeating the qualifying examination, and meeting any other requirements specified by the student’s committee.

Contractual Nature of Graduate Study

The student’s rights, privileges, obligations, and responsibilities are contained in the WVU Graduate Catalog, the plan of study, and, if research is one of the degree program requirements, the prospectus. Although not contracts in the formal legal sense, these requirements are agreements between the University and a student for the accomplishment of planned educational goals.

Residence Requirements

If transferring to WVU from another institution of higher learning, the transfer should occur no later than the start of the student’s third year. Under no circumstances will a student who enters WVU after October 1 in any year be allowed to receive a degree at the next commencement.

In some special cases, students can leave WVU at the end of their third year, and still receive a degree from WVU. The student must enter another accredited institution with the purpose of taking a combined program that will lead to two degrees or prepare for graduate study. Before leaving, the student must apply to the college’s Academic Standards Committee to request permission to do the work of the fourth year, or a part thereof, at the other institution but still receive the degree from WVU. The student will receive a degree when the proper records from the other school are presented.

A transfer student who has completed all undergraduate work in another school in the West Virginia system of higher education must complete either the last 30 hours of work at WVU or at least 36 hours of work at WVU, of which 16 of the last 32 hours must be on campus. Transfer students whose undergraduate work has been completed outside of the West Virginia system of higher education must complete a total of 90 hours or at least the last 30 hours of work in residence at WVU. Students may be required to earn up to 15 hours in a major field regardless of the number of hours or the nature of the courses transferred.
Work Done Out of Residence

WVU’s policy is to discourage taking regular residence courses in absentia. If a student begins a course at WVU but fails permission may be granted to complete it due to illness or some other acceptable reason. Permission must be granted to complete the work in absentia. Permission must be granted by the Academic Standards Committee of the college or school concerned, and the work must be done under the guidance of a WVU professor. Credit in such cases is allowed only upon a report of a grade of C or better on the final examination. This regulation does not apply to WVU off-campus courses.

If a student receives a final grade of F in a course taken at WVU, the course must be repeated at WVU to receive credit for that course. The dean of the college or school in which the student is enrolled may authorize an exception to this regulation. If so, then the dean should provide a letter to be placed in the student’s folder authorizing the exception and explaining its basis.

Students should be aware of the requirements for residence and specific degree requirements described in the catalog when transferring credit from other institutions. For courses taught outside the West Virginia state system of higher education, WVU will accept credit only for those in which a student earned a grade of D or higher, provided other conditions above have been met. Under no circumstances will grades be transferred from institutions outside the state system.

WVU Transient Students

If a student decides to take a course or courses at another school, written approval must be given from the student’s advisor, dean, and the director of the Office of Admissions or designee. To receive such approval, the student must have an overall 2.0 average. All approved college-level work is accepted for transfer from accredited institutions, provided the above requirements have been met and the student has an overall GPA of 2.0.

Advanced Placement Program (AP)

WVU encourages you to work to your full capacity and to earn your degree at your own learning speed. As a high school junior or senior, you can take college-level courses at your school in conjunction with the College Entrance Examination Board (CEEB). The Advanced Placement Service administers three-hour examinations to show competency equal to that received by taking the actual college course. The chart can be found at http://adm.wvu.edu/freshman/ap__clep_and_ib.

College Level Examination Program (CLEP)

If an incoming student has gained a significant level of maturity through life experiences, he or she may receive college credit for those educationally-related experiences through the College Level Examination Program (CLEP) of the CEEB. A policy of the WVU Board of Governors allows University credit to be awarded for successful completion of CLEP subject examinations, except English composition and freshman English. Up to 35 hours of general education or elective credit may be earned for successful performance on the CLEP general examinations. Although this program was designed primarily for adults, exceptionally well-qualified high school seniors may use the CLEP program. The chart at http://adm.wvu.edu/freshman/ap__clep_and_ib indicates the areas in which WVU grants credit based on the minimum scores required. It should be noted that no student is eligible for CLEP credits after he or she has enrolled at WVU.

A student with at least one year of active military service may receive college-level credit by submitting a copy of his or her DD214 or a SMART or AARTS transcript. The chart can be found at http://adm.wvu.edu/freshman/ap__clep_and_ib.

Credit by Examination

If currently enrolled, students may receive credit for a course or courses if competency in the course content can be demonstrated. The department offering the course determines evaluation standards for the student’s competency. If skill and cognitive abilities are components of the course, then both are evaluated. Credit is given only when a satisfactory degree of competency is shown.

A college, school, or department may ask the student to prepare a self-evaluation statement. The purpose of the statement is to determine the competency the student believes he or she has, and the methods by which it was achieved. For more information, contact the dean in the college or school offering the course.
Credit for Correspondence Work

Students may receive credit for correspondence work in non-laboratory courses. Certain conditions that govern this credit must be met:

- A maximum of 30 hours is acceptable.
- The work must be from accredited institutions.
- The institution must accept the credit toward its own degrees.
- WVU must ordinarily accept that institution’s residence work.

500-Level Courses

WVU student: A junior or senior may enroll in any class carrying a 500-level course number provided that they have at least a 3.0 cumulative grade point average and must complete an Application for an Advanced Undergraduate Student to Enroll in a Course Numbered 500–599 for Undergraduate Credit and have signatures from the instructor, their advisor and their academic dean. This form may be obtained from their advisor and must be completed prior to enrollment. Seniors wishing to count these courses for graduate credit must complete and have approved a senior petition.

Non-WVU student: A junior or senior student who wishes to take an off-campus course numbered 500–599 must submit an undergraduate application for admission and have his or her official transcripts sent to the Office of Admissions from all of the colleges and universities previously attended; the transcript cannot be one sent to the student or by facsimile (fax) transcript. The student must be classified as either a junior or senior and have a cumulative grade point average of at least 3.0 on a 4.0 scale. The Application for an Advanced Undergraduate Student to Enroll in a Course Numbered 500–599 for undergraduate credit must be completed and have signatures from the instructor, their advisor, and their academic dean. This form may be obtained from their advisor and must be completed prior to enrollment. Seniors wishing to count these courses for graduate credit must complete and have approved a senior petition.

Graduate Credit via Senior Petition

A student may begin graduate study early through the University's senior petition policy. A senior petition form may be obtained from the advisor/department and must be signed by the advisor and the dean of the college granting the student's degree and the dean of the college of the intended graduate degree (if different). An individual from another West Virginia state higher education system school desiring to take a course at WVU must have the form signed by his or her advisor and the registrar. These signatures are necessary to certify that the information contained on the form is correct and that the student has a cumulative 3.0 grade point average. The University has certain policies for a student to enroll in a graduate course for graduate credit. The policies are:

- Senior petition applies only to courses numbered 400–599. Student must be within 12 hours of receiving bachelor’s degree, and grade point average must be at least 3.0 on a 4.0 scale.
- Student can receive only 12 graduate hours through the senior petition.
- Student must have the proper signatures on the senior petition by the time of enrollment in the petitioned courses.

Return the approved senior petition to the Office of Admissions. It is kept on file so that the student receives graduate credit for these courses on the permanent record. The dean of the college or school in which the student is taking graduate courses must approve any exceptions to the policy.

Note: If you receive graduate credit for a course, the credit for that course does not count for your undergraduate degree.

Visitors

Full-time University students may attend classes as visitors. To visit a class, permission must be granted in writing from the student's advisor and the instructor of the course. A member of the administration, teaching staff, or other regular University employees may attend classes as visitors. These individuals must have written permission from their department and the instructor of the class. A visitor does not receive credit for a class. You may not apply for credit by exam in a class in which you were a visitor.
Auditors

An auditor may register for courses and pay full fees. Credit will not be given for the course. After auditing a course, one semester must pass before enrolling in the course for credit. A student may change the status from audit to grade or grade to audit only during the registration period. Attendance requirements for auditors are determined by the instructor of the course. The instructor may direct the Office of the University Registrar to remove an auditor from a class list or grade report if attendance requirements are not met.

Summer Sessions

WVU has one summer term, which begins in the middle of May and ends the second week of August. Requirements for admission and work performance for the summer term are the same as for the regular semesters. Courses are offered in a variety of time frames, e.g., one-week, three-week, six-week, and 12-week.

A student may earn credit toward a baccalaureate, master’s, doctoral, or professional degree in the summer term. Summer offerings vary from year to year. For complete information concerning course offerings during the summer term, students should consult the schedule of courses website at http://courses.wvu.edu/.

Evening Classes

The University offers evening courses taught by regular faculty. These courses carry full college credit and are offered at both the undergraduate and graduate levels.

Grade Point Average

All academic units of the University require minimum standards of scholastic quality. A grade point average is computed on grades earned in courses taken at WVU and institutions in the West Virginia system of higher education only. To be eligible to receive a baccalaureate students must have a grade point average of at least 2.0 at the time of graduation. Some degree programs require a higher grade point average overall or in the major courses. The grade point average is based on all work for which letter grades other than W, WU, and P were received. See “D/F Repeat Policy.” Students must make certain that they know their grade point standing. Necessary information concerning grade point standing can be obtained from the dean of the college or school. To determine your grade point average, use the method described in the section on grade points.

Graduation with Honors

WVU recognizes distinguished academic achievement by awarding degrees cum laude, magna cum laude, and summa cum laude. This distinction can be awarded on initial or second baccalaureates and specified entry-level professional degrees. All candidates for a baccalaureate with a grade point average of 3.8 or higher graduate summa cum laude. Those with a grade point average of less than 3.8, but equal to or above 3.6, graduate magna cum laude. Those with a grade point average of less than 3.6, but equal to or above 3.4, graduate cum laude.

The grade point average for honors consideration for a baccalaureate is based on baccalaureate-level college work attempted through the next to the last semester or through the last semester, whichever GPA is higher. This calculation includes transferable baccalaureate-level college work attempted at all regionally accredited higher education institutions the student has attended. Credit hours earned with a grade of P or S are not considered in the determination. The grade point average for honors consideration for entry-level professional degrees is based on baccalaureate-level and professional-level work attempted through the next to the last semester or through the last semester, whichever GPA is higher. This calculation includes transferable baccalaureate-level and professional-level college work attempted at all regionally accredited higher education institutions attended. Credit hours earned with a grade of P or S are not considered in the determination. Additionally, the GPA on WVU work must meet the requirements stated for the level of honors to be designated. If the GPA on WVU work indicates a lower level of honors, then the WVU GPA shall govern the specific designation.

Students entering and completing a second baccalaureate program following completion of the initial degree at the University are eligible to receive the honors designation. Grade point averages for graduation with honors on second baccalaureates shall be computed on the last 80 semester hours of baccalaureate-level work excluding credit earned with a P or S. At least 30 semester hours must have been completed in the second degree program through the penultimate semester.
A request for an exception to this policy may be made to the dean. After review, the dean will forward all requests for exceptions of this policy to the provost for the final decision.

**Academic Progress**

**Courses**
Most courses taught at WVU extend for one semester, although some extend for two semesters. Credit is not awarded for a course if a student does not attend the whole course. The only exception to this rule occurs if the Committee on Academic Standards decides to grant an exception. Grades reported at the end of the first semester in a two-semester course are merely an indication of the quality of the student’s work to that point. Credit is not given for that part of the course completed. Courses taught in the summer sessions carry the same credit value as fall and spring semester courses.

**Evaluation of Student Progress**
Progress is evaluated by a variety of methods. The measurement and evaluation of learning are consistent with the objectives of the course and provide the opportunity for the student and instructor to evaluate progress. The University discourages evaluation by final examination only. The student is responsible for all materials presented or assigned in scheduled instructional sections. Students who do not complete all assigned work may earn an incomplete (I) or a failing grade (F). A grade of incomplete (I) requires a written contract between the student and instructor and must include a timeline of no more than one semester.

**Finals**
The last week of each semester of the academic year is designated as finals week. Final examinations for the summer term are given on the last day of classes. The website http://registrar.wvu.edu/ gives the dates and times for final examinations. (See specific term Course Registration Information link for further information.)

Students who take a section of a multi-section course may be required to take the departmental final examination, given during the regular final examination period.

**Last Week of Classes**
Practical laboratory tests, make-up examinations, and regularly scheduled short quizzes are the only tests permitted for day classes during the week of classes preceding finals week unless the faculty member petitions the associate provost for Undergraduate Academic Affairs and the petition is approved by the beginning of the second week of the semester in which the final exam is to be given. Evening classes have their final exams on the last meeting of the class preceding finals week.

**Grading System**
A excellent (given only to students of superior ability and attainment)
B good (given only to students who are well above average, but not in the highest group)
C fair (average for undergraduate students)
D poor but passing (cannot be counted for graduate credit)
F failure
I incomplete
W withdrawal from a course before the date specified in the University calendar
P pass (see “Pass-Fail Grading”)
X auditor, no grade and no credit
CR credit but no grade
PR progress final grade at end of the second semester (HSC)
S satisfactory
U unsatisfactory (equivalent to F)
H honors course (medical school courses only)
INC permanent incomplete (graduate students only)
IF incomplete grade not removed by next regular term (computed as an F)
UF unforgivable F (not eligible for D/F repeat policy)
Note: Grades that are not reported by faculty at the end of a term will be designated with an NR on the official transcript. Grades that are not reported will become an F at the conclusion of the next semester if a final grade is not submitted.

Pass-Fail Grading

Pass-fail grading encourages students to take elective courses not related to their degree concentration. Pass-fail grading also facilitates grading in competency-based courses which may be an integral part of your program.

Student Option Any full-time student who has completed 15 hours or more and who has maintained a 2.0 grade point average may take a maximum of four hours each semester or summer session on a pass-fail basis. Any course taken on a pass-fail basis must be a free elective. Students are limited to a total of 18 hours of pass-fail credit in their collegiate careers. Unless otherwise indicated, courses in the major, courses in other subjects that are required by the major, and courses taken to satisfy University, college, school, or departmental requirements are excluded from pass-fail. For example, courses elected to satisfy the English, General Education Curriculum (GEC), or foreign language requirements may not be taken for pass-fail grading.

Courses taken on a pass-fail basis are given a regular letter grade. Then the instructor turns in the appropriate grade to the Office of the University Registrar. This letter grade is then converted to a P on the basis of A, B, C, or D for a pass, or F for a fail. The grade of P does not affect a student’s grade point average. However, any F grade affects the grade point average whether it is a regular grade or a pass-fail grade.

The optional choice of pass-fail grading for a course is made during the registration period. Once the registration period has ended, you may not change the grade status in the course.

College or School Option A department or unit may designate any performance- or competency-based course as exclusively pass-fail. To institute this, the college or school must have the approval of the Faculty Senate. Courses offered only as pass-fail are not included in the maximum of 18 hours that may be freely elected under the student option.

Grade Points

Each letter grade has a numeric value. Grade points are based on this number value and the credit-hour value of the course.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>0</td>
</tr>
<tr>
<td>U</td>
<td>0</td>
</tr>
</tbody>
</table>

The grade point average is computed on all work for which a student registers, with the following exceptions:

- Courses with a grade of W, P, S, and X carry no grade value. The grade of incomplete (I) initially carries no grade value.
- The grade of I is given when the instructor of the course believes that the work is unavoidably incomplete or that an additional examination is justified. There must be a written contract between the student and instructor, including a timeline for completion of the work. To remove the grade of I, a student does not register for the course again; instead, he or she arranges to submit incomplete or supplemental work to the original instructor of the course.

When a student receives the grade of I and the incomplete grade is later removed, the grade point average is calculated on the basis of the new grade. If the I grade is not removed within the next semester, the grade is treated as an F (failure). The Academic Standards Committee of the appropriate college or school may allow a student to postpone removal of the I grade if the student can justify a delay.

- If a student is working toward teacher certification, he or she is responsible for every registration in a course in which the grade of A, B, C, D, F, P, X, or I is received.

GPA Calculations

Students like to know how to calculate their overall and semester grade point averages. The following example shows how to do it. Assume a student is registered for 16 hours and received the following grades in these courses:
Incompletes

The grade of I is given when the instructor believes that the coursework is unavoidably incomplete or that a supplementary examination is justifiable. Before any graduate degree can be awarded, the grade of I must be removed either by finishing the incomplete or by having it recorded as a permanent incomplete. Only the instructor who recorded the I or, if the instructor is no longer at WVU, the chairperson of the unit in which the course was given may initiate either of these actions. When a student receives a grade of incomplete and later removes that grade, the grade point average is recalculated on the basis of the new grade. If you do not remove the I grade within the next semester, the grade of I is treated as an F (failure). The Academic Standards Committee of the appropriate college or school may allow you to postpone removal of the I grade if you can justify a delay.

In the case of withdrawal from the University, a student with a grade of I should discuss that grade with the appropriate instructor.

Grade changes other than “I” to a letter grade must be accompanied by an explanatory memo.

D/F Repeat Policy

WVU has a D/F repeat policy for undergraduate students who have not received their initial baccalaureate. If a D or F is earned in a course at WVU taken no later than the semester or summer session registration when the student reaches a cumulative total of 60 hours attempted, the student is eligible to “D/F repeat” that course by meeting with his or her academic advisor during registration in the semester in which he or she is repeating the course and by filling out the appropriate forms. The course must be repeated at WVU, Potomac State College of WVU, WVU at Parkersburg, or WVU Institute of Technology. The student will have only one opportunity to improve the original grade. The new grade becomes the grade that counts, even if the performance is worse than when originally graded.

When a student has D/F repeated a course, the following happens:

• The original grade is disregarded for the purpose of determining the grade point average, hours passed, and hours attempted.
• The original grade is not deleted from the permanent record.
• The second grade is entered on the transcript and marked as included (I) in the semester that the student repeated the course.
• The student can exercise his or her right under the D/F repeat policy at any time before receiving an initial baccalaureate. If a grade of F is received in a course for academic dishonesty, the grade is not eligible for change under the D/F repeat provisions. Such a failure is indicated on the permanent record by an UF and is calculated in the grade point average.

### Grades

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
<th>Value</th>
<th>Credits x Value</th>
<th>Grade Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101</td>
<td>3</td>
<td>B</td>
<td>3</td>
<td>3 x 3</td>
<td>= 9</td>
</tr>
<tr>
<td>Geology 101</td>
<td>3</td>
<td>C</td>
<td>2</td>
<td>3 x 2</td>
<td>= 6</td>
</tr>
<tr>
<td>Spanish 101</td>
<td>3</td>
<td>D</td>
<td>1</td>
<td>3 x 1</td>
<td>= 3</td>
</tr>
<tr>
<td>Mathematics 126</td>
<td>3</td>
<td>A</td>
<td>4</td>
<td>3 x 4</td>
<td>= 12</td>
</tr>
<tr>
<td>Political Sci. 101</td>
<td>3</td>
<td>B</td>
<td>3</td>
<td>3 x 3</td>
<td>= 9</td>
</tr>
<tr>
<td>Orientation 101</td>
<td>1</td>
<td>P</td>
<td>0</td>
<td>1 x 0</td>
<td>= 0</td>
</tr>
</tbody>
</table>

• Multiply the credit by the grade value to get the grade points earned for each course.
• Add the total grade points, in this case, 39.
• Divide the total grade points earned by the total credit hours with a grade value. Remember that P grades have no grade value, so in this case, there are 15 credit hours for the GPA calculation: 39 divided by 15 = grade point average of 2.6.
Grade Reports

During the seventh week of classes in the fall and spring semesters, instructors submit a grade for all undergraduate students earning grades of D or F in undergraduate courses. These grades are used for counseling, are not recorded on the student’s official transcript, and disappear from the computer system after the semester is completed. These grades are sent first to the Office of the University Registrar and then to the student via MIX, the student’s advisor, and the dean of the college or school in which the student is enrolled.

Final grades are due to the Office of the University Registrar within 48 hours after the end of the University’s final examination and are viewable to students within one week of submission to the Office of the University Registrar. The final grades of all seniors provisionally approved for graduation at the close of each semester or summer term are reported to the deans of the students’ colleges or schools. Special report forms for this purpose are supplied by the student’s dean. At the end of each semester, grades are available through MIX.

Official Transcripts

When applying for a transcript, students must furnish their last date of attendance, student number, and the full name under which they were enrolled. Requests for transcripts must be made in writing to the Office of the University Registrar. Cost of a transcript, methods of payment, and a request form can be found at http://registrar.wvu.edu. WVU cannot accept telephone requests.

Because of demand, it may take two to three weeks to process an application for a regular transcript at the close of a semester or summer session. At other times, it is the policy of WVU to process all regular transcript requests within 48 hours of receipt of the request.

If students owe money or have some other financial obligation to any unit of the University, they forfeit their right to claim a transcript or diploma until these financial obligations have been met.

Dissertation Procedures

Procedural rules for dissertations and theses are found in the WVU Graduate Catalog at http://coursecatalog.wvu.edu/.

Financial Aid

Students interested in applying for financial aid need to complete a Free Application for Federal Student Aid (FAFSA). This form is the application for all major federal student aid programs and must be received at the federal processing center by March 1 for applicants to receive maximum consideration.

For the summer session(s) a separate WVU Financial Aid Application is also required. Forms are available in the Financial Aid Offices in the Mountainlair, the Health Sciences Center, and the College of Law.

Students can also complete a FAFSA on the Internet at http://fafsa.ed.gov. Instructions are available at University libraries and computer labs and in the Financial Aid Offices.

For those students who filed a FAFSA for the previous year, a renewal application may be used. Renewal FAFSAs are mailed to students’ home addresses to arrive by mid-January. Students who do not receive a renewal FAFSA by that time should contact the Financial Aid Office for a regular FAFSA or file by using the Web address above.

Financial Aid Refund and Repayment Policy

Federal regulations require that West Virginia University recalculate eligibility for financial assistance for students who completely withdraw, drop out, or are dismissed before completing the enrollment period. Students who receive all unsatisfactory grades (defined as at least one F and no passing grades) at the end of the grading period will be considered as unofficially withdrawn at the semester mid-point unless documentation is available that demonstrates continued class participation. Application of this policy may result in the necessity for a student to return financial aid funds to various Title IV federal aid programs including Federal Pell Grant, Federal SEOG, Federal Perkins Loan, and William D. Ford Federal Direct Student and PLUS loans.

A student earns Title IV federal aid based upon the length of time the student remains enrolled during the enrollment period. Students who withdraw on or before completing more than 60 percent of the semester may be required to return a portion of federal financial assistance. The determination of 60 percent of the term is computed by dividing the total number of calendar days in the term into the number of calendar days completed as of the date of student withdrawal. Scheduled
breaks of five consecutive days or more are excluded. The percentage of Title IV assistance which the student has earned is equal to this percentage of the term completed. If the withdrawal occurs after more than 60 percent of the term is completed, the percentage earned is considered to be 100 percent.

If more Title IV aid was disbursed than was earned by the student, WVU is required to return the lesser of (1) the unearned aid percentage of institutional charges, or (2) the unearned aid percentage applied to the total Title IV aid received. The student must return unearned aid for which s/he is responsible after subtracting the amount the school will return. Funds are returned in the following priority:

1. Unsubsidized Federal Direct Loan
2. Subsidized Federal Direct Loan
3. Federal Perkins Loan
4. Federal Graduate PLUS Loan
5. Federal PLUS Loan
6. Federal Pell Grant
7. Federal Academic Competitiveness Grant (ACG)
8. Federal SMART Grant
9. Federal SEOG
10. Other Title IV assistance
11. Other federal, state, private, or institutional aid
12. The student

If less Title IV aid was disbursed that was earned by the student, the student is entitled to a post-withdrawal disbursement within 30 days of withdrawal.

The return of financial aid may result in unpaid charges to WVU for tuition/fees and room/board. WVU will bill the student for any balance due. Students who owe a repayment to any federal financial aid program are no longer eligible for financial aid at any post-secondary institution. Eligibility may be regained after repayment is satisfied.

Tuition and Fees
The WVU Office of Admissions assigns enrolling students a residency classification for admission, fee, and tuition purposes. Students who are legal residents of West Virginia pay resident tuition at WVU; students who are residents of other states and nations pay non-resident tuition.

Tuition and fee structures additionally vary by academic program at WVU. Current tuition and fee costs can be found at http://adm.wvu.edu/home/cost_of_attendance.

SREB Academic Common Market
Through the Southern Regional Education Board (SREB) Academic Common Market, WVU allows students from SREB member states to enroll in certain WVU programs at in-state tuition rates. Typically these degree programs are not available to students in their home state. In addition to West Virginia, SREB member states are Alabama, Arkansas, Delaware, Florida (graduate only), Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina (graduate only), Oklahoma, South Carolina, Tennessee, Texas (graduate only), and Virginia. Please refer to the SREB website for the most current information about programs offered to residents of your state.

Extended Learning
The cost of courses offered through Extended Learning varies according to program. The most recent tuition for online programs at WVU can be found at http://elearn.wvu.edu/Registration/tuitionFees.

Fee Regulations
All West Virginia University fees are subject to change without notice. A nonrefundable service fee of $50 must accompany the application for admission to graduate studies. All fees are payable to the Office of Student Accounts at registration. Arrangements with the Office of Student Accounts for payment from officially accepted scholarships, loan funds, grants, or contracts shall be considered sufficient for acceptance of registration. All students should register on days scheduled for registration at the beginning of each semester or summer session. No student will be permitted to register at the University after the eighth day of a semester or the fourth calendar day of the summer sessions or a single summer session. Days are counted from the first day of registration. Any student failing to complete registration on regular registration days is subject to a late registration fee.
Registering students pay the fees shown in the fee charts, plus special fees and deposits as required.

WVU places restrictions on students who have outstanding debts to a unit or units of the University. The restriction may include, but is not limited to, the withholding of a student's registration, diploma, or transcript. No degree is conferred and no transcripts are issued to any student before payment is made of all tuition, fees, and other indebtedness to any unit of the University.

**Types of Fees**

**Special Fees, Library Fee, and Technology Fee**

Special Fees provides students with access to the WVU Mountainlair Student Center, the Daily Athenaeum newspaper, University radio station, Student Recreation Center, and Student Health Services, athletics (student admission to WVU football, basketball, and other sporting events), student affairs activities, and the Personal Rapid Transit (PRT) system. The Library Fee provides students with access to and support from the University Libraries. The Technology Fee supports University computer centers and campus technology development. All students, regardless of whether or not they have been granted a tuition waiver must pay these mandatory fees.

**Laboratory Fees**

Many departments assess laboratory or other equipment fees to provide availability to consult specific departments concerning nonrefundable equipment deposits and laboratory fees.

**Music Fees**

All music majors must pay a fee that entitles them to assigned practice space daily. Band and orchestra instruments may be rented by the semester. Contact the College of Creative Arts for details regarding these fees.

**Extended Learning Fees**

Fees for credit hours for Extended Learning courses vary by program. Students should inquire of individual programs and view fee schedules at http://elearn.wvu.edu/registration/tuitionFees.

**Other Fees**

There are other fees for certain services and functions provided by the University. Check with the University office providing the service or function in question to find out the current fee. Also, individual programs may have additional fees.

**Remission of Fees**

Students appointed as graduate assistants are eligible for remission of tuition and certain fees.

**Summer Tuition and Fees**

Check the website http://adm.wvu.edu/.

**Refund of Tuition and Fees**

Current information on refunding can be found on the WVU Finance Division's webpage http://studentaccounts.wvu.edu/refunds/.

**Non-Sufficient Funds Check Policy**

Payments of tuition, fees, and other charges by check, draft, or money order are subject to WVU’s Non-Sufficient Funds Check Policy. A copy of the policy is available in the Office of Student Accounts. A service charge of $25.00 is collected on each check returned unpaid by the bank upon which it was drawn. The service charge on unpaid, returned check(s) is subject to change in accordance with state law.
Estimated Expenses for Graduate/Professional Health Sciences Center Programs

For current accurate tuition costs, call the Office of Admissions at 1-800-344-WVU1 or visit the website at http://adm.wvu.edu/. Tuition and registration fees are the same for both semesters. Some programs require summer sessions. Additional tuition and fees apply.

Identification Card

Students registered for the current semester are eligible for an identification card (Mountaineer Card). The Mountaineer Card gives access to certain activities and privileges depending on fees assessed. Students assessed the on-campus fees have free access to Student Recreation Center, the PRT, Student Health, athletic events and may ride the local bus system (MountainLine) by using their ID card. On- and off-campus students have access to the WVU Libraries and the Mountaineir’s WVU Up-All Night activities. Students taking Extended Learning classes may opt to pay the on-campus fees to participate in the other activities. WVU reserves the right to refuse issuance of an identification card and misuse may result in confiscate of the card. For more information about the Mountaineer Card visit http://wvucard.wvu.edu/ or contact them at WVUCard@mail.wvu.edu.

Residency Policy

Section 1: This policy bulletin contains general information regarding its scope an dates of adoption.

Section 2: Classification for Admission and Fee Purposes

2.1 Students enrolling in a West Virginia public institution of higher education shall be assigned a residency status for admission, tuition, and fee purposes by the institutional officer designated by the president. In determining residency classification, the issue is essentially one of domicile. In general, the domicile of a person is that person’s true, fixed, permanent home and place of habitation. The decision shall be based upon information furnished by the student and all other relevant information. The designated officer is authorized to require such written documents, affidavits, verifications, or other evidence as is deemed necessary to establish the domicile of a student. The burden of establishing domicile for admission, tuition, and fee purposes is upon the student.

2.2 If there is a question as to domicile, the matter must be brought to the attention of the designated officer at least two weeks prior to the deadline for the payment of tuition and fees. Any student found to have made a false or misleading statement concerning domicile shall be subject to institutional disciplinary action and will be charged the nonresident fees for each academic term theretofore attended.

2.3 The previous determination of a student’s domiciliary status by one institution is not conclusive or binding when subsequently considered by another institution; however, assuming no change of facts, the prior judgment should be given strong consideration in the interest of consistency. Out-of-state students being assessed resident tuition and fees as a result of a reciprocity agreement may not transfer said reciprocity status to another public institution in West Virginia.

Section 3: Residence Determined by Domicile

3.1 Domicile within the state means adoption of the state as the fixed, permanent home and involves personal presence within the state with no intent on the part of the applicant or, in the case of a dependent student, the applicant’s parent(s) to return to another state or country. Residing with relatives (other than parent(s)/legal guardian) does not, in and of itself, cause the student to attain domicile in this state for admission or fee payment purposes. West Virginia domicile may be established upon the completion of at least 12 months of continued presence within the state prior to the date of registration, provided that such 12 months’ presence is not primarily for the purpose of attendance at any institution of higher education in West Virginia.

3.2 Establishment of West Virginia domicile with less than 12 months’ presence prior to the date of registration must be supported by evidence of positive and unequivocal action. In determining domicile, institutional officials should give consideration to such factors as the ownership or lease of a permanently occupied home in West Virginia, full-time employment within the state, paying West Virginia property tax, filing West Virginia income tax returns, registering of motor vehicles in West Virginia, possessing a valid West Virginia driver’s license, and marriage to a person already
domiciled in West Virginia. Proof of a number of these actions shall be considered only as evidence which may be used in determining whether or not a domicile has been established.

3.3 Factors militating against the establishment of West Virginia domicile might include such considerations as the student not being self-supporting, being claimed as a dependent on federal or state income tax returns or the parents’ health insurance policy if the parents reside out of state, receiving financial assistance from state student aid programs in other states, and leaving the state when school is not in session.

Section 4: Dependency Status
4.1 A dependent student is one who is listed as a dependent on the federal or state income tax return of his or her parent(s) or legal guardian or who receives major financial support from that person. Such a student maintains the same domicile as that of the parent(s) or legal guardian. In the event the parents are divorced or legally separated, the dependent student takes the domicile of the parent with whom he or she lives or to whom he or she has been assigned by court order. However, a dependent student who enrolls and is properly classified as an in-state student maintains that classification as long as the enrollment is continuous and that student does not attain independence and establish domicile in another state.

Section 5: Change of Residence
5.1 A person who has been classified as an out-of-state student and who seeks resident status in West Virginia must assume the burden of providing conclusive evidence that he or she has established domicile in West Virginia with the intention of making the permanent home in this state. The intent to remain indefinitely in West Virginia is evidenced not only by a person’s statements, but also by that person’s actions. In making a determination regarding a request for change in residency status, the designated institutional officer shall consider those actions referenced in Section 2 previously. The change in classification, if deemed to be warranted, shall be effective for the academic term or semester next following the date of the application for reclassification.

Section 6: Military
6.1 An individual who is on full-time active military service in another state or foreign country or is an employee of the federal government shall be classified as an in-state student for the purpose of payment of tuition and fees, provided that the person established a domicile in West Virginia prior to entrance into federal service, entered the federal service from West Virginia, and has at no time while in federal service claimed or established a domicile in another state. Sworn statements attesting to these conditions may be required. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.

6.2 Persons assigned to full-time active military service in West Virginia and residing in the state shall be classified as in-state students for tuition and fee purposes. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.

Section 7: Aliens
7.1 An alien who is in the United States on a resident visa or who has filed a petition for naturalization in the naturalization court, and who has established a bona fide domicile in West Virginia as defined in Section 3, may be eligible for in-state residency classification, provided that person is in the state for purposes other than to attempt to qualify for residency status as a student. Political refugees admitted into the United States for an indefinite period of time and without restriction on the maintenance of a foreign domicile may be eligible for an in-state classification as defined in Section 3. Any person holding a student or other temporary visa cannot be classified as an in-state student.

Section 8: Former Domicile
8.1 A person who was formerly domiciled in the state of West Virginia and who would have been eligible for an in-state residency classification at the time of his or her departure from the state may be immediately eligible for classification as a West Virginia resident provided such person returns to West Virginia within a one-year period of time and satisfies the conditions of Section 3 regarding proof of domicile and intent to remain permanently in West Virginia.
Section 9: Residency Decisions/Appeals

Following is the process for initially determining residency for tuition purposes and how students appeal if they disagree with those decisions. Initial residency decisions are made at the admission level. Any questionable decisions are referred to the designated institutional official who determines whether the student meets the residency requirements or additional information is needed to make the decision. If additional information is needed, the student is requested to submit further documentation. If a student feels he or she has been improperly classified as a non-resident for tuition purposes, he or she should request an application for classification as a resident student at West Virginia University. To request this application write: Residency Officer, Office of Admissions., P.O. Box 6009, Morgantown, WV 26506-6009, or call (304) 293-2121.

Once this application and supporting documents are received, a decision is made by the designated institutional official. If the student meets the requirements as outlined by the Board of Trustees Policy Bulletin #34, the student is granted residency for the upcoming semester. If the student does not meet the necessary requirements, the student is denied in-state residency. If denied, the student has the option of appealing the decision to the WVU Council on Residency. The council consists of faculty and student representatives, whose number shall be at least three. The student representative(s) shall be appointed by the president of West Virginia University Student Administration while the faculty representative(s) shall be selected by the University Faculty Senate. The student contesting a residency decision shall be given the opportunity to appear before the institutional committee on residency appeals.

If the council overturns the initial denial, the student becomes a resident for the semester in question. Should the council uphold the original denial, the student has the option of appealing to the president of WVU. The president, again, may either uphold the original denial or overturn the decision of the council.

Residency appeals shall end at the institutional level.

Absences

Importance of Class Attendance At WVU, class attendance contributes significantly to academic success. Students who attend classes regularly tend to earn higher grades and have higher passing rates in courses. Excessive absences may jeopardize students' grades or even their ability to continue their courses.

Attendance Policies Instructors must set attendance policies that are appropriate for the goals and instructional strategies of their courses. Instructors may include attendance records in determining the final course grade. All attendance policies that affect students' grades must be announced in writing within the first week of class. Moreover, instructors are responsible for keeping accurate enrollment records, and for keeping accurate attendance records when attendance is used in grading. Attendance policies thought to violate the statement on student attendance should be discussed with the instructor, then with the department chair, and finally the college dean, if necessary.

Class Absences Students who are absent from class for any reason are responsible for all missed work and for contacting their instructors promptly, unless the instructors' policies require otherwise. However, instructors cannot require documentation of student illness from any medical provider as part of an attendance policy, since medical conditions are confidential and frequently not verifiable.

Make-Up Examinations Students absent from regularly scheduled examinations because of authorized University activities will have the opportunity to take them at an alternate time. Such make-up examinations should be of comparable difficulty to the original examination.

Students in courses with regularly scheduled evening examinations shall have the opportunity to make up these examinations if they miss them in order to attend a regularly scheduled class that meets at the same time. Such make-up examinations should be of comparable difficulty to the original examination.

Attendance at a regularly scheduled evening examination will not excuse a student from a regularly scheduled class that meets at the same time as the examination.

Days of Special Concern Instructors are urged not to schedule examinations or field trips on “days of special concern” that are identified in the Schedule of Courses.
Academic Leave of Absence

WVU offers undergraduate students in good standing, as defined by WVU’s uniform suspension policy and not subject to disciplinary action, the opportunity to request an academic leave of absence. The academic leave of absence is designed for the student who wishes to be away from his or her academic endeavors at WVU for one or more semesters, but intends to return at a later date. Leave of absence status must be requested before the beginning of the semester for which the leave is desired. The academic records of students on an academic leave of absence remain in an active status. While on an academic leave of absence, the student retains the right to use certain campus facilities such as the Study Skills Center, Writing Lab, Math Lab, Student Counseling Service, and Career Services. When a student decides to return to WVU after his or her academic leave of absence, application fees are waived. If a student attends any institution of higher education while on leave of absence, an overall average of 2.0 must be obtained on all work attempted in order to be eligible to return. An overall grade point average of 2.0 on all work attempted while on leave combined with the WVU grade point average is also acceptable. While on an academic leave of absence, the student receives communications from WVU. Academic advisors and the Office of the University Registrar can provide additional details about an academic leave and eligibility requirements.

Withdrawals

There are two types of withdrawals: Withdrawal from individual courses for which a student has registered and a complete withdrawal from the University. Deadlines for withdrawals for each semester are available at http://registrar.wvu.edu/current_students/withdrawal_policies. If students follow all established University procedures and withdraw before the published deadline, they will receive a W on their transcript. The grade point average is not affected in any way by this mark. If formal withdrawal procedures are not executed by the student, a failing grade/s will be recorded. Withdrawals from some part of the work must have the initial approval of the student’s advisor. It is the student’s responsibility to see that all forms are properly executed and delivered to the appropriate authorities for recording.

Withdrawal/Drop From Individual Classes

Until the Friday of the tenth week of class (or Friday of the fourth week in a six-week summer class, or Friday of the second week of a three-week summer class), students may withdraw from individual courses.

Students must obtain their advisor’s approval before withdrawing from classes. Students, with the help of their academic advisors, are responsible for determining:
- If their course load would be reduced below the minimum requirement set by their program;
- If their course load would be reduced below the minimum hours required to qualify for a graduate assistantship, financial aid, or international full-time student status;
- If the course to be dropped is a co-requisite for another course the student is taking or a prerequisite for a course required the following semester, the student may be required to drop the co-requisite course or asked to take a substitute course the following semester.

Withdrawal From All Classes for the Term

Deadlines

Students may withdraw from WVU for the term in which they are enrolled at anytime before the last day of classes of the term on which regular classes are scheduled to meet. Students will receive grades of W in all classes for that term.

Procedures

To withdraw from all classes through the last day to drop a class with a W, a student would log on to their MIX account and drop their classes through STAR.

To withdraw from the TERM after the last day to drop a class with a W, you may do any of the following:
- Visit the Office of the University Registrar.
- Send an email from your MIX Account only to webregistration@mail.wvu.edu. Please include your full name, last four digits of your student identification number, reason for your withdrawal, address, telephone number.
• Mail a request and include your full name, student identification number, reason for your withdrawal, address, telephone number, and signature to the following address: Attn: Registration Unit, Office of University Registrar, West Virginia University, P.O. Box 6009, Morgantown, WV 26506.
• Fax a request to (304) 293-8991 and include your full name, student identification, reason for your withdrawal, address, telephone number, and signature to the Office of the University Registrar.

Important Notice Financial aid recipients who withdraw from all classes before 60 percent of the term is completed may be required to return a portion of any financial aid that was received for the term. Students who do not receive at least one passing grade for classes in a term must provide documentation which verifies continued participation in educational activities. If documentation cannot be provided, those students are considered to have informally withdrawn from WVU prior to 60 percent of the term and may be required to return a portion of any financial aid which was received. This review and return of financial aid is done in accordance with federal regulations.

Re-Enrollment After Withdrawal
After a student withdraws from WVU in two consecutive semesters (excluding summer sessions), a student may not register for further work without approval of the dean of the college or school in which the student wants to register, subject to conditions set by that dean. In the case of a general studies major, the student must seek approval from the director of the University Services Advising Center.

Policy on Graduate Student Academic Rights and Responsibilities

Committee on Academic Standards
The Committee on Academic Standards of each college or school shall have authority to proceed according to its best judgment in regard to students referred to it for consideration. All orders of the committee shall become effective when approved by the dean of the college or school. In exercising its authority, the committee shall not suspend a student during a semester except for willful neglect and in cases where the student’s class grades are so low that further class attendance would be a waste of time. No suspension shall become effective until approved by the dean of the college or school.

Final Grade Appeals
Students have the right to appeal final course grades which they believe reflect a capricious, arbitrary, or prejudiced academic evaluation, or reflect discrimination based on race, sex, age, handicap, veteran status, religion or creed, sexual orientation, color, or national origin. The grade appealed shall remain in effect until the appeal procedure is completed or the problem resolved. The primary intent of this procedure is to provide a mechanism whereby a student might appeal a failing grade or a grade low enough to cause the student to be eliminated from some program or to require the repetition of a course. Grade appeals that do not meet this classification are not precluded.

Step 1 The student shall discuss the complaint with the instructor involved prior to the mid-semester of the succeeding regular semester, whether the student is enrolled or not. If the two parties are unable to resolve the matter satisfactorily, or if the instructor is not available, or if the nature of the complaint makes discussion with the instructor inappropriate, the student shall notify the chairperson of the instructor’s department or division (or, if none, the dean). The chairperson or dean shall assume the role of an informal facilitator and assist in their resolution attempts. If the problem is not resolved within 15 calendar days from when the complaint is first lodged, the student may proceed directly to step 2.

Step 2 The student must prepare and sign a document which states the facts constituting the basis for the appeal within 30 calendar days from when the original complaint was lodged. Copies of this document shall be given to the instructor and to the instructor’s chairperson (or, if none, to the dean). If, within 15 calendar days of receipt of the student’s signed document, the chairperson does not resolve the problem to the satisfaction of the student, the student will forward the complaint to the instructor’s dean (see step 3).
Step 3 Within 15 calendar days of receipt of the complaint, the instructor’s dean shall make a determination regarding the grade, making any recommendation for a grade change to the instructor involved. If the instructor involved does not act on the dean’s recommendation, or if the student is in disagreement with the decision of the dean, the dean will refer the case to a representative committee, appointed by the dean, for final resolution. This committee shall consist of three or more faculty members, including at least one person outside the instructor’s discipline.

- Upon receiving an appeal, the committee will notify in writing the faculty member involved of the grade challenge, which shall include a statement of the facts and evidence to be presented by the student.
- The committee shall provide to the faculty member involved and the student making the appeal written notification of their right to appear at a hearing to be held before the department, college, or school representative committee, together with the notice of the date, time, and place of the hearing.
- The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
- The final decision of this committee shall be forwarded to the instructor and to the dean involved. If the decision requires a change of grade, the instructor shall take action in accord with the committee’s decision.
- If the instructor does not act within five days, the dean shall make any necessary grade adjustment.
- In the case of grade appeals, the dean functions as the president’s designee; therefore, implementation of this decision shall end the appeal procedure.

Probation, Suspension, Readmission, Expulsion Policy Uniform Probation

Students with a cumulative grade point average below 2.0 are notified on semester grade reports that their academic performance is unsatisfactory. Such students may be subject to probation by the dean of their college or school. A unit may require a grade point average above 2.0 or other academic requirements for purposes of determining probation or meeting degree requirements. Students have the right to have the sanction of academic probation reviewed and explained by the academic official who imposed the sanction. Academic probation is not recorded on a student’s permanent record and essentially constitutes a warning to the student of standards which must be met.

Uniform Academic Suspension Regulations

The student whose cumulative grade point deficiency exceeds the allowable grade point deficiency (see table on page 22) is subject to suspension at any time. Normally, students are suspended at the end of a semester or summer school session. Deans have the authority to waive suspension in favor of probation if in their judgment the circumstances of individual cases warrant. The suspension rule will be set aside only under extraordinary conditions.

Academic suspension identifies the status of a student who has failed to meet the University minimum standards and who has been notified formally by the dean of the college or school of academic suspension. Suspension from the University means that a student will not be permitted to register for any classes, including those in summer sessions, offered by the University for Academic Credit until the student has been officially reinstated. The normal period of suspension is a minimum of one academic semester but will not exceed one calendar year from the date of a student’s first suspension. A student who has been suspended for academic deficiencies and who takes courses at other institutions during the period of suspension cannot automatically transfer such credit toward a degree at WVU upon readmission to the University. Students are not eligible for readmission if they earn less than a 2.0 at other institutions while on suspension from WVU.

After one semester of satisfactory performance (C average or better on a minimum of 12 credit hours earned during a regular semester or during the summer sessions) the appropriate transfer credit will be entered into the student’s record upon certification by the advisor and dean that the above conditions have been met. A student who has preregistered and is subsequently suspended shall have his or her registration automatically canceled.
Reinstatement After Suspension

During the semester immediately following the effective date of suspension, suspended students may petition in writing for reinstatement. The college or school petitioned shall establish the terms of reinstatement for successful student petitions. After one calendar year from the effective date of suspension, any student who has been suspended one time shall, upon written application, be reinstated to the University and to the college or school in which the student was previously enrolled, unless the student petitions for admission to another college or school. The college which reinstates the student removes the student’s suspension restriction in the Office of the University Registrar and accepts the student.

A suspended student who is reinstated under the provisions above will be placed on academic probation and will be subject to the maximum grade point deficiency regulations as before, unless the terms of probation agreed to by the student and that college stipulate otherwise. Each college or school shall have the right to establish requirements or performance expectations.

After the second or any subsequent suspension, a student may be reinstated to the University provided that a college or school agrees to reinstate the student. After a student has been reinstated, he or she must apply for readmission through the Office of the University Registrar.

Maximum Allowable Grade Point Deficiency*

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*The grade point deficiency is the difference between the number of grade points needed for a 2.0 average and the number of grade points that a student has actually earned in all courses attempted.

**Includes all hours attempted in institutions in the West Virginia system of higher education, excluding grades of P and exclusive of the D/F repeat policy.

Appeal of Suspension

Imposition of academic suspension based on grade point average, failure to meet the conditions previously specified for removal of academic probation, or failure to meet the conditions of admission, may be appealed under the following conditions:

- The student may appeal individual final course grades and, if successful, may be reinstated.
- The student may make an appeal to the appropriate dean based on erroneous calculation of the grade point average or on erroneous calculation of the time period within which a grade point average must be achieved. The decision of the dean, as the president’s designee, is final.

Students have the right to appeal academic suspensions based on requirements or standards other than grades or grade point average which they believe reflect capricious, arbitrary, or prejudiced academic evaluation, or reflect discrimination based on race or color, sex, sexual orientation, veteran status, religion, age, disability, national origin, creed, ancestry, or political affiliation. At the dean’s discretion, suspensions may remain in effect until appeal procedures are completed.

Step 1 The student shall discuss the complaint with the dean involved within 30 calendar days of the action taken. If the two parties are unable to resolve the matter satisfactorily within 15 calendar days, the student may proceed to Step 2.

Step 2 The student must prepare and sign a document which states the facts constituting the basis for the appeal. A copy of this document shall be given to the University Committee on Student Rights and Responsibilities. Within 15 calendar days of receipt of the appeal, the University Committee on Student Rights and Responsibilities will arrange a hearing using the following procedures:
• All parties involved shall receive written notice of the date, time, and place of the hearing.
• The student may be advised by a person of his or her choice from within the institution; likewise, the academic officer recommending suspension may have an advisor from within the institution. Such advisors may consult with but may not speak on behalf of their advisee or otherwise participate.
• The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
• Witnesses may be called by any of the parties involved.
• A record of the appeal shall be prepared in the form of summary minutes and relevant attachments and will be provided to any of the parties involved upon written request.

The decision of the University Committee on Student Rights and Responsibilities will be sent to the dean involved and the student within seven calendar days of the hearing. If the decision requires a reinstatement, the dean will take action in accordance with the committee’s decision. If the decision of the committee is to uphold the suspension, the student’s appeal must reach the appropriate vice president within 30 calendar days of receipt of the committee decision. The vice president will review and make a decision regarding the suspension within 15 calendar days of receiving the student’s appeal. The decision of the vice president, as the president’s designee, is final.

Uniform Academic Dismissal Regulations

Academic dismissal from the University means that a student will not be permitted to register for any classes, including those in summer sessions, offered by the University. Academic dismissal can result from repeated failure to make academic progress and/or to meet probationary terms set forth in writing by the student’s college or school.

After five calendar years from the effective date of academic dismissal, any student who has been dismissed shall, upon written application, be considered for reinstatement to the University, with the terms of reinstatement to be established by the college or school entered. Failure to meet these terms will result in permanent academic expulsion.

Appeal of Dismissal—Failure to Meet Academic Standards

The procedures and appeals described here do not apply to dismissal as a sanction for academic dishonesty. The time limitations stated herein are suggested in order to render a decision as expeditiously as possible. In the case of University holidays or absence of person(s) involved, reasonable delays may be expected.

A decision to dismiss a student for failure to meet academic standards (as distinguished from academic dishonesty) can be made only after the student has been counseled by the appropriate departmental committee or representative, with counseling to take place as soon as possible after discovery of the problem. After the student is given a reasonable opportunity to correct deficiencies, there shall then be a formal review of the student’s status by the appropriate departmental or program committee to determine whether the student shall be retained or dismissed. The student may provide the committee written documentation of his or her efforts to correct deficiencies.

A committee recommendation for dismissal, including any documentation provided by the student, shall be forwarded to the student’s dean and to the student. Within 15 calendar days of receipt of the committee’s recommendation, the dean shall inform the student and the student’s department or program of his or her decision. A decision to dismiss shall specify whether the dismissal is from the program or college or school. The dean may also dismiss a student from the institution if the student does not meet institutional standards.

Step 1 The student shall prepare and sign a document which states the facts constituting the basis for the appeal. A copy of this document must reach the dean within 30 calendar days of receipt of written notice of dismissal. The student shall be given an opportunity to discuss the appeal with the dean at any time in Step 1. If the matter is not resolved satisfactorily within 15 calendar days of the dean’s receipt of the student’s appeal, the student may proceed to Step 2.

Step 2 The student will forward a copy of the appeal to the appropriate vice president within 15 calendar days of failure to resolve the matter at the dean’s level. Prior to the decision of the vice president, the student will be given an opportunity to discuss the appeal with the vice president. The decision of the vice president, as the president’s designee, shall be rendered within 15 days of receipt of the student’s appeal and is final.
Appeal of Dismissal—Failure to Meet Academic Requirements or Performance Standards

Dismissal, based on failure to meet academic requirements or performance standards irrespective of grades or grade point average, from undergraduate programs, graduate programs, professional programs, and/or from the institution, may also be appealed. Students have the right to appeal academic dismissal based on requirements or standards other than grades or grade point average which they believe reflect capricious, arbitrary, or prejudiced academic evaluation, or reflect discrimination based on race or color, sex, sexual orientation, veteran status, religion, age, disability, national origin, creed, ancestry, or political affiliation.

Step 1 The student shall prepare and sign a document which states the facts constituting the basis for the appeal. A copy of this document must reach the dean within 30 calendar days of receipt of written notice of dismissal. The student shall be given an opportunity to discuss the appeal with the dean at any time in Step 1. If the matter is not resolved satisfactorily within 15 calendar days of the dean’s receipt of the student’s appeal, the student may proceed to Step 2.

Step 2 The student will forward a copy of the appeal to the University Committee on Student Rights and Responsibilities, which, within 15 calendar days of receipt of the student’s appeal, will arrange a hearing using the following procedures:

- All parties involved shall receive written notice of date, time, and place of hearing.
- The student may be advised by a person of his or her choice from the institution; likewise, the academic officer recommending academic dismissal may have an advisor from the institution. Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings unless they are given specific permission by the University Committee on Student Rights and Responsibilities chairperson.
- The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
- Witnesses may be called by any of the parties involved.
- A record of the appeal shall be prepared in the form of summary minutes and relevant attachments and will be provided to any of the parties involved upon written request.

The University Committee on Student Rights and Responsibilities will reach a decision within seven days. The committee’s recommendation for dismissal must be reviewed by the appropriate vice president, who may confirm or remand the recommendation with specific instructions. Prior to the decision of the vice president, the student will be given an opportunity to discuss the appeal with the vice president. Within 15 calendar days of a recommendation for dismissal confirmed by the vice president, the student may appeal to the president. The decision of the president is final.

Academic Integrity and Dishonesty

The academic development of students and the overall integrity of the institution are primary responsibilities of WVU. Academic dishonesty is condemned at all levels of life, indicating an inability to meet and face issues and creating an atmosphere of mistrust, disrespect, and insecurity. In addition, it is essential in an academic community that grades accurately reflect the attainment of the individual student. Faculty, students, and administrators have shared responsibilities in maintaining the academic integrity essential for the University to accomplish its mission.

Responsibilities

Students should act to prevent opportunities for academic dishonesty to occur and in such a manner to discourage any type of academic dishonesty. Faculty members are expected to remove opportunities for cheating, whether related to test construction, test confidentiality, test administration, or test grading. This same professional care should be exercised with regard to oral and written reports, laboratory assignments, and grade books.

Deans and department chairpersons are expected to acquaint all faculty with expected professional behavior regarding academic integrity, and to continue to remind them of their responsibility. Deans and department chairpersons shall assist faculty members and students in handling first-offense cheating allegations at the lowest possible level in the University, and with discretion to prevent damage to the reputation of any person who has not been found guilty in the prescribed manner.
Each member of the teaching faculty and all other WVU employees, including but not limited to assistants, proctors, office personnel, custodians, and public safety officers, shall promptly report each known case of academic dishonesty to the appropriate supervisor, department chairperson, or dean of the college or school concerned, and to the Office of Judicial Programs, Office of Student Life.

Academic Dishonesty Defined
WVU expects that every member of its academic community shares the historic and traditional commitment to honesty and integrity. Academic dishonesty is defined to include but is not limited to any of the following:

- Plagiarism is defined in terms of proscripted acts. Students are expected to understand that such practices constitute academic dishonesty regardless of motive. Those who deny deceitful intent, claim not to have known that the act constituted plagiarism, or maintain that what they did was inadvertent are nevertheless subject to penalties when plagiarism has been confirmed. Plagiarism includes, but is not limited to: submitting, without appropriate acknowledgment, a report, notebook, speech, outline, theme, thesis, dissertation, or other written, electronic, visual, or oral material that has been copied in whole or in part from the work of others, whether such source is published or not, including (but not limited to) an other individual’s academic composition, compilation, or other product, or commercially prepared paper.
- Cheating and dishonest practices in connection with examinations, papers, and projects, including but not limited to:
  - Obtaining help from another student during examinations.
  - Knowingly giving help to another student during examinations, taking an examination or doing academic work for another student, or providing one’s own work for another student to copy and submit as his or her own.
  - The unauthorized use of notes, books, or other sources of information during examinations.
  - Obtaining without authorization an examination or any part thereof.
  - Forgery, misrepresentation, or fraud.
  - Forging or altering, or causing to be altered, the record of any grade in a grade book or other educational record.
  - Use of University documents or instruments of identification with intent to defraud.
  - Presenting false data or intentionally misrepresenting one’s records for admission, registration, or withdrawal from the University or from a University course.
  - Knowingly presenting false data or intentionally misrepresenting one’s records for personal gain.
  - Knowingly furnishing the results of research projects or experiments for the inclusion in another’s work without proper citation.
  - Knowingly furnishing false statements in any University academic proceeding.

Procedure for Handling Academic Dishonesty Cases
Academic dishonesty includes plagiarism; cheating and dishonest practices in connection with examinations, papers, and projects; and forgery, misrepresentation, and fraud. Some cases of forgery, misrepresentation, or fraud which occur outside the context of courses or academic requirements may be referred directly to the University Committee on Student Rights and Responsibilities by any member of the University community. In such cases, the University Committee on Student Rights and Responsibilities will arrange a hearing following the procedure outlined in Step 3 within 15 calendar days of receipt of the charges.

Step 1 Instructor’s Level
- **Instructor’s Notice** An instructor who suspects a student of dishonest practices may meet with the student to discuss the evidence and may drop the matter without making a formal accusation and without imposing a penalty.

  An instructor may not find guilt or impose a penalty without a written charge that describes the evidence against the student. Within 15 calendar days of discovering clear evidence of an offense, an instructor who wishes to charge a student with academic dishonesty must personally deliver written notice of the charges or send the notice by certified U.S. mail to the student’s local and permanent addresses.
• **Student's Response** A student who elects to respond must do so in writing no later than 15 calendar days after the mailing or personal delivery of the instructor’s written notice. The student may respond by admitting or denying guilt, by offering counter evidence, or by describing extenuating or mitigating circumstances that might affect the instructor’s judgment of the severity of the offense.

• **Instructor’s Decision** Within five calendar days of the student’s response or after the opportunity for response has passed (whichever comes first), the instructor must reach a decision and send written notice of the decision to the student (and, if guilt is found, to others named below).

• **Charge Withdrawn** An instructor who believes that the evidence is not sufficient to establish guilt should immediately notify the student of this decision in writing, thus closing the case.

• **Penalty Imposed** An instructor who is convinced that the student is guilty and wishes to impose an academic penalty must summarize the evidence justifying the penalty in a written notice to the student. The notice must also inform the student of the right to petition the dean within 30 calendar days. Copies of the notice must be sent to the dean of college or school offering the course, the dean of the college or school in which the student is enrolled, and the Office of Judicial Programs. The maximum penalty an instructor may impose is an unforgivable F in the course. The Office of Judicial Programs will notify the Office of the University Registrar to enter an unforgivable F, which cannot be removed from the student’s transcript unless the decision is reversed. If the student repeats the course and a new grade is entered, the unforgivable F will still remain on the transcript. The instructor may exclude the student from further participation in the course, but is discouraged from doing so unless the student has admitted guilt in writing. The instructor may impose lesser penalties, including (but not limited to) a reduced grade on the work or examination in question, assignment of remedial work, or a reduced grade (including a forgivable F). The instructor may also recommend to the dean of the college offering the course that additional penalties be imposed.

**Step 2 Dean’s Level**

A student may petition the dean on two grounds, which may be presented at the same time or separately within the 30-day time limit. A student may (I) ask the dean to review the conduct of the case for adherence to correct procedures; (II) challenge the finding of guilt or the severity of the penalty; or (III) do both.

• **Procedural Review** A student who believes that the instructor failed to follow correct procedures at Step I may petition the dean of the college or school in which the course is offered to conduct a review of the procedures. The student must submit the petition in writing, specifying the procedural errors, within 30 days of the instructor’s written notice. Within 15 calendar days of receiving the student’s petition, the dean or the dean’s designee must:
  - Notify the instructor that a procedural review is being conducted at the student’s request and give the instructor an opportunity to reply.
  - Decide, after reviewing the available information, whether any procedural errors were made and whether such errors affected the outcome of the case.
  - Send written notice of the decision and its rationale to the student, instructor, and dean of the college in which the student is enrolled, and the Office of Judicial Programs. A dean or dean’s designee who decides that the outcome was affected may (I) direct the instructor to reopen the case and to correct the error(s) within a specified period of time or (II) overturn the instructor’s decision and nullify the penalty, in which case the dean must see that the student’s record is amended. If the dean or dean’s designee decides that the outcome was not affected, the instructor’s decision stands.

• **Appeal** A student who wishes to challenge the instructor’s finding of guilt or the severity of the penalty may appeal to the dean of the college or school in which the course is offered. The appeal must (I) be made in writing within 30 calendar days of the instructor’s written notice; (II) state specific grounds for any claim that the finding of guilt was unwarranted or the penalty unjust; and (III) specify the desired remedy. Within 15 calendar days of receiving the student’s appeal the dean or dean’s designee must:
  - Notify the instructor that the student is appealing and specify whether the finding of guilt, the severity of the penalty, or both will be reviewed.
• Solicit from the instructor and the student evidence and arguments relevant to the issues.
• Make this material available to both the student and the instructor.
• Arrange a meeting of the instructor, the student, and the dean or dean’s designee. (A person from within the University may accompany the student to the meeting and may consult with the advisee but not speak on behalf of the student or otherwise participate directly in the discussion unless given explicit permission by the dean or dean’s designee.
• Decide, based on the available evidence, whether to uphold the decision being challenged.
• Send written notice of the decision, with summary minutes of the meeting and a rationale for the decision to the student, instructor, dean of the college or school in which the student is enrolled, and Office of Judicial Programs.
• See that the student’s record is amended if necessary.
• Additional Penalties The dean or dean’s designee may impose penalties beyond those imposed by the instructor if the instructor recommends such action or if the dean’s under standing of the case in the context of other misconduct by the student suggests that additional penalties are warranted. The dean or dean’s designee may consider such action only after completing any procedural review or appeals requested by the student or after opportunities have passed for the student to initiate a review or appeal (that is, after it is clear that the instructor’s decisions will stand).
• Within 15 calendar days of this time, the dean or dean’s designee must:
  • Notify the student that additional penalties are being considered.
  • Give the student an opportunity to provide additional evidence or argument that might affect a decision about the appropriate penalty and to answer any questions by the dean or dean’s designee.
• Decide, based on the available evidence, whether to impose any additional penalties.
• Send written notice of the decision, including a summary of the evidence of the decision, including a summary of the evidence and a rationale for the decision, to the student, instructor, dean of the college or school in which the student is enrolled, and Office of Judicial Programs.
• See that the student’s record is amended if necessary.

Step 3 University Committee Level
A student or instructor may petition the Committee on Students Rights and Responsibilities on two grounds, which may be presented at the same time or separately within 30 calendar days of receipt of the dean’s decision. A petitioner may (I) ask the committee for a procedural review; (II) challenge decisions made at Step 2; or (III) do both. Those petitioning the committee must do so in writing through the Office of Judicial Programs.
• Procedural Review The student or the instructor may ask the committee to conduct its own review of the procedures followed in Steps 1 and 2.
  • The petition must (I) name the dean or instructor who is believed to have made the error(s); (II) describe the alleged procedural error(s); (III) specify how the error(s) affected the outcome of the case or otherwise harmed the student or the cause of justice; and (IV) include copies of all documentation and correspondence about the case.
  • On receipt of the petition, the committee chair, in consultation with the Office of Judicial Programs, will convene a panel of two faculty members and one student who will decide by majority vote whether to conduct the review. No member of this panel may serve on any other panel in connection with the same case. If the panel denies the petition, the procedural case is closed when written notice of the denial and its rationale have been sent to the student, instructor, dean of the college or school offering the course, dean of the college or school in which the student is enrolled, and the Office of Judicial Programs.
  • If a majority of the panel agrees that a review is warranted, they must (I) give the student, instructor, and dean a reasonable opportunity to answer any questions the panel may have; (II) decide, based on a review of the any such errors affected the outcome of the case; and (III) send written notice of the decision, with summary minutes of the meeting and a rationale for the decision to the student, instructor, deans of the college or school offering the course and the college or school in which the student is enrolled, and the Office of Judicial Programs.
  • A panel that decides by majority vote that the outcome was affected by error(s) may (I) direct the dean or instructor to reopen the case and to correct the error(s) within a specified period of time, or (II) overturn the finding of guilt and nullify the penalty. In either course of action, the panel must provide the rationale for the decision.
• The dean of the college or school offering the course must see that the student’s record is amended if necessary.
• Appeal The student or instructor may challenge the decision(s) of Step 2. (If the dean up held the instructor’s finding or penalty, then the student is appealing the instructor’s decision, not the dean’s.)
• The petition must (I) specify the decision being appealed; (II) name the person whose decision is being appealed; (III) specify grounds for any claim that the finding of guilt was unwarranted or the penalty unjust; (IV) specify the desired remedy; (V) provide additional evidence or line or argument not previously introduced that might affect the outcome of the case; (VI) include copies of all documentation and correspondence about the case.
• On receipt of the appeal, the committee chair, in consultation with the Office of Judicial Programs, must convene a panel of three faculty and two student members, chaired by one of the faculty members. This panel may decide by majority vote whether to conduct a hearing. If the panel decides that no hearing is warranted, the appeal is denied and the case is closed when written notice of the denial, including the rationale, has been sent to the student, instructor, dean of the college in which the course is offered, dean of the college in which the student is enrolled, and the Office of Judicial Programs.

If the panel deems a hearing is warranted, the Office of Judicial Programs must, in a timely manner, arrange a hearing to accommodate the schedules of the student, instructor, and dean, as well as any other parties involved, all of whom must be notified in writing of the date, time, and place of the hearing, as described below.
• The administrative procedure is not adversarial; the formal rules of evidence do not apply.
• Witnesses may be called by any of those involved.
• The person bringing the appeal and the person whose decision is under appeal may be accompanied by an advisor from within the University who may consult with but not speak on behalf of the advisee or otherwise participate directly in the proceedings unless given explicit permission by the chair of the panel.
• A written record of the hearing must be prepared in the form of summary minutes with relevant attachments and must be provided to those involved upon written request. In addition, a tape recording of the hearing must be made a part of the permanent record.
• Within seven calendar days of the hearing the panel must decide by majority vote, based on the available evidence whether to uphold the decision(s) under appeal and must send written notice of the decision, specifying the numerical vote, to the student, instructor, dean of the college or school offering the courses, dean of the college or school in which the student is enrolled, and Office of Judicial Programs. The dean of the college offering the course must see that the student’s record is amended if necessary.
• If the panel overturns the decision(s) of Step 2, whether by charging the finding of guilt or by imposing, reinstating, or modifying a penalty, the panel’s notice must summarize the evidence they considered and provide a rationale for the decision.
• In an appeal by a student, the panel may not impose a penalty more severe than that imposed or upheld by the dean at Step 2; in an appeal by an instructor, the panel may not impose a penalty more severe than that imposed by the instructor at Step 1.

**Step 4 President’s Level**
The student or the instructor may appeal the decisions made by the University Committee on Student Rights and Responsibilities, this appeal is made to the president or president’ designee. Such appeals must (I) be made in writing within 30 calendar days of notice of the decision of the Committee on Student Rights and Responsibilities; (II) state specific grounds for any claim that the committee’s decision was faculty or unjust; and (III) specify the desired remedy. On receipt of the appeal, the president or president’s designee will decide whether or not to hear the appeal. The decision of the president or of the president’s designee is final.

**Plan of Study**
Within the first academic year, the student submits a plan of study to the Health Sciences Center Graduate Programs Office. Once approved, the plan of study becomes part of the student’s record. It serves as a formal agreement between the student and program faculty as to the requirements for completing the graduate degree. Any changes to the plan of study must be made through mutual agreement, and the student must submit a memorandum of changes to the Health Sciences Center Graduate Program’s Office.
Dismissal

Dismissal from a graduate or professional program may be based on program and/or professional performance standards other than cumulative grade point average. Reasons must be based on catalog and other written documents describing academic and professional performance standards and expectations.

Procedures

• Counseling by departmental committee or representative as soon as possible after discovery of problem.
• Second counseling by departmental committee or representative after opportunity to improve if performance is not changed sufficiently.
• Formal review of student status by department or program committee. The formal review will result in one of the following actions:
  • Student retained or recommended for dismissal.
  • Counseling or remediation required as a condition of retention.
  • Appeals available if dismissal recommended.
  • A dismissal decision by the dean of the student’s school or college may be appealed to the University conduct/appeals committee which will hold a hearing using the following procedures:
    • The student may be advised by a person of his or her choice to assure due process protection not to affect the outcome of the proceedings. The advisor may consult with the student but shall not speak on behalf of the student or participate directly unless granted specific permission by the University conduct/appeals committee.
    • The formal rules of evidence do not apply.
    • The administrative procedure is not adversarial in nature.
    • Witnesses may be presented and examined under oath.
    • An accurate record of the procedure is to be kept. The student may request a transcript of the proceedings at the student’s expense.
    • An academic appeals committee has the right to counsel in those proceedings in which the student has retained counsel. Such counsel may not speak on behalf of the institution or otherwise participate directly in the proceedings.
    • A decision for dismissal must be reviewed by the appropriate academic vice president who may confirm or remand the recommendation with specific instructions.
    • Recommendation for dismissal confirmed by the appropriate academic vice president may be appealed to the president. The decision of the president is final.

Students’ Committees

Doctoral dissertation committees will consist of no fewer than five members, the majority of whom, including the chairperson, will be regular graduate faculty. No more than one person may be a non-member. At least one member of every doctoral committee must be from a department other than the one in which the student is seeking a degree.

Master’s committees of programs requiring a thesis will consist of no fewer than three members, the majority of whom will be regular graduate faculty, including the chairperson. No more than one person may be a non-member.

Master’s committees of programs not requiring a thesis will consist of no fewer than three members, one of whom must be a regular graduate faculty member. No more than one person may be a non-member, and the non-member cannot chair or advise.

Committee approval must be obtained prior to the second semester for a master’s degree and prior to the fourth semester for the doctorate. Committee approval for the nursing program is after the third semester.

Committee Approval

All graduate committees are subject to the approval of the school dean or designate and the Health Sciences Center Graduate Programs Office.
Other Relevant University Policies and Regulations

West Virginia University Policy on the Family Educational Rights and Privacy Act
http://ferpa.wvu.edu

The Family Educational Rights and Privacy Act of 1974 is a federal law which states: (a) that a written institutional policy must be established; and (b) that a statement of adopted procedures covering the privacy rights of students be made available. The law provides that the institution will maintain the confidentiality of student education records.

WVU accords all the rights under the law to students who are declared independent. No one outside WVU shall have access to nor will WVU disclose any information from students’ educational records, without the written consent of students except to personnel within WVU and the West Virginia Higher Education Policy Commission; to persons or organizations providing students’ financial aid; to accrediting agencies carrying out their accreditation function; to persons in compliance with judicial order; to organizations conducting studies for, or on behalf of, education agencies or institutions for the purpose of developing, validating, or administering predictive testing student aid programs, and improving instruction; and to persons in an emergency in order to protect the health or safety of students and or other persons; the victim of an alleged perpetrator of a crime of violence or non-forcible sex-offense (final results of the disciplinary proceeding only); the parent of a student under the age of 21, regarding the violation of any federal, state, or local law or institution policy governing the use or possession of alcohol or controlled substance; or to a student who is the alleged perpetrator of a crime of violence or non-forcible sex offense. All of these exceptions are permitted under the act.

The act also permits disclosure of information from a student’s educational records, without the written consent of students, to parents of a dependent student of such parents, as defined in Section 152 of the Internal Revenue Code of 1954, as amended.

The West Virginia University Policy on the Family Educational Rights and Privacy Act explains in detail the procedures to be used for compliance with the provisions of the act. Copies of the policy can be found in the offices of all deans and directors. The policy also is printed annually in the Daily Athenaeum and can be found at: http://ferpa.wvu.edu. The offices of the deans and directors can inform students as to the locations of all records maintained on students by West Virginia University.

Research Policy Guidelines

Research Involving Animals or Human Subjects

Any graduate student who conducts research with experiments using animals must have a protocol approved by the Animal Care and Use Committee before starting the research. Information about procedures and protocol forms may be obtained from the Office of Sponsored Programs.

Any graduate student who conducts research involving human subjects must have the approval of the Institutional Review Board for the Protection of Human Subjects before starting the research. Information about procedures and approval forms may be obtained from the Office of Sponsored Programs, 886 Chestnut Ridge Road, Morgantown, WV 26505-6845, (304) 293-3998.

Research Integrity at West Virginia University

Integrity in research and scholarship is an obligation of all who engage in the acquisition, application, and dissemination of knowledge. Research and scholarly work by West Virginia University faculty, staff, and students are governed by Policy and Procedures for Responding to Allegations of Misconduct in Research and Scholarship at West Virginia University. This policy can be found at http://researchoffice.wvu.edu/policies.
All members of the University community are obligated to report observed, suspected, or apparent misconduct in research. Reports should be made to the University’s research integrity officer, WVU Office of Research (304) 293-2867. Regular reviews of the status of research integrity at WVU are conducted by the Research Integrity Policy Committee.

**University Patent Policy**

West Virginia University is committed to supporting faculty members and staff in all matters related to patents based on discoveries and inventions created solely or jointly by them. This policy encourages and aids research at the University, provides financial compensation and professional recognition to inventors, and protects and serves the public interest.

The University recognizes that discoveries and inventions may, and frequently do, include equities. The use of University facilities, equipment, personnel, supplies, or services, the particular assignment of duties or conditions of employment, the possible claims of a cooperating agency, as in research supported from extramural funds, and other situations may give rise to complex rights involving the inventor, the University, and a sponsoring agency. Such rights must be evaluated and an agreement reached on their appropriate disposition. Policies and procedures involving the rights and obligations of the University, its sponsors, and its inventors with respect to inventions resulting from research, development, or other work performed at the University are overseen by the Office of Technology Transfer and can be obtained at www.wvu.edu/~research/techtransfer/policy.
School of Dentistry
Louise T. Veselicky, D.D.S, M.D.S, M.Ed., Interim Dean
Christina B. DeBiase, B.S.D.H., M.A., Ed.D., Associate Dean, Academic and Postdoctoral Affairs
Richard J. Crout, D.D.S., M.S., Ph.D., Associate Dean, Research
Robert L. Wanker, D.D.S., Assistant Dean, Student and Alumni Affairs

http://www.hsc.wvu.edu/sod

Degrees Offered
- D.D.S. in Dentistry
- M.S. in Dental Specialties (Endodontics, Orthodontics, and Prosthodontics)
- M.S. in Dental Hygiene
- B.S. in Dental Hygiene

Historical Background
The School of Dentistry was established by an act of the West Virginia Legislature on March 9, 1951, and the first class was enrolled in September 1957. The 23 members of that class graduated in 1961, receiving the first dental degrees awarded in West Virginia. In September 1961, the first two students were enrolled in the school’s baccalaureate degree program in dental hygiene and graduated in 1965.

Mission
To promote a learning environment that addresses the present and future oral health needs of the citizens of West Virginia and beyond by providing an oral health center committed to excellence and innovation in education, teaching, patient care, community service, research, and technology.

The WVU School of Dentistry offers degrees of doctor of dental surgery, master of science in dental specialties and dental hygiene, and bachelor of science in dental hygiene. The Department of Oral and Maxillofacial Surgery offers a four-year residency program, a one-year internship, and a one-year general practice residency program. Programs leading to the master of science and doctor of philosophy degrees are available in the associated basic sciences. Continuing education courses for dentists and auxiliaries are offered throughout the year on a wide variety of dental topics.

Accreditation
All programs are accredited by the Commission on Dental Accreditation of the American Dental Association.

Administration
The dean is responsible for implementing the established policies of the School of Dentistry, the Health Sciences Center, and the University. The dean of the School of Dentistry reports to the chancellor for Health Sciences.

Dental Clinic
Clinical training and experience constitute a major part of the curriculum for dental and dental hygiene students. Facilities for dental and dental hygiene students include over 75 treatment cubicles and all necessary related laboratories. Students treat their assigned patients under close supervision of faculty and receive practical experience while rendering service to thousands of patients annually.

Books and Instruments
Dental and dental hygiene students are required to obtain necessary textbooks for the scheduled courses and special instruments for use in the various laboratories and clinics. Lists of approved instruments and books will be provided at the time of registration, and these supplies will be made available through University services. Official authorization is essential in the purchase of all instruments and books used in dental courses. All dental students must maintain a library of required textbooks through graduation. Used instruments and equipment are not acceptable.
Organizations

American Student Dental Association. Pre-doctoral and advanced education dental students are eligible to become members of the American Student Dental Association. Membership provides for student membership in the American Dental Association.

American Association of Dental Research. All dental and auxiliary students, including advanced education students, are eligible to become student members of the American Association of Dental Research during the period of enrollment in the School of Dentistry.

American Dental Education Association. All dental and auxiliary students, including advanced education students, are eligible to become student members of the American Dental Education Association during the period of enrollment in the School of Dentistry.

American Association of Women Dentists. The objectives and purposes of the West Virginia University School of Dentistry Chapter of the American Association of Women Dentists are to offer opportunities for personal growth through association with women in the dental profession, support the goals of the American Association of Women Dentists, aid in the advancement of women in dentistry, promote professional support and cooperation among its members, and promote the fundamentals of good oral health.

Academy of Dentistry for Persons with Disabilities. The Academy of Dentistry for Persons with Disabilities is an international organization for dental students and hygiene students interested in management and treatment of special care patients. Community services are provided by assisting with Special Olympics and presenting disability awareness programs to area grade schools. Guest speakers are sponsored on topics such as: “Managing the Hearing Impaired Patient in the Dental Office,” “Use of Restraint in Treating Patients with Disabilities,” and “Child Abuse and Neglect in Special Needs Children.”

WVU School of Dentistry Alumni Association. In a series of meetings held during May 1961, the first senior class of the School of Dentistry established the WVU School of Dentistry Alumni Association. The association promotes the educational program of the School of Dentistry. Full membership is extended to all graduates of the school, and associate memberships are available to others interested in the aims of the association.

Omicron Kappa Upsilon. On February 6, 1961, the Alpha Beta Chapter of Omicron Kappa Upsilon, national honorary dental society, was chartered at the School of Dentistry. Student membership is limited to 12 percent of each senior class. Candidates are from the academically superior 20 percent.

Dental Fraternities. Chapters of two national dental fraternities, Delta Sigma Delta and Psi Omega, are active at the school.

Student American Dental Hygienists’ Association. Dental hygiene students are eligible for membership in the official organization representing the dental hygiene profession.

Sigma Phi Alpha. Alpha Xi chapter of the national dental hygiene honorary society, Sigma Phi Alpha was established on March 19, 1968. Student membership is limited to ten percent of each graduating class. Candidates are selected on the basis of scholarship, character, and leadership potential as a dental hygienist.

Undergraduate Program

Dental Hygiene
Amy D. Funk, M.S.D.H., Interim Director
e-mail: afunk@hsc.wvu.edu
1188 Health Sciences North
http://www.hsc.wvu.edu/sod/

Degree Offered

Bachelor of Science

Dental hygiene, a division of the School of Dentistry, offers a four-year curriculum leading to a B.S. in dental hygiene. The program is, in part, based in the liberal arts, but it is also a thoroughly professional education. The format of the curriculum is not conventional, in that it includes courses from many academic disciplines. The program prepares students through classroom and practical experiences.
Program Goals

Program goals include:
1. Provide a high quality program of instruction that prepares dental hygienists to:
   a. Possess a heightened awareness of social and cultural diversity, ethics, and professionalism.
   b. Apply critical thinking to integrate current scientific principles/technology with the provision of evidenced-based, comprehensive health care.
   c. Perform to the level of clinical competency those legally approved oral health services as defined by the West Virginia State Board of Dental Examiners and the WVU School of Dentistry.
   d. Perform to the level of laboratory competency those legally approved oral health services (beyond the scope of the West Virginia practice act) stipulated in the practice acts of other states, districts, or territories of the United States.
   e. Coordinate and administer oral health services for a variety of populations in diverse settings (public health agencies, hospitals, school systems, etc.).
   f. Function collaboratively with community leaders, health care professionals, and lay persons to manage the oral health needs of rural West Virginia.
   g. Provide didactic and clinical instruction in allied dental education programs.
   h. Pursue professional development through self-study, continuing education, research, and advanced studies at the master’s and doctoral levels.
2. Recruit, admit, and retain students with the potential to succeed within the dental hygiene program.
3. Create an environment conducive to faculty promotion, retention, and satisfaction.

Undergraduate Admission Requirements

To get an application, go to http://adm.wvu.edu/home/health_sciences_students and follow the “On-line Application” link at the bottom of the page. You may also get an application by contacting the Division of Dental Hygiene, West Virginia University, P.O. Box 9425, Morgantown, WV 26506, or the Office of Admissions, Health Sciences Center, West Virginia University, P.O. Box 9815, Morgantown, WV 26506. Applications for the fall semester should be received by March 1st of the preceding fall semester.

If you are applying to WVU as a freshman, you need to complete the entire dental hygiene application, including two one-page essays and the shadowing form. If you are not accepted into the dental hygiene program, you will be placed in general studies. You must have a diploma from an accredited high school or preparatory school. The following high school classes are required:

- English - 4 units (including grammar, composition, and language)
- Math - 4 units (including Geometry)
- Sciences (Lab) – 3 units
- Foreign Language – 2 units (must be in same language)
- Social Studies – 3 units
- Fine Arts – 1 unit

Particular attention is paid to scholastic achievement in science courses as well as overall grade point average. Involvement in community service activities is strongly encouraged. Applicants are expected to rank in the upper half of their graduating classes. Physical strength with the ability to sit and stand as required, fine precision bilateral manipulative hand/motor skills, adequate visual acuity, eye/hand/foot coordination, and emotional stability are essential characteristics for individuals who wish to enter and continue in the dental hygiene program. They must meet other medical qualifications as required. Reasonable accommodation will be considered for students with special needs.

Prior to application, interested students must take the American College Testing Program (ACT) examination or the Scholastic Aptitude Test (SAT). The Dental Hygiene Admissions Committee reviews all applications. If you are among the most qualified, you may be invited to come to the campus for a personal interview. Competition for admission is intense. Preference is given to residents of West Virginia.
Degree Completion Program

Registered dental hygienists can be admitted directly to the Division of Dental Hygiene as a full-time or part-time student. To be eligible for the degree completion program, students must have a certificate or associate’s degree from an accredited dental hygiene program. Lower-division credits may be transferred (see “Dental Hygiene Suggested Curriculum”). Acceptance and placement in the program depends upon the applicant's academic record and upon the number of spaces available. When applying to the program complete records of previous study must be included. In addition to an official transcript mailed to us by the registrar of all previous schools, catalog descriptions of the courses taken must be included. If currently enrolled in a certificate or associate’s degree program, the applicant must include the program of study. The applicant is responsible for the submission of complete records.

The degree completion program can be entered twice a year. Applications can be obtained after September 1 of the year preceding application to the program.

Requirements

To summarize the admission process for the degree completion program, applicants must:
- Complete the accredited certificate/associate’s degree program in which currently enrolled or offer proof of a previously completed program.
- Present at least a 2.5 grade point average for all college work attempted. If an applicant’s grade point average is below our minimum, the Dental Hygiene Admissions Committee can be petitioned for special consideration.
- Complete the Dental Hygiene National Board Examination successfully and submit the score. Submit two letters of reference, one from the director of the applicant's previous program and one from a clinical instructor. If an applicant has professional experience, a letter from an employer for either of the above may be substituted.

The Admissions Committee may ask applicants to come for a personal interview before they make a final decision on your application.

Dental Hygiene Academic Policies

At mid-term and the conclusion of every semester, the Dental Hygiene Committee on Academic and Professional Standards reviews the status of every student in the program. The committee may also convene more frequently as any professional/academic situations arise. The committee recommends promotion, probation, or dismissal to the dean of the School of Dentistry.

If students fulfill all course requirements, meet all professional standards, and have the necessary grade point averages, promotion is unconditional.

A. All students enrolled in the dental hygiene program must maintain full-time status and meet with the director prior to making any changes to their prescribed schedule. Alterations in your schedule could adversely affect your ability to meet program expectations and could result in sanctions up to and including dismissal.

B. Students must maintain cumulative and dental hygiene/science grade point averages of 2.25 or higher. The dental hygiene/science average is based on grades earned in these courses or their equivalents:
- Anatomy 205, 206 and 309
- Biology 102 and 104
- Chemistry 111 and 112
- Pathology 300 and 302
- Pharmacology and Toxicology 260
- Physiology 241
- Nutrition 171
- All Dental Hygiene courses

C. A grade of F in a dental hygiene/science course or failure to attain a 2.25 cumulative or dental hygiene/science grade point average in any semester will result in placing a student on probation

D. Student on probation who do not raise their cumulative or dental hygiene/science grade point average to 2.25 or better the following semester may be dismissed from the program.

E. A student who receives a grade of D, F, or WU in a required dental hygiene/science course must repeat that course. These courses may only be repeated once. Failure to earn a grade of C or better will result in dismissal from the program.
F. A student may repeat only two dental hygiene/science courses throughout the dental hygiene curriculum. A third D or F in a dental hygiene/science course may require the student to repeat the year as a full-time student as determined by the Academic Standards Committee. Four or more grades of D or F will result in dismissal from the program, and the student will be ineligible for readmission to the program.

G. Students repeating the year are required to repeat any dental hygiene courses in which they were enrolled that year and earned a grade of C or below. The Academic Standards Committee may also prescribe any additional course to enhance the student’s academic progress and psychomotor skills.

H. Prior to entrance into DTHY 370/372, a student must pass all basic science courses required in the first two years of the curriculum.

I. Dental hygiene/science pre-requisite courses in which students earn a grade of D, F, or WU must be repeated prior to the student’s progression to the next course in that sequence and at the discretion of the Academic Standards Committee, may result in repeating the year.

J. The Division of Dental Hygiene reserves the right to recommend imposition or academic sanctions, to require remedial work, or to withhold the opportunity to take one or more licensing exams. This policy would affect any student who may have met formal curriculum requirements, but who lacks the professional skills and/or behavior and conduct considered necessary for the baccalaureate degree in dental hygiene.

K. Students recommended for dismissal have the opportunity to appeal in writing to the Academic Standards Committee within five working days of receipt of the written notice and may be asked to meet in person with the recommending committee. (See Academic Sanctions: Procedures and Appeals in the WVU Student Handbook.)

L. Successful completion of the National Dental Hygiene Board Examination is a requirement for graduation. Failure to produce evidence of taking this examination before the first day of the spring semester of the senior year will result in academic sanctions up to and including repeating the year or dismissal.

M. All students are also required to take a clinical board for licensure prior to graduation. The School of Dentistry Division of Dental Hygiene reserves the right to declare a student ineligible for any licensure examination (national, regional, or state boards).

### First Year

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<th>First Semester</th>
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<th>Second Semester</th>
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<td>BIOL 102</td>
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<td>*COMM 100/102 or 104</td>
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<td>BIOL 104</td>
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<td>CHEM 112</td>
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<tr>
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<td>*DTHY 101 Intro to Dental Hygiene</td>
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<tr>
<td>ENGL 101</td>
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<td>*DTHY 186 Dental Anatomy</td>
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<td>HN&amp;F 171 Nutrition</td>
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<tr>
<td>UNIV 101</td>
<td>1</td>
<td>*PSYC 101</td>
<td>3</td>
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<tr>
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<td><strong>17</strong></td>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

**Summer I**

<table>
<thead>
<tr>
<th>Hrs.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NBAN 205 Anatomy (Web)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

### Second Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hrs.</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTHY 205 Theory/Practice-Prevent</td>
<td>2</td>
<td>DTHY 211 Dental Radiology</td>
<td>1</td>
</tr>
<tr>
<td>DTHY 210 Dental Radiology</td>
<td>2</td>
<td>DTHY 220 Dent Nursing Tech</td>
<td>2</td>
</tr>
<tr>
<td>NBAN 206 Anatomy</td>
<td>1</td>
<td>DTHY 225 Dent Hygiene Tech</td>
<td>4</td>
</tr>
<tr>
<td>MICB 200</td>
<td>3</td>
<td>*ENGL 102</td>
<td>3</td>
</tr>
<tr>
<td>*PSYC 241</td>
<td>3</td>
<td>*GEC Req. #3, 5, 8, 9</td>
<td>3</td>
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<tr>
<td>*SOCA 101</td>
<td>3</td>
<td>NBAN 309 Histology</td>
<td>2</td>
</tr>
<tr>
<td>*GEC Req. #3, 5, 8, 9</td>
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<td>PSIO 241</td>
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<td><strong>17</strong></td>
<td><strong>Total</strong></td>
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**Summer Semester**

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>DTHY 226 Clinical Dental Hygiene</td>
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</tr>
<tr>
<td>PCOL 260 (Web)</td>
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</tr>
<tr>
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Third Year

<table>
<thead>
<tr>
<th>First Semester</th>
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<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>DTHY 350 Public Health</td>
<td>2</td>
<td>DTHY 300 Anesthesiology</td>
<td>1</td>
</tr>
<tr>
<td>DTHY 360 Dent Materials</td>
<td>3</td>
<td>DTHY 351 Dental Health Education</td>
<td>3</td>
</tr>
<tr>
<td>DTHY 363 Periodontics</td>
<td>1</td>
<td>DTHY 361 Expanded Functions</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 366 Dent Literature</td>
<td>1</td>
<td>DTHY 364 Periodontics</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 370 Clinical Methods</td>
<td>2</td>
<td>DTHY 374 Clinic-DH</td>
<td>3</td>
</tr>
<tr>
<td>DTHY 372 Clinic DH</td>
<td>2</td>
<td>DTHY 378 Didactic Teaching Meth</td>
<td>2</td>
</tr>
<tr>
<td>PATH 300</td>
<td>3</td>
<td>PATH 302</td>
<td>3</td>
</tr>
<tr>
<td>*GEC Req. #3, 5, 8, 9</td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

Summer Semester

| DTHY 491 Rural Health                 | 3    | **Total**                               | **3** |

Fourth Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hrs.</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTHY 402 DH Practice Management</td>
<td>2</td>
<td>DTHY 406 Clinic-DH</td>
<td>3–4</td>
</tr>
<tr>
<td>DTHY 405 Adv Clinic-DH</td>
<td>4</td>
<td>DTHY 407 Clinical Methods</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 445 Applied Pharm</td>
<td>1</td>
<td>DTHY 440 Sr. Integration Seminar</td>
<td>1</td>
</tr>
<tr>
<td>DTHY 450 Dental Health Educ 2</td>
<td>2</td>
<td>DTHY 451 Dental Health Educ 3</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 478 Clinic Teaching Methods</td>
<td>1</td>
<td>DTHY Elective 490, 491, 493</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 493 Clinical Pharm</td>
<td>1</td>
<td>*GEC Req. #3, 5, 8, 9</td>
<td>3</td>
</tr>
<tr>
<td>DTHY Elective 490, 491, 493</td>
<td>1</td>
<td><strong>Total</strong></td>
<td><strong>13–14</strong></td>
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<tr>
<td>*GEC Req. #3, 5, 8, 9</td>
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<td></td>
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<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

(Minimum hrs. required to graduate =141)

Advanced Education Programs

The Division of Dental Hygiene and the Departments of Endodontics, Orthodontics, and Restorative Dentistry offer programs of advanced study leading to the degree of master of science. The department of oral and maxillofacial surgery offers one four-year residency. Three general practice residencies and two advanced education in general dentistry residencies are also offered. Continuing education courses are offered throughout the year. Detailed information concerning admission requirements, courses of study, etc., may be obtained from the Office of the Associate Dean for Academic and Postdoctoral Affairs, WVU School of Dentistry, P.O. Box 9402, Morgantown, WV 26506.

Dental Hygiene

Amy D. Funk, M.S.D.H., Interim Director
E-mail: afunk@hsc.wvu.edu
1188 Health Sciences North
http://www.hsc.wvu.edu/sod/

Degree Offered

Master of Science

The School of Dentistry and its Division of Dental Hygiene offer a program of advanced study leading to the degree of master of science. This program requires a minimum of 38 semester hours through full-time or part-time enrollment in the School of Dentistry. It is designed to qualify dental hygienists for careers in teaching, administration, research, and management.

Applications should be filed by July 1 for fall admission and by October 15 for spring enrollment.

Admission Requirements

The program’s admission requirements are as follows:

- Meet WVU requirements for admission to graduate study.
- Applicants who do not meet the minimum requirements for admission must gain provisional acceptance into the program. All provisions of admission must be met no later than completion of the 18th credit hour to be reclassified as a regular student. A student who fails to meet the provisions of admission or who fails to meet the required GPA will be suspended.
• Possess a baccalaureate degree in dental hygiene from an accredited dental hygiene program or a baccalaureate degree in another field of study from an approved institution of higher education while holding a certificate or associate's degree in dental hygiene from a program fully accredited by the American Dental Association Commission on Dental Accreditation.
• Demonstrate evidence of scholastic and clinical achievement to indicate the applicant’s ability to progress in a program of this nature.
• Generally, a minimum grade point average of 2.75 or above on a 4.0 scale on all college work attempted is required.
• Complete the Graduate Record Examination (GRE) general aptitude test with an acceptable score.
• Consent to and pass a criminal background investigation prior to final acceptance.
• Submit all information requested in the graduate application to the Office of the Associate Dean for Academic Affairs.

**Degree Requirements**

For the master of science degree, the following requirements must be met:

• Complete a minimum of 38 semester credit hours: 26 required credit hours and 12 credit hours in an elective area(s) of dental hygiene specialization. Two elective areas of specialization are offered: teaching/administration and special patient care. The student chooses one area of study. Courses within these specializations are taught by a number of schools or colleges within the University. An individualized program will be devised for each student which includes a maximum of six hours in research leading to an acceptable thesis. Oral defense of the thesis is required.
• Provide instruction in the undergraduate clinic a minimum of one semester.

**GPA**

In order to earn a master’s degree in dental hygiene, students must also meet the following:

• Achieve a 3.0 GPA or an overall academic average of at least a B in all work attempted in the master’s program. A grade of C or below in one course will require a faculty review of the student’s progress. A second C or below will result in dismissal from the program. A student may repeat only one course one time to bring the GPA up to the 3.0 requirement.
• Remove all conditions, deficiencies, and incomplete grades must be removed from the student’s transcript. Credit hours for courses with a grade lower than C do not count toward degree requirements.

**Curriculum**

**Basic Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBH 611 Applied Biostatistics in Health</td>
<td>3</td>
</tr>
<tr>
<td>PUBH 630 Policy and the Health System</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;I 689 Cultural Diversity in the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>EDP 612 Introduction to Research</td>
<td>3</td>
</tr>
<tr>
<td>DTHY 678 Dental Hygiene Teaching Methods</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 679 Dental Hygiene Clinical Evaluation</td>
<td>2</td>
</tr>
<tr>
<td>DTHY 680 Critical Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>DTHY 690 Teaching Practicum</td>
<td>1</td>
</tr>
<tr>
<td>DTHY 697 Research</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

**Elective Area(s) of Dental Hygiene Specialization**

<table>
<thead>
<tr>
<th>Courses taught by:</th>
</tr>
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<tbody>
<tr>
<td>Business and Economics</td>
</tr>
<tr>
<td>Educational Psychology</td>
</tr>
<tr>
<td>Medicine (Community Health Promotion)</td>
</tr>
<tr>
<td>Multidisciplinary Students Program</td>
</tr>
<tr>
<td>Human Resources and Education</td>
</tr>
</tbody>
</table>

**Total** .............................................................................................................. **12**

**Total** .............................................................................................................. **38 Hrs. (minimum)**
Endodontics
C. Russell Jackson, D.D.S., M.S.
1067 Health Sciences North
http://www.hsc.wvu.edu/sod

Degree Offered
Master of Science

The School of Dentistry and its Department of Endodontics offer a program of advanced study and clinical training leading to the degree of master of science. The program requires a minimum of 24 months (two academic years and two summer sessions) of full-time residency in the School of Dentistry. It is designed to qualify dentists for careers in endodontic clinical practice, teaching, and research.

Inquiries concerning this program should be directed to the Office of Academic and Postdoctoral Affairs. Applicants will be processed in the School of Dentistry. Applicants approved for admission to the program will be notified soon after interviews are completed.

Admission Requirements
The program’s admission requirements are as follows:

• Must have passed the National Dental Board Examination—Part 1 and Part 2.
• Must have earned a D.M.D. or D.D.S. degree.
• Must be a graduate of an accredited U.S. or Canadian Dental School.
• Must possess West Virginia state dental license.
• Must display evidence of scholastic and clinical achievement that would indicate the applicant’s ability to progress in a program of this nature. Generally, a minimum grade point average of 3.0 is required.
• Must apply to the program through the Postdoctoral Application Support Service (PASS, http://www.adea.org/dental_education_pathways/pass/ and have all application materials submitted to PASS by September 1. Please see the “How to Apply” section for more detailed information.
• Must consent to and pass a criminal background investigation prior to final acceptance.

Degree Requirements
For the master of science degree, the following requirements must be met:

• Fulfill University requirements for graduate study.
• Complete 24 months (two academic years and two summer sessions) of consecutive full-time advanced study and clinical training at the School of Dentistry.
• Complete an approved master’s thesis based on original research completed during the course of study in an area related to endodontics.
• Pass a final oral examination.
• Complete all didactic and clinical work in the required curriculum.
• Demonstrate satisfactory clinical competency in endodontics.
• Complete a minimum of 63 credit hours, including 35 hours of endodontic courses, a minimum of 11 hours of selected basic sciences subjects, six hours teaching practicum and a thesis (11 hours).
• Achieve a 3.0 GPA or an overall competence in the student’s field. A minimum grade of B must be earned in all work attempted in the master’s program. A grade of C or below in two courses will require a faculty review of the student’s progress. A third C or below will result in suspension from the program.

Orthodontics
Peter Ngan, D.M.D., Chair
1073 Health Sciences North
http://www.hsc.wvu.edu/sod

Degree Offered
Master of Science

The School of Dentistry and its Department of Orthodontics offer a program of advanced study and clinical training leading to the degree of master of science. The program requires a minimum of 34 months (three academic years and two summers) of full-time residency in the School of Dentistry. It is designed to qualify dentists for careers in orthodontic clinical practice, teaching, and research.
Inquiries concerning this program should be directed to the Office of Academic and Postdoctoral Affairs. Applications will be processed in the School of Dentistry. Applicants approved for admission to the program will be notified soon after December 1.

**Admission Requirements**

The program’s admission requirements are as follows:

- Must have passed the National Dental Board Examination—Part I.
- Must have earned a D.M.D./D.D.S. degree, or its equivalent.
- Must be proficient in the English language.
- Must provide the most recent TOEFL score (if you are a foreign applicant).
- Must submit undergraduate transcripts.
- Must display evidence of scholastic and clinical achievement that would indicate the applicant’s ability to progress in a program of this nature. Generally, a minimum grade point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS, http://www.adea.org/dental_education_pathways/pass/) and have all application materials submitted to PASS by September 1. Each applicant must also have a MATCH number from National Matching Services (www.natmatch.com). Please see the “How to Apply” section for more detailed information.
- Must consent to and pass a criminal background investigation prior to final acceptance.

**Degree Requirements**

For the master of science degree, the following requirements must be met:

- Fulfill University requirements for graduate study.
- Complete 34 months (three academic years and two summer sessions) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master’s thesis based on original research completed during the course of study in an area related to orthodontics.
- Pass the Mock ABO clinical examination which includes a written and an oral examination.
- Pass the written component of the ABO examination.
- Complete all didactic and clinical work in the required curriculum.
- Demonstrate satisfactory clinical competency in this field.
- Complete a minimum of 81 credit hours, including 54 hours of orthodontic courses, a minimum of eight hours of selected basic sciences subjects, six hours teaching practicum, and a research/thesis (13 hours).
- Achieve a 3.0 GPA or an overall competence in the student’s field. A minimum grade of B must be earned in all work attempted in the master’s program. A grade of C or below in two courses will require a faculty review of the student’s progress. A third C or below will result in suspension from the program.

**Prosthodontics**

Mark W. Richards, DDS, FACP, Director
1199B Health Sciences North
http://www.hsc.wvu.edu/sod

**Degree Offered**

*Master of Science*

The School of Dentistry and its Department of Restorative Dentistry offers a three-year program of advanced study and clinical training in the dental specialty of prosthodontics. The program requires a minimum of 53 months (three academic years and two summers) leading to a certificate in prosthodontics and a master of science degree. The purpose of this program is to train well-qualified dentists in all aspects of prosthodontics and is designed to qualify them for careers in prosthodontic clinical practice, teaching, and research.

Inquiries concerning this program should be directed to the Office of Academic and Postdoctoral Affairs. Applications will be processed in the School of Dentistry. Applicants approved for admission to the program will be notified soon after interviews are completed.
Admission Requirements
The program’s admission requirements are as follows:
• Must have passed National Dental Board Examination—Part I.
• Must have earned a D.M.D. or D.D.S. degree.
• Must be a graduate of a U.S. or Canadian Dental School
• Must be proficient in the English language.
• Must display evidence of scholastic and clinical achievement that would indicate the applicant’s ability to progress in a program of this nature. Generally, a minimum grade point average of 3.0 is required.
• Must apply to the program through the Postdoctoral Application Support Service (PASS, http://www.adea.org/dental_education_pathways/pass/) and have all application materials submitted to PASS by October 1. See the “How to Apply” section for more detailed information.
• Must consent to and pass a criminal background investigation prior to final acceptance.

Degree Requirements
For the master of science degree the following requirements must be met:
• Fulfill University requirements for graduate study.
• Complete 33 months (three academic years and two summer sessions) of consecutive full-time advanced study and clinical training at the School of Dentistry.
• Complete an approved master’s thesis based on original research completed during the course of study in an area related to prosthodontics.
• Pass a final oral examination.
• Complete all didactic and clinical work in the required curriculum.
• Demonstrate satisfactory clinical competency in this field.
• Complete a minimum of 77 credit hours. This includes 49 credit hours of prosthodontic courses, a minimum of 13 credit hours of selected basic science subjects, two hours of teaching practicum, and 13 credit hours for completion of a master’s thesis.
• Achieve a 3.0 GPA or an overall competence in the student’s field. A minimum grade of B must be earned in all work attempted in the master’s program. A grade of C or below in two courses will require a faculty review of the student’s progress. A third C or below will result in suspension from the program.

Doctor of Dental Surgery
The profession of dentistry offers many career opportunities. In addition to the general practice of dentistry, specialty practice areas may be pursued by further study. The fields of dental education and research provide the opportunity for satisfying and interesting careers. Men and women entering the oral health care delivery system find that they play an important role in the exciting and challenging world of the modern health sciences.

Because of the large number of applicants and limited openings available, preference in admissions is given to qualified West Virginians, although outstanding nonresident applicants are considered. Residency status is determined by the Office of Admissions in accordance with Policy Bulletin No. 34. Nonresident applicants should have a grade point average of 3.5 or above and an average score of 17 or above on the academic and PAT sections of the Dental Admission Test. Individuals from diverse backgrounds (especially if they are West Virginia residents) are encouraged to apply.

Admission Requirements
Admission to the WVU School of Dentistry Doctor of Dental Surgery (D.D.S.) program is contingent upon satisfactory completion of all admission requirements, appropriate completion of all application instructions, submission of all transcripts from each college attended, a personal interview, and satisfactory completion of all courses taken before the time of registration in dental school (includes courses taken during the summer session immediately preceding initial enrollment).

Application for admission in the fall of the year the applicant desires enrollment should be made upon completion of the preceding school year. A candidate for the D.D.S. degree must have abilities and skills of five varieties including observation; communication; motor; intellectual; conceptual; integrative and quantitative; and behavioral and social. Technological compensation can be made for some disabilities in certain of these areas, but a candidate should be able to perform in a reasonably independent manner. For further details consult the WVU School of Dentistry Technical Standards Document available in the School of Dentistry Office of Dental Admissions.
Applicants for admission must present evidence of having successfully completed three or more academic years of work in liberal arts from an accredited U.S. college. To be considered applicants must have completed at least 90 semester credit hours at the time of application. The prerequisites for admission include:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English composition and rhetoric, or equivalent</td>
<td>6</td>
</tr>
<tr>
<td>Zoology or Biology (with laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>Inorganic Chemistry (with laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry (with laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>Physics (with laboratory)</td>
<td>8</td>
</tr>
</tbody>
</table>

Courses in comparative anatomy, microbiology, embryology, biochemistry, physiology, cellular/molecular biology, and psychology are strongly recommended. In addition, courses in the humanities and the social sciences are suggested in order to acquire a broadened intellectual background for the study and practice of dentistry.

The School of Dentistry participates in the Associated American Dental Schools Application Service (AADSAS). All applications are processed by that organization. Applications may be submitted online and can be obtained from the AADSAS website: http://www.adea.org. The deadline for submission of a completed AADSAS application to the AADSAS office, for admission to the West Virginia University School of Dentistry, is November 1. This deadline is deliberately and explicitly discussed in the AADSAS instructions; applicants should review them carefully. Because deadline dates are so important, you are strongly urged to give this part of the application procedure your strict attention.

Each applicant is required to have letters of recommendation sent on their behalf. Refer to the School of Dentistry website for specific guidelines for obtaining written recommendations. Additionally, satisfactory completion of the Dental Admission Test (DAT) is required. This test is given at testing centers throughout the U.S. and its possessions, and in Canada. DAT scores must be submitted by November 1 of the year preceding the date of matriculation. Application cards may be obtained by writing to Division of Testing, Council on Dental Education, 211 E. Chicago Ave., Chicago, IL 60611.

Applicants who are West Virginia residents are usually interviewed, although the admissions committee may elect not to interview an unrealistic applicant. Selected non-resident applicants will also be invited for an interview depending on their academic qualifications.

Final acceptance of a student is contingent upon satisfactory completion of all requirements, including criminal background clearance prior to enrollment. The School of Dentistry criminal background investigation policy is available at http://www.hsc.wvu.edu/sod/admissions.

### International Dental Graduate Guidelines

International dental graduates who wish to apply to the WVU School of Dentistry Doctor of Dental Surgery (D.D.S.) program as a student in the first-year class must:

1. Submit an application through the Associated American Dental Schools Application Service (AADSAS) by November 1.
2. Provide documentation of a D.D.S. or D.M.D. degree (or equivalent) from a non-U.S. dental school.
3. Demonstrate proficiency in the English language as demonstrated by either performance on the Test of English as a Foreign Language (TOEFL), performance on the Test of Spoken English (TSE), and completion of at least six semester credit hours of English at an accredited U.S. college or university.
4. Provide three letters of recommendation by instructors familiar with the applicant, excluding family members.
5. Submit Dental Admission Test (DAT) scores showing at least average competence in the various subsections of the test, or provide evidence of having successfully passed the National Board Dental Examination, Part I, within the five years preceding the application.
6. Have all previous coursework from non-U.S. Colleges evaluated by Educational Credential Evaluators (ECE) or the World Educational Services (WES). The applicant is responsible for payment of fees for this service.
7. Provide official transcripts from all schools attended in the original language of issue, and
8. Present to the school for personal interview with the Admissions Committee, if invited. Applicants who are selected for an interview must complete the institutional application for admission and submit the associated fees. The transcripts of international dental graduates who are approved for an interview will be evaluated by the WVU Office of Admissions, International Admissions unit. West Virginia residents will be given priority consideration.
Degree Requirements
Candidates for graduation are recommended by the faculty of the School of Dentistry to the Board of Governors for approval and for the conferring of the degree of Doctor of Dental Surgery (D.D.S.), provided they fully meet the following conditions:

• Shall have been in regular attendance in the School of Dentistry for the academic period prescribed for each student.
• Shall have completed the prescribed curriculum for each of the academic sessions.
• Shall have shown good moral character and shall have demonstrated a sense of professional responsibility in the performance of all assignments as a student.
• Shall have met in full all financial obligations to the University.

In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend to the president of the University the removal of any student from its rolls whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession.

Curriculum
The required courses in the prescribed curriculum are presented throughout eight semesters and three summer sessions. During this time, all students are enrolled in courses designed primarily to prepare them to be competent in the general practice of dentistry. Throughout the program, overall student progress is continually monitored by the Academic and Professional Standards Committee. Students must remain full-time and must satisfactorily complete all courses for which they have registered. Additional requirements include participation in mock board examinations and a minimum of six weeks of remote-site training by fourth-year students.

Promotion
At the end of each grading period (i.e., each academic semester or summer session) all students will have their individual progress reviewed by the Academic and Professional Standards Committee convened for their class. The progress of each student in the curriculum is governed by minimum acceptable performance standards upon which the committee bases its decisions.

The standards consist of three categories: scholastic performance, clinic utilization, and professional development. Scholastic performance requires that each student must earn a specified grade point average to be promoted to the succeeding year. Clinic utilization requires that each student must utilize a specified percentage of available clinic time to demonstrate steady progress toward attainment of clinical competency. Professional development is an important component of the study of dentistry. The criteria for determining this development are based on the student’s personal behavior and patient management.

These performance standards are explained in detail in the document entitled WVU School of Dentistry Academic and Professional Standards. All first-year students are presented this document prior to entering school and are required to acknowledge by their signature that they have read and accepted the conditions set by the material contained therein. At the completion of each academic term, following the Committee on Academic and Professional Standards meetings, the status of each student is reported to the dean. The committee may recommend that a student be promoted unconditionally, be promoted on probation, be allowed to make up deficiencies, be given the opportunity to repeat the year, or be suspended or dismissed from further studies in the School of Dentistry. Final disposition in each case is the prerogative of the Committee on Academic and Professional Standards and the dean.

School of Dentistry Course Schedule

First-Year Didactic Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 701</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>DENT 710</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>DENT 712</td>
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<th>Course</th>
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<th>Second Semester Hrs.</th>
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<td>DENT 718</td>
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<td>DENT 731</td>
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### Summer Session Hrs.

<table>
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### Second-Year Didactic Courses

#### First Semester Hrs.

<table>
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#### Second Semester Hrs.

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### Summer Session Hrs.

<table>
<thead>
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<tr>
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<td>PR</td>
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<td>1</td>
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<td>DENT 783</td>
<td>PR</td>
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<tr>
<td>DENT 784</td>
<td>PR</td>
</tr>
<tr>
<td>DENT 786</td>
<td>PR</td>
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<tr>
<td>DENT 787</td>
<td>PR</td>
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<td><strong>Total</strong></td>
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### Third-Year Didactic Courses

#### First Semester Hrs.

<table>
<thead>
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#### Second Semester Hrs.

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<tr>
<td>DENT 791</td>
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### Summer Session Hrs.

<table>
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### Third-Year Clinical Courses

**Taken First/Second Semester and Summer**

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<td>DENT 775</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 776</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 777</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 780</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 783</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 784</td>
<td>1–6</td>
</tr>
<tr>
<td>DENT 785</td>
<td>1–6</td>
</tr>
<tr>
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<td>1–6</td>
</tr>
<tr>
<td>DENT 789</td>
<td>1–6</td>
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### Fourth-Year Didactic Courses

**First Semester**

<table>
<thead>
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<th>Hrs.</th>
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<table>
<thead>
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### Fourth-Year Clinical Courses

**Taken First and Second Semester**

<table>
<thead>
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<tbody>
<tr>
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<td>DENT 775</td>
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<td>DENT 788</td>
<td>1–15</td>
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*Courses denoted by PR (Progress) are two semesters in length. Credit hours and grades are earned during the final semester of the course.*

**Clinic courses receive a designation of PR until the semester in which the student graduates. Six credit hours are earned in each clinical discipline upon graduation.*
School of Medicine
Arthur J Ross III, M.D., Dean
Michelle Nuss, M.D., Interim Associate Dean, Hospital Services
James P. Griffith, M.D., Associate Dean, Student Services, Charleston Division
Norman D. Ferrari, M.D., Senior Associate Dean, Medical Education
Timothy Palencik, Associate Dean, Finance
Fred L. Minnear, Ph.D., Assistant Dean, Graduate Studies
MaryBeth Mandich, Ph.D., Associate Dean for Professional and Undergraduate Programs
James M. Shumway, Ph.D., Associate Dean, Medical Education
James M. Stevenson, M.D., Associate Dean, Continuing Medical Education
G. Anne Cather, M.D., Associate Dean, Student Services and Professional Development
C.H. Mitch Jacques, M.D., Dean, Eastern Division and Associate Vice President
Rosemarie Cannarella, M.D., Assistant Dean for Student Services, Eastern Division
Clark Hansbarger, M.D., Associate Vice President, Dean, Charleston Division
Konrad C. Nau, M.D., Associate Dean, Eastern Division
Gary Marano, M.D., Interim Associate Dean, Clinical Services
Kathleen C. Bors, M.D., Assistant Dean, Student Services, Charleston Division
Maria Kolar, M.D., Associate Dean, Veterans Affairs
Barbara Ducatman, M.D., Associate Dean, Faculty Services
David Wilks, M.D., Assistant Dean, Medical Education Technology
James O’Donnell, Ph.D., Assistant Dean, Research
Jamal Mustafa, Ph.D., Assistant Dean, Research
Leslie Miele, Chief Administrative Officer

http://www.hsc.wvu.edu/som

Degrees Offered
M.D., Doctor of Medicine
M.D./Ph.D., Joint Doctor of Medicine and Doctor of Philosophy
Ph.D., in Biochemistry and Molecular Biology
Ph.D. in Cancer Cell Biology
Ph.D. in Cellular and Integrative Physiology
Ph.D. in Immunology and Microbial Pathogenesis
Ph.D. in Neuroscience
M.H.S. in Pathologists’ Assistant
B.S., M.S., Ph.D., Exercise Physiology
M.S. in School Health Education
B.S. in Medical Laboratory Science
M.O.T., Master of Occupational Therapy
D.P.T., Doctor of Physical Therapy
Ph.D., Pharmaceutical and Pharmacological Sciences
M.D./M.P.H., Doctor of Medicine and Master of Public Health
Ph.D., Public Health Sciences
M.S., Biomedical Sciences

Introduction
The West Virginia University School of Medicine is a part of the Robert C. Byrd Health Sciences Center, a comprehensive academic health system with three campuses in the state, a network of affiliated hospitals and practice plans, and a mission of education, research, clinical care, and service to the state. On the main Morgantown campus, students have access to a full range of research and clinical facilities, including a new laboratory building and a wide range of advanced research centers. West Virginia University Hospitals includes sophisticated medical technology, including magnetic resonance imagery, lithotripsy, and laser surgery; the campus includes a large and busy tertiary hospital, a trauma center, children’s hospital, cancer center, a psychiatric hospital, primary care and specialty clinics, a rehabilitation hospital and many other patient care facilities.

Biomedical sciences graduate programs (in collaboration with School of Pharmacy) offer training in seven areas: Biochemistry and molecular biology; cancer cell biology; cellular and integrative physiology; exercise physiology; immunology and microbial pathogenesis; neuroscience; and pharmaceutical and pharmacological sciences. Biomedical sciences graduate students take a common core curriculum the first year and match with a faculty mentor and self-select into their specialty areas in year two.
The public health sciences Ph.D. program offers training in two tracts: Social and behavioral sciences; and population epidemiology and biostatistics. First-year graduate students take a common core curriculum and match with a faculty mentor and choose a specialty area in year two.

The Department of Human Performance and Applied Exercise Sciences incorporates exercise physiology, physical therapy, and occupational therapy. Additionally, the Department of Community Medicine has a M.P.H. program in public health with five specialty tracts, a generalist M.P.H online program, and a M.S. in school health. These programs complement all of the other existing programs in the other health professions schools (dentistry, nursing, and pharmacy).

**Departments**
- Anesthesiology
- Behavioral Medicine and Psychiatry
- Biochemistry
- Community Medicine
- Emergency Medicine
- Family Medicine
- Human Performance and Applied Exercise Science
- Medicine
- Microbiology, Immunology, and Cell Biology
- Neurobiology and Anatomy
- Neurology
- Neurosurgery
- Obstetrics and Gynecology
- Ophthalmology
- Orthopaedics
- Otolaryngology
- Pathology
- Pediatrics
- Physiology and Pharmacology
- Radiology
- Surgery

**Committees**
- Academic Standards
- Admissions Committee, M.D. Degree
- Admissions Committee, M.D. / Ph.D. Program
- Admissions Committee/Graduate Biomedical Sciences
- Admissions Committee/Medical Laboratory Science
- Admissions Committee/Occupational Therapy
- Admissions Committee/Pathologists’ Assistant
- Admissions Committee/Physical Therapy
- Continuing Medical Education
- Curriculum Committee
- Distinguished Teacher Committee
- Faculty Promotion and Tenure
- Graduate Medical Education
- Research Funding Development Grant Committee
- Bridge Funding Grant Committee
- Van Liere Research Convocation and Faculty Research Day

**Chairs**
- Richard Driver, M.D.
- James M. Stevenson, M.D.
- Michael Schaller, Ph.D.
- Alan Ducatman, M.D.
- Todd Crocco, M.D.
- James G. Arbogast, M.D.
- MaryBeth Mandich, Ph.D.
- Kevin Halbritter, M.D., Interim
- John B. Barnett, Ph.D.
- Richard D. Dey, Ph.D.
- John F. Brick, M.D.
- Julian E. Bailes, M.D.
- Michael Vernon, Ph.D.
- Judee Charlton, M.D.
- Sanford E. Emery, M.D.
- Stephen J. Wetmore, M.D.
- Barbara Ducatman, M.D.
- Giovanni Piedimonte, M.D.
- Robert L. Goodman, Ph.D.
- Mathis P. Frick, M.D.
- Richard Vaughan, M.D.

- Michelle Nuss, M.D.
- Jim Helsley, M.D.
- Michael Ruppert, M.D., Ph.D.
- Albert Berrebi, Ph.D.
- Beverly Kirby, Ed.D.
- Donna Colaianni, M.S., O.T.R. / L.
- Cheryl Germain, M.H.S.
- Carol Waggy, P.T., Ph.D. and Ralph Utzman, M.S.
- James Helsley, M.D.
- Michael Stitely, M.D.
- Ruth Kershner, Ed.D.
- Diane Trumbull, M.D.
- Norman Ferrari, M.D.
- Jefferson Frisbee, Ph.D. and Jeffrey Coben, M.D.
- Albert Berrebi, Ph.D.
- Paul Gordon, Ph.D., Stanley Hileman, Ph.D., and Joan Olson, Ph.D.
Biomedical Sciences Graduate Programs
Fred L. Minnear, Ph.D., Assistant Dean for Graduate Studies, Director, M.D./Ph.D. Scholars Program
fminnear@hsc.wvu.edu
Al Berrebi, Ph.D., Chair, Biomedical Sciences Admission Committee
aberrebi@hsc.wvu.edu
Claire Noel, Assistant Graduate Director, WVU Health Sciences
cnoel@hsc.wvu.edu
Penny Phillips, Staff Assistant, M.D./Ph.D. Scholars Program
pphillips@hsc.wvu.edu

Overview
The WVU Health Sciences Center offers biomedical research training leading to the Ph.D. and M.S. degrees and the joint M.D./Ph.D. degree. Our Ph.D. and M.S. students matriculate into a common, integrated core curriculum including research laboratory rotations. This integrated first year allows students to build competence in key areas of contemporary science, gain exposure to our seven training programs, and network scientifically and socially. In the second semester, students customize their coursework by selecting from an array of program-specific electives. By April of year one, students have acquired the necessary didactic and research knowledge to make an informed selection of a research advisor and one of our seven graduate training programs. M.D./Ph.D. scholars take the first two years of medical school, do research for three to four years in one of our seven training programs under the guidance of a graduate faculty advisor, and then complete the last two years of medical school.

Our seven graduate training programs are: Biochemistry and molecular biology; cancer cell biology; cellular and integrative physiology; exercise physiology; immunology and microbial pathogenesis; neuroscience; and pharmaceutical and pharmacological sciences.

Successful completion of the Ph.D. degree requires a 3.0 GPA, As, Bs, or S in research, passages of the qualifying examination, which usually includes a defense of the research proposal and dissertation defense, and at least one first-author manuscript, based on the Ph.D. dissertation research, published or in press in a peer-reviewed journal before the formal defense of the dissertation.

The goal of all seven biomedical sciences graduate Ph.D. programs is to train highly qualified students for academic and scientific careers as research investigators. The program provides the instructional and research background needed to enable doctoral candidates to complete an original Ph.D. project that advances the field and is acceptable for publication in peer-reviewed journals. This doctoral training serves as a foundation for further career development, which usually includes three to five years of postdoctoral research training.

Admissions
Ph.D. Students
Applicants to the Ph.D. graduate programs in the biomedical sciences and the Schools of Medicine and Pharmacy apply directly to the Office of Research and Graduate Education in the WVU School of Medicine. In addition, official transcripts and an official application for admission must be sent to the WVU Office of Admissions, P.O. Box 6009, Morgantown, WV 26506-6009. Both an online application and a printable hard copy application, as well as other essential forms, can be found online at http://www.hsc.wvu.edu/ResOff/PhDPrograms/BioMedSci.aspx.

Applicants must have a bachelor’s degree and excellent GRE scores. Three letters of recommendation and a personal statement are required. Students are invited in groups of ten to fifteen for paid, two-day visit/interviews from January through March. Students are admitted as a class by a common graduate admissions committee comprised of the graduate directors of each of our seven Ph.D.-degree granting programs, a senior Ph.D. student from the Graduate Student Organization (GSO), and the assistant dean for Graduate Studies.

Applicants must have a bachelor’s or equivalent academic degree and should demonstrate a strong background in the biological sciences, inorganic and organic chemistry, physics, and mathematics through calculus. Courses in biochemistry, cell biology, molecular genetics, and physical chemistry, and experience in research are recommended. Students with demonstrated abilities but lacking some recommended courses should correct these deficiencies in the summer preceding or after enrollment. Recommended are a minimum GPA of 3.0 and a GRE total of 1,000 for verbal and quantitative with a 4.0 in the analytical essay.
M.D./Ph.D. Students

Formal application requires successful application to the School of Medicine through the American Medical College Application Service (AMCAS), followed by a separate application to the director of the M.D./Ph.D. scholars program. M.D./Ph.D. candidates interview with two current M.D./Ph.D. scholars, the director of the scholars program, and selected graduate faculty.

Financial Aid

All Ph.D. and M.D./Ph.D. students matriculated in the biomedical sciences graduate programs in the WVU Health Sciences Center receive full financial support during their training, provided that they remain in good academic standing, a 3.0 GPA, and excellent performance in research. Stipend levels are considered for adjustment approximately every two years. Such support currently includes a $20,000 annual stipend, full tuition coverage, and student health insurance (hospitalization and disability).

Ph.D. Undifferentiated First Year

Advantages of an undifferentiated first year:
- Students acquire a fundamental yet in-depth exposure to relevant contemporary science
- Students have one year to select a specific training program and research advisor
- Larger numbers of available graduate faculty to select from for a research advisor
- Students develop important intellectual and social connections
- Enhances future collaborations among research laboratories

In year one, students:
- Take an integrated core curriculum that focuses on contemporary science and scientific integrity
- Take specialized areas of science that align with the research strengths of the graduate faculty
- Rotate through three active research laboratories supported by federal grants

First semester: Cellular Structure and Function and Fundamentals of Integrated Systems are the two major courses. Journal clubs are incorporated and complement the didactic information, emphasizing discussions of literature articles led by students and facilitated by the faculty. Biostatistics for the Basic Sciences provides an introductory background to statistics. Students take Discussions on Scientific Integrity that meets weekly, is led by individual faculty, and incorporates small and large group discussions of ethical and moral issues presented as scientific case studies.

Second semester: Molecular Biology, which also incorporates a journal club, is required of all students. In addition, students help design their own curriculum. Each of the seven graduate programs offers a module taught primarily from the current literature with an emphasis on discussions among students and faculty. Each student, with assistance from the graduate directors, selects two or three of these modules.

By April of year one, students are provided the necessary didactic and research experiences to make an informed selection of a research advisor and one of the seven graduate training programs. In the first summer, students take Scientific Writing. Students attend weekly lectures and complete assignments in two separate writing skills, a scientific journal article, and an NIH pre-doctoral fellowship grant.

M.D./Ph.D. Scholars Program

The WVU School of Medicine’s M.D./Ph.D. Scholars Program prepares students for academic careers that combine the practice and teaching of clinical medicine with laboratory investigation of disease mechanisms. The goal is to train independent investigators who can function in the future as physician-scientists. This joint training program requires at least seven years to complete.

Medical School, Years One and Two

Students enter the program in July before beginning medical school with an orientation to the various areas of research. Students choose one six-week research rotation before medical school starts in August. In years one and two, trainees take the integrated medical school basic science curriculum. All M.D./Ph.D. trainees participate in monthly research forums. At these forums, students present their research, learn from physician-scientist role models, and discuss academic career opportunities. During the summer of year one, trainees complete a rotation in one additional research laboratory to facilitate their final selection of a specific graduate program and research advisor by April of year two.
**Ph.D. Training**

After successful completion of years one and two of the medical curriculum and step 1 of the United States Medical Licensing Examination (USMLE), students enter the research portion of their Ph.D. training. There are two research opportunities in these two training programs are numerous and include cell and molecular biology, integrative physiology, immunology, exercise physiology, cardiovascular sciences, receptor biochemistry, bacterial pathogenesis, lung cell biology and environmental exposures, inflammation, molecular genetics, pharmacological sciences, neuroendocrine and reproductive biology, developmental biology, tumor invasion and angiogenesis, cancer cell biology, neurodegenerative disorders and stroke, functional brain imaging and cognitive behavior, learning and memory, as well as population-based outcomes and epidemiology studies relevant to public health. There are two M.D./Ph.D. training programs: Biomedical sciences and public health sciences. Before transitioning back to the clinical clerkships, students brush-up on their clinical skills by shadowing physicians, conducting physicals, and presenting case studies at the monthly M.D./Ph.D. forums.

**Medical School, Years Three and Four**

After the writing and successful defense of the doctoral dissertation, students complete years three and four of medical school at the Morgantown campus.

**Biochemistry and Molecular Biology**

Dr. Lisa Salati, Graduate Program Director  
lsalati@hsc.wvu.edu  
http://www.hsc.wvu.edu/som/bmp

**Degrees Offered**

- **Doctor of Philosophy**
- **Joint Doctor of Medicine and Doctor of Philosophy**

The disciplines of biochemistry and molecular biology seek to understand biology by exploring the functions of the molecular components of cells. A major goal of this program is to foster your ability for independent thought. To this end, our faculty cultivates an open, collegial relationship with one another and with our students. Close collaboration between scientists, the sharing of ideas, and open inquiry are critical components of our training plan. Our goal is to develop your independence as a scientist.

The hallmarks of graduate training in biochemistry and molecular biology are the emphasis placed on the use of the scientific literature in advanced coursework and on protecting time for laboratory research. In addition, you will have time for professional development through seminar presentation, attendance at national meetings, teaching opportunities, and seminar programs both within the department and throughout the Health Sciences Center.

Faculty research in the program can provide the student with training in multiple basic sciences areas: regulation of gene expression; chromatin silencing; RNA processing; cell survival mechanisms; intermediary metabolism; regulation of signal transduction by nutrients and metabolites; nutritional biochemistry; cell proliferation and cell cycle regulation; cell adhesion; ion channel biochemistry; kinases and phosphatases in signal transduction mechanisms involved in cancer cell metabolism; spirochete biology; oxidant-induced cellular stress; structure/function relationships of proteins; molecular genetics of visual and auditory development; G protein-mediated signaling in retina photoreceptors; and molecular basis of age-related blindness.

These research areas provide fundamental knowledge toward both the normal health state and the amelioration of multiple diseases: atherosclerosis; blindness; cancer; deafness; diabetes; and metabolic disorders.

**Doctor of Philosophy**

Upon successful completion of the undifferentiated first year, as outlined earlier, students choose a dissertation research advisor, at which time emphasis is placed on research. During the second year, specialized courses in biochemistry are offered as students continue their research projects. During subsequent years, students emphasize independent dissertation research, and a few formal courses may be taken.

Completion of the Ph.D. program is realized when the student successfully presents the research results to both the department and their Graduate Advisory Committee. Typically, four to five years are required to realize this goal.
Cancer Cell Biology
Dr. Scott Weed, Graduate Program Director
sweed@hsc.wvu.edu

Degrees Offered

**Doctor of Philosophy**
**Joint Doctor of Medicine and Doctor of Philosophy**

Research interests include biochemical, molecular and cellular basis of cancer origin and progression. Current research areas include:

**Tumor Microenvironment:** Tumor cell resistance to anoikis; effects of chemotherapy on the bone marrow microenvironment, stem cell regulation, leukemia/stromal interactions, effects of the extracellular matrix on angiogenesis and tumor cell invasion.

**Mechanisms of Metastasis:** Role of proteases in cell motility, regulation of the actin cytoskeleton in invadopodia formation and migration, signaling pathways in invasion and metastasis, imaging of metastasis in animal models.

**Genetic Regulation of Cancer:** Tumor suppressor genes and transcriptional regulation, post-translational modifications in transcriptional regulation.

**Heavy Metals and Cancer:** Effects of heavy metals on signal transduction pathways governing angiogenesis and tumor cell motility.

**Signal Transduction in Cancer:** Receptor tyrosine kinase signaling in cancer growth and metastasis, non-receptor tyrosine kinases in cell adhesion and proliferation, ROS in tumor progression, lipid kinase signaling in angiogenesis.

**Cancer Bioinformatics:** Biomarker classification in cancer, predictive models of carcinogenesis.

Cancer cell biology investigators working in these research areas routinely incorporate biochemical, molecular, cellular, animal and computational-based techniques that are currently utilized at the forefront of leading basic cancer research laboratories around the world. The main tumor types that are the current focus of cancer cell biology investigators are based on cancers with disproportionate incidences in West Virginia, including breast, leukemia, ovarian, cervical, lung, and head and neck cancers.

The doctor of philosophy program in cancer cell biology is designed to expose Ph.D. and M.D./Ph.D. level graduate students to a wide spectrum of opportunities available in basic and translational cancer research. In addition to mechanistic and therapeutic approaches to studying problems in cancer at the bench, students have the opportunity for exposure to more clinical elements of cancer practice, including participation in tumor boards, shadowing clinicians, and participation in the design and approval of clinical trials. The cancer cell biology program at WVU is a member of the Cancer Biology Training Consortium (CABTRAC), a national organization of similar cancer-specific Ph.D. programs that interact through annual regional and national meetings to improve and refine Ph.D. cancer training. Graduates of the cancer cell biology program are therefore well equipped to enter into a number of different career paths. These include postdoctoral research, biotechnology, industry, government, science writing, core facilities management, and legal counsel as examples.

**Qualifying Examination**

The qualifying examination consists of two parts. The written portion is conducted at the end of the first year of study, and is an evaluation of the student’s performance and aptitude conducted by the rotation mentors the student had during their first year. Students are judged on their competency at the bench, in-depth knowledge of each research topic they worked on, overall enthusiasm, and potential for success at the Ph.D. level. After successful completion of the second academic year, the students take an oral examination that consists of the writing and defense of the student’s research dissertation project in the format of a NIH grant proposal. Upon successful completion of both elements of the qualifying examination, the student is admitted to candidacy for the degree of doctor of philosophy.
Cellular and Integrative Physiology
Dr. Robert W. Brock, Graduate Program Director
rbrock@hsc.wvu.edu

Degrees Offered
Master of Science
Doctor of Philosophy
Joint Doctor of Medicine and Doctor of Philosophy

Physiology is a dynamic life science that focuses on the study of biological systems at many levels of complexity; ranging from genes and molecules to cells and organisms. Thus, training in physiology has the ultimate goal of linking molecular and cellular information to functional outcomes. Currently, groundbreaking research and discovery in the life sciences are more interdisciplinary than ever, and students studying within the realm of physiology can expect to work with a wide range of scientists. Our program provides a multidisciplinary approach to modern life sciences, drawing on faculty expertise from several departments and centers in the School of Medicine.

The program's participating research faculty consists of scientists from the Center for Cardiovascular and Respiratory Sciences, NIOSH/CDC, Center for Neuroscience, and the Blanchette Rockefeller Neurosciences Institute. As a result, this multidimensional program includes activities in integrative and systems physiology, pathophysiology, pharmacology, translational research, small animal physiology, biomedical engineering, and biophysics. It also integrates information from genetics, functional genomics, and proteomics into whole animal and human physiology.

This interactive and cross-disciplinary environment, together with an atmosphere filled with enthusiasm and passion for scientific discovery, makes our program a uniquely exciting place for doing research and the training of students. Specific topics of research emphasis include:

- Hemodynamics and Cardiovascular Control in Health and Disease
- Microcirculation and Cellular Biophysics
- Respiratory Function and Control in Health and Disease
- Neuroendocrine Control of Reproduction
- Neural Control of Sensory Physiology

The goal of the cellular and integrative physiology graduate program is to engage students in creating a new approach to the life sciences, with the aim of explaining how the higher-level properties of complex systems appear from the interactions amongst their parts. Students will leave our program better able to identify important unsolved scientific problems, and with an appreciation of how to select problems for which quantitative and theoretical approaches will be most productive.

Qualifying Examination
After successful completion of their second academic year, students take a two-part qualifying examination. The exam consists of an oral examination covering the major areas of physiology, followed by a written and oral research defense of the student's research proposal. Upon successful completion of the qualifying examinations, the student is admitted to candidacy for the degree of doctor of philosophy. Our graduates obtain excellent postdoctoral research training opportunities in prestigious laboratories and develop productive and satisfying careers in academics, industry, and government. Graduates have become departmental chairs, industrial department heads, university vice presidents, and entrepreneurs.

Neuroscience
Dr. Albert Berrebi, Graduate Program Director
aberrebi@hsc.wvu.edu

Degrees Offered
Doctor of Philosophy
Joint Doctor of Medicine and Doctor of Philosophy

The interdepartmental neuroscience graduate program is committed to training the next generation of researchers and educators. Successful completion of degree requirements is based on research and scholarly achievement. Students will have opportunities to experience and acquire the skills needed for successful careers as independent scientists, including critical thinking, problem solving, and leadership. Research experiences include evaluating scientific literature, identifying
critical scientific issues, experimental design, grant and manuscript writing, publication of scientific papers, and presentations at national meetings. Students with career interests in teaching will have the opportunity to gain experience in innovative teaching methods and techniques, including problem-based learning, computer-assisted learning, and integrated teaching approaches. The program faculty's expertise spans all neuroscience sub-disciplines, including structural, cellular, molecular, and developmental. After completion of core coursework, students conduct an original research project culminating in a doctoral dissertation.

Current research areas include:

- **Sensory Neuroscience:** Mechanisms of auditory and visual system development; inhibitory neural circuits in the brain stem and cortex; synaptic development of thalamocortical circuits; molecular genetic control of retinal development and neural patterning; cell biology of G-protein-mediated signal transduction in vertebrate photoreceptors; olfactory signal processing in the brain; post-translational modification of proteins and protein assembly.

- **Cognitive Neuroscience:** Sound recognition, spatial hearing and sensory integration using fMRI; use-dependent plasticity in motor cortex after stroke; neurogenic communication disorders.

- **Neural Injury:** Functional and structural integrity of the blood brain barrier in health and disease; role of neuroinflammation in CNS pathologies; stroke pathophysiology and neuroprotection.

- **Behavioral Neuroscience:** Airway innervation and asthma; structural and functional changes in the hypothalamus of seasonal breeders; neurobiological pathways controlling food intake and obesity; plasticity in the amygdala; development of new compounds to treat neurological and psychiatric disorders; developmental aspects of sleep and sleep disorders; molecular psychopharmacology; learning, memory and synaptic plasticity; signal transduction pathways involved in neurodegenerative and neuropsychiatric disorders.

- **Interdisciplinary research projects include:** Structure and transcriptional mechanisms controlling neural gene expression; molecular biology and molecular genetics of neural degeneration and regeneration in the central nervous system; developmental neurochemistry and environmental influences on brain development, especially nutrition; neuroanatomy and neurophysiology of somatosensory and auditory systems; structural plasticity of astrocytes and modulation of synaptic contacts in the central nervous system; developmental neurobiology of anxiety disorders; development of synaptic connections in the neocortex; developmental genetics of rodent behavioral mutants; neural basis of pulmonary diseases, especially asthma and occupational/environmental diseases; mechanisms regulating microcirculation under pathophysiological conditions.

**Seminars and Journal Clubs**

Students develop skills in formal presentation, critical thinking, and scientific analysis by participating in neuroscience seminars and journal clubs.

**Ph.D. Candidacy**

To be admitted to candidacy for the Ph.D. degree, the student must pass a preliminary examination and present a plan for the dissertation research project for approval by the candidate’s Advisory Committee.

**Ph.D. Dissertation**

To be recommended for the Ph.D. degree, each student must satisfactorily complete a dissertation based on original research and defend the dissertation at an oral examination. Success in the dissertation research is the core of the degree.

**Pharmaceutical and Pharmacological Sciences**

Dr. Rae Matsumoto, Graduate Program Director
rmatsumoto@hsc.wvu.edu
www.hsc.wvu.edu/sop/graduate_programs/phd_specializations.html

**Degrees Offered**

- **Master of Science**
- **Doctor of Philosophy**
- **Joint Doctor of Medicine and Doctor of Philosophy**

Research interests are complementary to a focus on drug discovery and development. Key areas of research interest and expertise are in:

- **Drug discovery science:** In silico drug design; medicinal chemistry
- **Drug metabolism:** Pharmacokinetics; pharmacogenomics; enzyme structure-activity relationships; toxicology mechanisms; bioanalytical chemistry
Drug delivery: Formulation; drug transport mechanisms; nanopharmaceutics; polymer-based drug delivery

Molecular therapeutics: Drug target identification and validation; nucleic acid-based therapeutics; protein-based therapeutics; phosphodiesterase inhibitors

Pharmacology: Neuropharmacology; cardiovascular pharmacology; pulmonary pharmacology

Toxicology: Drug-induced adverse effects; free radical toxicology and carcinogenesis; pulmonary toxicology; drug interactions; nanotoxicology

Translational research: Pre-clinical and clinical testing; cancer nanotechnology; pharmaceutical technology and processes

The Computational Chemistry Molecular Modeling (CCMM) Laboratory is a focal point for drug discovery at WVU.

Community Medicine
Educational Programs in Public Health

Alan M. Ducatman, M.D., M.Sc., Professor and Chair, Community Medicine
Ian R. H. Rockett, Ph.D., M.P.H., Professor and Associate Chair, Community Medicine and Director of Educational Programs
Keith Zullig, Ph.D., M.S.P.H., Associate Professor, Community Medicine, Director of the Ph.D. Program in Public Health Sciences
Ruth E. Kershner, Ed.D., R.N., Associate Professor, Community Medicine, Coordinator of M.S. in School Health Education
Leah A. Adkins, Educational Programs Senior Program Coordinator

Graduate Education Opportunities

Public Health degree programs
Master of Public Health (on campus and online)
Ph.D. in Public Health Sciences

School Health Education degree program
Master of Science

Master of Public Health (M.P.H.)

The field of public health encompasses a number of specific disciplines whose mission is to prepare individuals to help improve the health and quality of life in the population through education, research, and service. Public health strategies typically are implemented at a broad societal and population level; for example, environmental regulations, water quality control, immunization programs, and health education initiatives.

The M.P.H. program seeks students with a strong, genuine commitment to a career in public health. An M.P.H. degree is appropriate for physicians, nurses, nutritionists, and other health care professionals with a strong interest in preventive medicine and community health. We welcome applications from both mid-career professionals and students who have recently completed a bachelor’s degree. Physicians may also apply to the occupational medicine residency program, designating the M.P.H. as part of their residency

Program Description

The future of public health will be shaped by our nation’s public health agencies via health assessment, policy development, and public health services. The WVU School of Medicine addresses these core functions of public health through the M.P.H. degree (both on campus and online) with tracks focused on epidemiology and biostatics, social and behavioral theory, environmental health, health policy and management, and generalist, all of which are offered by the Department of Community Medicine. The M.P.H. program prepares students to fill decision-making roles in managed care and other integrated delivery systems, the medical products industry, health departments and other governmental agencies, consumer groups, and community-based organizations. This program is accredited by the National Council on Education for Public Health (CEPH).
Mission and Goals
The mission of the M.P.H. program is closely aligned with the educational mission of the WVU School of Medicine’s which is to improve the health of West Virginians through the education of health professionals, basic/clinical scientific research and research in rural health care delivery, the provision of continuing professional education, and participation in the provision of direct and supportive health care.

The specific M.P.H. program educational mission includes the following goals:
1. Maintain an educational environment that provides students with the opportunity to acquire public health knowledge, skills, and practice grounded in theory and evidence, provided by quality faculty in an environment that respects diversity.
2. Support a research agenda that is grounded in current theory and evidence to provide leadership in public health knowledge and practice.
3. Support a service agenda that complements program goals through faculty and student participation in public health policy and practice.

Admission Requirements
Admissions decisions will be based on an overall assessment of the applicant’s demonstrated commitment to public health and her/his educational and professional preparation for the successful completion of the M.P.H. degree program. All aspects of an applicant’s record, such as professional experience and career achievements, will be considered. The Admissions Committee reviews applications on a rolling basis. Contact the Department of Community Medicine for current application deadline dates.

Applicants to the M.P.H. Program Must:
1. Hold a bachelor’s degree from an accredited college or university and a minimum grade point average of 2.75 on a 4.0 scale.
2. Submit scores for the General Test of the Graduate Record Examination (GRE). (Contact the department for a list of examinations that may substitute for the GRE exam).
3. Submit an Application for Graduate Admission to West Virginia University and attach a nonrefundable check for the amount specified on the application form.
4. Submit sealed transcripts of all college coursework to the Graduate unit, West Virginia University, Office of Admissions.
5. Complete an official M.P.H. Program Application and three letters of recommendation.
6. Submit a Track of Interest Form (on-campus applicants only).
7. Submit an essay stating interest in public health/community health.
8. Submit a CV/resume.
9. Computer skills are a program requirement. It is the responsibility of students to become skilled in computer applications.
10. A minimum score of 550 (paper-based) or 213 (computer-based) on the TOEFL (Test of English as a Foreign Language) exam is required for all international applicants whose first language is not English.

Performance Standards
GPA and grade requirements are as follows:
1. Students are required to maintain a GPA of at least 3.0 on all work taken as a graduate student while enrolled in community medicine graduate programs. A student must have 3.0 GPA or better in order to graduate from the program.
2. Students admitted with a 2.75 to 2.99 GPA must have attained a 3.0 GPA or above at the end of their first semester or they will be dismissed.
3. Students admitted with a 3.0 GPA must have a minimum 3.0 GPA every semester. If their GPA falls below 3.0 one semester, they will be placed on probation. If the GPA falls below 2.75 they will be suspended.
4. Two grades of C or below while enrolled as a graduate student will result in probation. Three grades of C or below while enrolled as a graduate student will result in suspension.
5. A grade lower than C will not be counted towards satisfying degree requirements. A grade lower than a C must be repeated for all required graduate program courses.
6. A grade of F in any course taken to satisfy degree requirements in a community medicine graduate program will result in automatic program dismissal.
7. Students may refer to the WVU Board of Governors Policy 15, Student Academic Rights at http://bog.wvu.edu/r/download/4219 and also, CMED website: http://www.hsc.wvu.edu/som/cmed/PDF/Student-Policies.pdf for current student policies.
Course of Study for On-Campus M.P.H., Including Specialty Tracks
1. The M.P.H. on-campus degree requires 42 credit hours.
2. Upon matriculation, students will be asked to provisionally select a track. There are five specialty tracks: biostatistics and epidemiology, environmental health, health policy and management, social and behavioral science (with an option of two concentrations: women's health; and wellness and health promotion), and a generalist track.
3. Students are required to formally select a track after nine credit hours have been completed. If necessary, new advisors will be assigned.
4. Six core three-credit hour courses are required in addition to an eight-credit hour practicum and a one-credit hour seminar-total of 27 credit hours required.
5. Students are required to take nine credit hours (three courses) of track-specific courses. (Exception: Generalist requires 15 credit hours of electives.)
6. Six credit hours of other electives can be selected from a list of suggested courses for the track or from the general list of electives approved by the M.P.H. program.

Course of Study for On line M.P.H. Program (Generalist Track Only)
1. The M.P.H. online degree requires 42 hours.
2. Six core three-credit hour courses are required in addition to an eight-credit hour practicum, and a one-credit hour seminar-total of 27 credit hours required.
3. Fifteen hours of online elective coursework are required.

Since unforeseen circumstances and program implementation might necessitate a change in our curriculum, we encourage prospective and current students to visit the educational programs website at: http://www.hsc.wvu.edu/som/cmed/ for current requirements. Information on Department of Community Medicine specializations/certificates (M.P.H. certificate in women's health, M.D./M.P.H., public health track M.D./M.P.H.) is available at http://www.hsc.wvu.edu/som/cmed/.

For more information about the M.P.H. program contact: Leah Adkins, Educational Programs Senior Program Coordinator or Ian Rockett, Ph.D., M.P.H., Professor and Associate Chair, Director of Educational Programs at P.O. Box 9190, WVU School of Medicine, Morgantown WV 26506, phone (304) 293-2502, fax (304) 293-3755, e-mail: ladkins@hsc.wvu.edu or irockett@hsc.wvu.edu.

Doctor of Philosophy (Ph.D.) in Public Health Sciences
The Ph.D. program in public health sciences is a degree for scientist-practitioners in the area of prevention of premature mortality, morbidity, and disability resulting from communicable disease, chronic disease, and injury. This program features a common first-year core curriculum that includes intensive training in public health research methods, epidemiology, and biostatistics. The program offers two specialist tracks in distinct areas of public health: social and behavioral sciences, and population epidemiology and biostatistics.

The social and behavioral sciences track features public health-specific coursework in social and behavioral theory, qualitative and quantitative public health research methods, social and behavioral risk factor measurement, multivariate statistics, public health needs assessment, intervention design, graduate electives in topical areas, and advanced research.

The population epidemiology and biostatistics track will feature coursework in epidemiology, biostatistics, research design, multivariate data analysis, chronic disease epidemiology, secondary data analysis, categorical data analysis, topical graduate electives, and advanced research.

Detailed curricula are available at the Ph.D. program website: http://www.hsc.wvu.edu/som/cmed/.

Goals of the Ph.D. Program
The Ph.D. in public health sciences emphasizes both evidence-based primary prevention of disease and injury, and health promotion research and practice. Program goals are to:

- Train the next generation of public health leaders and produce a self-renewing cadre of teachers, researchers, and practitioners who will help shape and sustain the best public health practices.
- Identify and address public health disparities.
- Improve health and health care in our state, and simultaneously improve the economic competitiveness of the WVU Health Sciences Center, emulating what similar training programs have done in other states.
- Feature trans-disciplinary teaching and research so that trainees of the program will be able to compete for the highest level public health jobs, grants, and research opportunities.
- Create a pool of epidemiologic, behavioral science, demographic, and environmental health talent for developing highly technical enterprises in West Virginia that seek to influence health behavior at the community and policy level.
Coursework Summary

The 116-hour program features a common undifferentiated curriculum for the first year. During this time students can select one of the two tracks in which to matriculate. The first year will feature a seminar series for faculty to introduce their research to students.

Key components of the core-integrated first year are a series of courses in epidemiology, scientific integrity and ethics, grant writing, and research and statistical methodology, and three research rotations with potential faculty mentors. Over two semesters and the summer, the first-year curriculum is 33 credit hours in duration. Additional years are of similar length.

The program features a common undifferentiated curriculum for the first year. During this time students can select one of the two tracks in which to matriculate. The first year will feature a seminar series for faculty to introduce their research to students. In any public health doctoral program, key components of the proposed core-integrated first year are a series of courses in epidemiology, scientific integrity and ethics, and research and statistical methodology. In the second year of coursework students will engage in required courses and electives in their topical track area of expertise. The second year features advanced methods and theory with additional research study opportunities. At the conclusion of the second year, students will be matched with a mentor. In the third and fourth years, students will begin and complete the dissertation proposal process.

Qualifying Examination Summary

At the conclusion of the second year of coursework, the students will be required to pass a comprehensive qualifying examination after which they may prepare their dissertation proposal. Also, at the conclusion of the second year, students will transition to a funded research lab/group of one of the public health graduate faculty.

The comprehensive exam will be based on both core and content material and administered by the student’s dissertation committee. Students will only be allowed to take the comprehensive exam twice. If a student fails the exam twice they will be dismissed from the program.

Doctoral Dissertation Proposal

Upon successful completion of the qualifying exam, the student may set a date for the doctoral dissertation proposal defense. The proposal will take the form of a PHS 398 grant proposal including: specific aims, introduction, succinct yet detailed literature review, complete sections on applicant capability, materials and research methodology, references, human subjects, and supporting documents. The proposal must be defended by the student in a forum that includes the student’s complete Doctoral Dissertation Committee.

Dissertation Summary

The program will culminate in a dissertation research project on an important public health topic. The dissertation will take the form of a traditional research dissertation or, at the student’s option, a series of three publishable papers or monographs on a related, important public health topic. The papers must be cleared for submission by the committee and submitted before the dissertation defense. We emphasize peer-reviewed research publications as desired outcomes because of their positive impact on skills and the professional placement options for our graduates. This is consistent with a trend in public health Ph.D. programs around the country.

The dissertation will be defended in public in a forum that has been announced at the school and university level. The Dissertation Committee comprises five members, all of whom must sign the approval form for the dissertation to be complete. The dissertation must be completed following WVU policy regulating electronic submission of theses and dissertations.

Program Delivery

Virtually all courses in the program will be taught using the face-to-face, on-campus, small or large group format. Only two or three courses will be delivered by Web-based technology.

Admission to the Program

Admission to the doctoral program will be limited to highly qualified and motivated candidates. Competitive stipend support will be offered to these students.

An above average undergraduate GPA is required for applicants to be eligible for program admission. The Graduate Record Examination (GRE) or equivalent graduate-level standardized test is used to screen applicants. For such tests, the scores must be less than five years old. In addition to official transcripts and GRE scores, each applicant is screened based on: 1.) A commitment to national and international public health research, training, and service as demonstrated in a statement of purpose (two to three pages single-spaced); 2.) Curriculum vitae/resume; 3.) Official educational programs and WVU application materials; and 4.) Three letters of recommendation.
(two must be academic references). A test of English as a Foreign Language (TOEFL) score of at least 550 will be required for students who obtained their bachelor’s and master’s degrees in a country where English is not the first language. Short-listed applicants will be interviewed based on academic merit, considering all of the above criteria. The interview may be conducted in person, via telephone, or in video conference.

Detailed admissions procedures, including online application materials can be found the Ph.D. program’s website: http://www.hsc.wvu.edu/som/cmed/.

**Performance Standards**

To be admitted to any Ph.D. track, students must demonstrate the ability to maintain at least a 3.0 GPA in the first core year of study and thereafter. For courses in which a grade lower than a C is received the credit hours will not count toward satisfying degree requirements. Students who fail to maintain a 3.0 GPA will be placed on probation and must bring their GPA up to 3.0 during the following semester. Students who then fail to attain a 3.0 will be dismissed from the program. Student research will be graded by the faculty mentor each semester. Research grades will be satisfactory or unsatisfactory (S/U) during the first year.

For more information about the Ph.D. program contact: Keith Zullig, Ph.D., M.S.P.H., Associate Professor, Director of the Ph.D. Program in Public Health Sciences, P.O. Box 9190, WVU School of Medicine, Morgantown WV 26506, Phone (304) 293-1091, Fax (304) 293-6685 E-mail: kzullig@hsc.wvu.edu, WVU School of Medicine, Department of Community Medicine, Phone (304) 293-2502.

**Master of Science (M.S.) in School Health Education**

The Department of Community Medicine offers the M.S. degree in school health education. This program is open only to applicants holding a professional teaching certificate/licensure. A copy of your teaching certificate is required for admission. (SREB approved)

**Goal of the M.S. Program**

The goal of the school health M.S. degree program is to provide teachers with the knowledge and skills necessary to instill in school-age students the information necessary to make healthy decisions regarding well-being. Experiential instruction, coupled with critical thinking skills, enables students to be informed health consumers. The program will provide an optimal experience to equip students to be models and mentors for their own students. This program is only for those who have an active teaching certificate in any teaching area.

**Admission Requirements**

**Applicants to the M.S. program must:**

1. Hold a bachelor’s degree from an accredited college of university and a minimum grade point average of 2.75 on a 4.0 scale.
2. Submit an Application for Graduate Admission to West Virginia University and attach a nonrefundable check for the amount specified on the application form.
3. Submit sealed transcripts of all college coursework to the Graduate Unit, West Virginia University Office of Admissions.
4. Complete an M.S. (school health education) program application with a copy of an official teaching certificate.
5. Submit a one-page typed essay expressing your interest in the M.S. school health education program.
6. Submit a CV/resume.

**Performance Standards**

**GPA and grade requirements are as follows:**

1. Students are required to maintain a GPA of at least 3.0 on all work taken as a graduate student while enrolled in community medicine graduate programs. A student must have 3.0 GPA or better in order to graduate from the program.
2. Students admitted with a 2.75 to 2.99 GPA must have attained a 3.0 GPA or above at the end of their first semester or they will be dismissed.
3. Students admitted with a 3.0 GPA must have a minimum 3.0 GPA every semester. If their GPA falls below 3.0 one semester, they will be placed on probation. If the GPA falls below 2.75 they will be suspended.
4. Two grades of C or below while enrolled as a graduate student will result in probation. Three grades of C or below while enrolled as a graduate student will result in suspension.
5. A grade lower than C will not be counted towards satisfying degree requirements. For any required graduate program course where the student receives a grade lower than a C must be repeated.
6. A grade of F in any course taken to satisfy degree requirements in a community medicine graduate program will result in automatic program dismissal.
7. Students may refer to the WVU Board of Governors Policy 15 Student Academic Rights for more information: http://bog.wvu.edu/r/download/4219 and on the CMED website: http://www.hsc.wvu.edu/som/cmed/PDF/Student-Policies.pdf

Course of Study
The program requires 30 credit hours of coursework. Students may transfer nine credit hours that are pre-approved upon admission. Students will take two courses per semester with three one-week intensive summer sessions. This program can be completed in two calendar years on a part-time basis.

Since unforeseen circumstances might necessitate a curriculum change, prospective and current students are encouraged to visit the educational programs website at: http://www.hsc.wvu.edu/som/cmed/ for current requirements.

For more information about the M.S. program please contact: Ruth E. Kershner, Ed.D., R.N., Associate Professor, Coordinator of the M.S. Program in School Health Education, P.O. Box 9190, WVU School of Medicine, Morgantown WV 26506, Phone (304) 293-7440, Fax (304) 293-6685, E-mail: rkershner@hsc.wvu.edu or WVU School of Medicine, Department of Community Medicine, Phone (304) 293-2502.

Human Performance and Applied Exercise Science

The Department of Human Performance and Applied Exercise Science has three divisions:

Division of Exercise Physiology
Includes an undergraduate and a graduate program.

Division of Occupational Therapy
Includes an entry-level master’s program.

Division of Physical Therapy
Includes an entry-level doctoral program.

Division of Exercise Physiology
Dr. John M. Hollander, Graduate Program Director
jhollander@hsc.wvu.edu

Stephen E. Alway, Ph.D., Professor and Chair and Director of Graduate Studies Master’s Program
http://www.hsc.wvu.edu/som/ep/Education/Masters-of-Science/

John M., Hollander, Ph.D. Assistant Professor, Graduate Coordinator, Ph.D. Program
http://www.hsc.wvu.edu/som/ep/Education/PhD-Program/Default.aspx

Randall W. Bryner, Ed.D, Associate Professor, Vice Chair, and Director of Undergraduate Education

Degrees Offered
Bachelor of Science
Master of Science
Doctor of Philosophy
Joint Doctor of Medicine and Doctor of Philosophy

Introduction
The WVU exercise physiology program was established in the Health Sciences Center’s School of Medicine in July 1993. The program offers a four-year curriculum leading to a bachelor of science degree in exercise physiology, a two-year program leading to a masters of science (clinical or thesis track) and a doctoral program leading to a Ph.D. in exercise physiology.
What is an Exercise Physiologist?
Exercise physiologists are trained to evaluate people in the areas of cardiovascular fitness, muscular strength and endurance, flexibility, neuromuscular integration, and body composition. They are also trained to provide exercise programs based on the results of these evaluations that are designed to increase the functional capacity of the participants.

Exercise physiologists work with athletes, patients, and healthy participants in the areas of disease prevention in wellness programs, or rehabilitation in hospital settings. The bachelor of science program is a preparatory program for graduate school. Graduates of this program continue their studies in exercise physiology, physical therapy, medicine, or other health-related careers. Graduates of the master of science or doctoral program find employment in corporate wellness, hospital rehabilitation, higher education, or other research settings. Additionally, they may be employed in a wide variety of private, community, state, and national agencies. Exercise physiology is an evolving field that is becoming increasingly important with the integration of preventive medicine into the health care system. Employment opportunities are expanding and increasing with experience and level of education.

Bachelor of Science
The bachelor of science in exercise physiology is a preparatory program for graduate or professional school. Graduates continue their education in areas such as exercise physiology, physical therapy, dentistry, pharmacy, or medicine. The program is designed to provide students a background in basic science and exercise physiology as well as courses in nutrition, athletic training, first aid and emergency care, and business.

Admission
Students must meet the minimum requirements for WVU for admission to the program. All coursework completed prior to transfer to the exercise physiology program requires at least a 2.75 cumulative grade point average and a grade of C or better in all required courses.

Program Requirements
Students must complete the University requirements for the General Education Curriculum. Students must complete the following courses or course equivalents in theory and foundation to meet the exercise physiology program requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHPR 172 First Aid and Emergency Care</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 241 Developmental Psychology</td>
<td></td>
</tr>
<tr>
<td>ATTR 121 Sport Injury Control and Management</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 219 Gross Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 240 Medical Terminology</td>
<td></td>
</tr>
<tr>
<td>EXPH 100 Introduction to Exercise Physiology I</td>
<td>1</td>
</tr>
<tr>
<td>EXPH 101 Introduction to Exercise Physiology II</td>
<td>1</td>
</tr>
<tr>
<td>EXPH 364 Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 365 Exercise Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 368 Laboratory Techniques and Methods I</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 369 Strength and Conditioning Methods</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 370 Writing for Exercise Physiology</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 491 Professional Field Experience</td>
<td>6</td>
</tr>
<tr>
<td>EXPH 475 Industry Organization in Exercise Physiology</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 496 Senior Thesis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 126 College Algebra*</td>
<td>3</td>
</tr>
<tr>
<td>MATH 128 Plane Trigonometry*</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 101 Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 102 Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 115 Fundamentals of Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 116 Fundamentals of Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 231 Organic Brief Course (or both of the following)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 233 and 235 Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 234 and 236 Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 101 and 103 General Biology and Lab**</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 102 and 104 General Biology and Lab**</td>
<td>4</td>
</tr>
</tbody>
</table>
Students must have a grade of C or better in all required courses. Students must have a minimum of 128 hours to graduate. Students must maintain a cumulative GPA of 2.5 or better to remain in the program.

Students may choose the general curriculum tract or health professionals’ tract. Students who intend on applying to medicine, dentistry, pharmacy, or graduate school should take the health professionals tract. Students applying to physical therapy can choose either the general or health professional track.

**Exercise Physiology Curriculum Plan**

**Freshman Year**

First Semester Hrs. | Second Semester Hrs.
--- | ---
ENGL 101 .................. 3 | MATH 128 Trig ................. 3
MATH 126 Algebra .......... 3 | BIOL 102 and 104 .............. 4
BIOL 101 and 103 ......... 4 | GEC Objectives ............... 3
EXPH 100 Intro. to EXPH I ... 1 | ATTR 121 Athletic Training .... 3
PSYC 101 Intro. to Psychology 3 | EXPH 101 Intro. to EXPH II ... 1
ATTR 219 Anatomy .......... 3 | Total ................................ 17

**Sophomore Year**

First Semester Hrs. | Second Semester Hrs.
--- | ---
PHYS 101 .................. 4 | PSIO 241 Human Physiology .... 4
GEC Objective .......... 3 | EXPH 240 Medical Terminology .... 1
ENGL 102 .................. 3 | GEC Objectives ............... 3
EXPH 364 Kinesiology .... 3 | Total ................................ 17

**Junior Year**

First Semester Hrs. | Second Semester Hrs.
--- | ---
CHPR 172 First Aid and Emer. Care ... 2 | CHEM 231 Org. Chem. Brf. Cor .... 4
EXPH 365 Exercise Physiology I .... 3 | EXPH 369 Strength and Cond. Mth .... 3
EXPH 368 Lab. Tech. and Mth. I .... 3 | HN&F 171 Nutrition ............. 3
PSYC 241 Human Growth and Dev. ... 3 | Elective (s) .................. 6
GEC Objective .......... 3 | Total ................................ 17
EXPH 370 Writing Meth. In EXPH .... 3 | Total ................................ 16

**Senior Year**

First Semester Hrs. | Second Semester Hrs.
--- | ---
EXPH 491 Professional Field Exp .... 3 | EXPH 491 Professional Field Exp .... 3
EXPH 496 Senior Thesis .... 3 | EXPH 475E The Bus. of Exercise .... 3
STAT 211 .................. 3 | GEC Objectives ............... 3
Electives .......... 6 | Electives ............... 6
Total .................. 15 | Total .................. 15

**Health Professions Emphasis Curriculum Plan**

**Freshman Year**

First Semester Hrs. | Second Semester Hrs.
--- | ---
ENGL 101 .................. 3 | MATH 128 Trig ................. 3
CHEM 115 .................. 4 | BIOL 117 .............. 4
MATH 126 Algebra .......... 3 | GEC Objectives ............... 3
BIOL 115 .................. 4 | CHEM 116 ............. 4
EXPH 100 Intro. to EXPH I .... 1 | EXPH 101 Intro. to EXPH II ... 1
PSYC 101 Intro. to Psychology 3 | ATTR 219 Anatomy ........... 3
Total .................. 18 | Total .................. 18
Sophomore Year
First Semester Hrs. Second Semester Hrs.
CHEM 233 & 235 Organic ...................... 4 CHEM 234 & 236 Organic ...................... 4
ATTR 121 Athletic Training ................... 3 PHYS 102 ........................................... 4
ENGL 102 ............................................ 3 PSIO 241 Human Physiology .................. 4
EXPH 364 Kinesiology ......................... 3 CHPR 172 First Aid and Emer. Care ........... 2
PHYS 101 ............................................ 4 EXPH 240 Medical Terminology ............... 1
Total ............................................. 17 Total ............................................. 18

Junior Year
First Semester Hrs. Second Semester Hrs.
EXPH 365 Exercise Physiology I ............ 3 EXPH 460 Pathophysiology .................... 3
EXPH 368 Lab Tech. and Meth. I ............. 3 EXPH 369 Strength and Cond. Mth ............ 3
PSYC 241 Human Growth and Dev. ......... 3 HN&F 171 Nutrition .............................. 3
BIOL 339 ........................................... 4 EXPH 370 Writing Meth. for EXPH ............ 3
Elective Science (e.g. BIOL 219) .......... 4 STAT 211 ............................................ 3
Total ............................................. 17 Total ............................................. 18

Senior Year
First Semester Hrs. Second Semester Hrs.
EXPH 491 Professional Field Exp ............ 3 EXPH 470 Research Methods .................. 3
EXPH 496 Senior Thesis ....................... 3 EXPH 491 Professional Field Exp ............ 3
Elective Science .................................. 4 EXPH 475 Industry Organ EXPH ............... 3
MBIM 200 ............................................ 4 Elective Science (BIOL 410) .................. 4
GEC Objective .................................. 3 GEC Objective .................................. 3
Total ............................................. 17 Total ............................................. 18

Master of Science
The master of science program in exercise physiology is a two-year degree program that is offered in two tracks. The clinical track master of science program in exercise physiology provides coursework and laboratory experience that prepares students for careers in adult fitness, hospital or corporate-based wellness programs, or cardiac rehabilitation. Students will complete clinical internship training as part of the course and laboratory requirements. This is a two-year program, which will qualify students to sit for the national certification examination for a Registered Clinical Exercise Physiologist of the American College of Sports Medicine. The thesis track master of science program in exercise physiology is intended to give exceptional students knowledge in basic medical and scientific areas to prepare them for entry into advanced research intensive or professional careers (e.g., Ph.D., M.D./Ph.D.; P.T., O.T., dentistry, pharmacy, etc.). Students in the thesis track will typically take two academic years to complete the coursework and research thesis. Graduate work involves a program of study and research individually designed to utilize the abilities and strengths of the faculty and accommodate the needs of the student within an area of specific interest. Although there are common goals, expectations, and courses that will be universal for all masters’ graduate students, the exact content of a program of study may differ from one student to another.

Grade requirements for the masters’ degree (clinical and thesis tracks) in exercise physiology include the following:

- Minimum GPA of 3.0.
- No grade less than B will be accepted for any exercise physiology course.
- A maximum of one C will be accepted on a transcript for graduation. The C must be in a non-exercise physiology course.

Admission
Approximately 12 students are accepted into the clinical track and five students are accepted into the thesis track once a year on a competitive basis. Applicants must have a baccalaureate degree in an allied field from an accredited institution with a minimum undergraduate grade-point average of 3.0 (based on A = 4.0 grade points). Three letters of reference and GRE scores are required. Applicants are selected for admission on the basis of scholastic standing (special attention is given to science grades), and recommendations. The graduate application, three letters of reference, GRE scores, and college transcripts must be submitted by February 15th.
**Program Requirements**

**Clinical Track.** The following courses or course equivalents are required to complete the requirements for the clinical track M.S. degree program. The courses are taken over two years.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSIO 743 <em>Mechanisms of Body Function</em></td>
<td>4</td>
</tr>
<tr>
<td>ESTAT STAT 511 <em>Statistics</em> (or another approved statistics)</td>
<td>3</td>
</tr>
<tr>
<td>PCOL 693 <em>Pharmacology: Drugs and Medicines</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 567 <em>Exercise Physiology 2</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 670 <em>Laboratory Techniques and Methods 2</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 672 <em>Professional Field Placement 2</em></td>
<td>6</td>
</tr>
<tr>
<td>EXPH 693A <em>Research Methods</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 693B <em>Clinical Lab 1</em> (stress testing)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 693C <em>Exercise Prescription and Testing 1</em></td>
<td>4</td>
</tr>
<tr>
<td>EXPH 693D <em>Clinical Lab 2</em> (cardiovascular and metabolic)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 693E <em>Clinical Lab 3</em> (Neuro and immunology)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 693F <strong>Recommended Electives</strong></td>
<td>4</td>
</tr>
</tbody>
</table>

**Thesis Track.** The following courses or course equivalents are required to complete the requirements for the thesis track M.S. degree program, the courses are taken over two years.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSIO 743 <em>Mechanisms of Body Function</em></td>
<td>4</td>
</tr>
<tr>
<td>STAT 511 <em>Statistics</em> (or another approved statistics)</td>
<td>3</td>
</tr>
<tr>
<td>AGBI 514 <em>Animal Biotechnology</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 567 <em>Exercise Physiology 2</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 693A <em>Research Methods</em></td>
<td>3</td>
</tr>
<tr>
<td>EXPH 697 <em>Research</em></td>
<td>15</td>
</tr>
<tr>
<td>EXPH 799 <em>Graduate Colloquium</em></td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGBI 610 <em>General Biochemistry</em> (Fall)</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 791B <em>Advanced Muscle Physiology</em> (Spring)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 791A <em>Advance Cardiovascular Physiology</em> (Fall)</td>
<td>3</td>
</tr>
<tr>
<td>HN&amp;F 619 <em>Nutrition in the Prevention of Human Diseases</em> (Spring)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Doctor of Philosophy**

The Division of Exercise Physiology offers a program leading to the doctor of philosophy degree (Ph.D.) in the School of Medicine. The program is intended to give exceptional students knowledge in basic medical and scientific areas to prepare them for careers as effective and knowledgeable researchers and teachers in the broad field of exercise physiology/kinesiology. These goals are achieved by several means. Formal coursework in the sub-disciplines of exercise physiology, physiology, biochemistry, molecular biology, pharmacology, and neuroscience provides the student with the opportunity to develop a solid foundation in basic subject matter of medical sciences that can be applied to aspects of exercise and disease. The student’s knowledge base is further strengthened by participation in elective courses offered within the division, selected courses offered by other departments within the School of Medicine, and by departments in other colleges and schools of WVU. Research training and experience are provided under the guidance and supervision of the graduate faculty. The aim is to promote attitudes, habits, skills, and abilities that will enable the student to grow and develop as an independent scientist.

The faculty in the Division of Exercise Physiology views the Ph.D. primarily as a research degree. Research training and experience are provided under the guidance and supervision of the graduate faculty. The aim of this effort is to promote attitudes, habits, skills, and abilities that will enable the student to grow and develop as an independent scientist.
Graduate work involves a program of study and research individually designed to utilize the abilities and strengths of the faculty (e.g., cardiovascular disease, heart disease, aging, and diabetes/obesity) and accommodates the needs of the student within an area of specific interest. The exact content of a program of study for a particular student usually will differ from one student to another. Nevertheless, there are common goals, expectations, policies, and procedures that will be universal for all graduate students. Likewise, there are activities and responsibilities that will be common among all faculty advisors in the Division of Exercise Physiology.

**Program Features**

**Admission and Performance Standards**

Program requirements typically restrict the admission of first-time applicants to the fall semester. The general application procedures to the Ph.D. program in exercise physiology follows guidelines for admission to the common Ph.D. graduate programs in the Schools of Medicine and Pharmacy. Students applying to the Ph.D. program normally have a minimum graduate grade point average of 3.0. In addition, applicants must submit three letters of recommendation from professors involved with the student’s academic work, including faculty who can comment on the applicant’s research ability and aptitude, an official transcript of all college work, and the results of the Graduate Record Examination. The minimum recommended score on the Graduate Record Examination is 1,000 for the verbal and quantitative scores combined. Normally, students are enrolled for four to five years in the Ph.D. program with the majority of time spent in preparation for dissertation research and conducting independent dissertation research.

**Grade requirements for the doctoral degree in exercise physiology include the following:**


b. No grade less than B will be accepted for any exercise physiology course.

c. A maximum of one grade of C in a non-exercise physiology course will be allowed on a transcript for graduation.

d. Students are expected to obtain a B or better in non-exercise physiology courses in which the Dissertation Committee views as critical for the student’s research success (i.e., students who obtain a C may be required to retake courses to obtain a grade that is B or better).

Failure to meet these requirements will result in dismissal from the program. The exercise physiology graduate faculty will review all petitions to remain in the program according to due process. The faculty may provisionally retain a student in the program if special circumstances exist. In this case, the graduate faculty and the Doctoral Committee of Exercise Physiology will review the student’s record and render its decision by majority vote. If a failing student is provisionally retained, the graduate faculty and the Dissertation/Advisory Committee will draft a plan of approach from which the student must follow to regain academic good standing within the specified time period. The student may appeal a decision for dismissal by writing an appeal to the chair of the Division of Exercise Physiology. The division chair will convene a meeting of the exercise physiology graduate faculty and the student’s Doctoral Committee members if the committee had been formed prior to the student’s dismissal. The student may appear at the meeting to make his/her appeal. The graduate faculty and Doctoral Committee members will review the appeal and render a decision by majority vote.

**Program Requirements**

Students will be assigned a provisional advisor upon acceptance into the program. By the end of the first academic year, the student must choose a committee chair. The student and chairperson will invite other faculty members to serve on a Graduate Committee. All members of the committee must be acceptable to both the student and the chair. The committee will develop a plan of study that will include required coursework for the program. The committee will consist of at least five faculty, the majority of who hold regular graduate faculty status. The chairperson and two other members of the committee must be members of the exercise physiology graduate faculty. One member of the committee must be from the student’s minor area. The committee members will be selected according to their abilities to assist the students with critical aspects of their doctoral work.

**Basic Science Recommendations (not required)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>4–8</td>
</tr>
<tr>
<td>General Chemistry or Organic Chemistry</td>
<td>4–8</td>
</tr>
<tr>
<td>Physics is recommended but not required</td>
<td>4</td>
</tr>
</tbody>
</table>
required research efforts should be progressing towards approval of a dissertation topic from the data or research skills prior to approving the research proposal as a dissertation topic. The student's manner. Nevertheless, the Dissertation Committee may require the student to obtain additional pilot appropriate and justified. This process facilitates progression through the program in a timely and efficient manner. Studies to obtain pilot data should be presented to the Dissertation Committee to demonstrate the student's competency in research skills, and, that his/her research ideas and hypotheses are appropriate and justified. This process facilitates progression through the program in a timely and efficient manner. All preliminary research must be collected under the supervision and approval of the dissertation chair to learn techniques and collect pilot data that will be the basis of a future dissertation project. Students should work with their dissertation advisor to design appropriate pilot studies and with that faculty in exercise physiology during the first two semesters of enrollment. Students are expected to present their research findings at national meetings and publish their data in appropriate peer-reviewed journals prior to graduation. All doctoral students will be required to present a minimum of six one-hour graduate seminars co-authoring co-authors and grant sources. A minimum of one peer-reviewed manuscript that is derived from the student's dissertation research must be published beginning no later than the second year of enrollment in the doctoral program.

Directed Research

All preliminary research must be collected under the supervision and approval of the dissertation chair. The student is expected to engage in directed research under the supervision of the dissertation chair to learn techniques and collect pilot data that will be the basis of a future dissertation project. Studies to obtain pilot data should be presented to the Dissertation Committee to demonstrate the student's competency in research skills, and, that his/her research ideas and hypotheses are appropriate and justified. This process facilitates progression through the program in a timely and efficient manner. Nevertheless, the Dissertation Committee may require the student to obtain additional pilot data or research skills prior to approving the research proposal as a dissertation topic. The student's directed research efforts should be progressing towards approval of a dissertation topic from the
members of the Dissertation Committee, once they have been identified (before the end of the first semester of year two). This research training will provide the student background data/information from which to base grant proposal and dissertation topic as part of the requirements for completing Part II of the Comprehensive Examination.

**Comprehensive/Qualifying Examination**

The Comprehensive (qualifying/candidacy) Examination will evaluate a student’s readiness for advancement to doctoral candidacy. This will consist of a written and an oral component to determine that the student is qualified to complete the doctoral dissertation and conduct independent research.

**Requirements of the Qualifying/Candidacy Examination**

Graduate students will be admitted to Ph.D. candidacy after successfully completing all course work and passing a candidacy examination. The purpose of the candidacy examination is to evaluate a student’s readiness for advancement to doctoral candidacy. The candidacy examination will consist of writing and orally defending a dissertation proposal. Advancement to candidacy means that in the judgment of the faculty, the doctoral student has an adequate knowledge of exercise physiology, knows how to use academic resources, and has potential to do original research autonomously. In other words, the student is qualified to complete the doctoral dissertation. In addition, no student with a grade point average of less than 3.0 will be eligible to take this examination.

The qualifying examination should be taken after completion of the formal coursework as defined by the student’s dissertation committee and chair/advisor of the dissertation committee in conjunction with the director for Graduate Studies. When a student has passed the Candidacy/Qualifying Examination, he/she will be admitted to candidacy for the Ph.D.

The following are prerequisites for advancement to the qualifying examination:
- The student must have a dissertation advisor and a dissertation committee.
- The student must have demonstrated competent research skills.
- The student must have a suitable dissertation topic that is approved by the dissertation committee.
- The student must be in good academic standing as defined in the doctoral program and have satisfactorily completed the first two years of course requirements (including those specified by the student’s advisory committee) with at least six credit hours (or equivalent) of laboratory research experience.

Appropriate (recommended) lengths for each section of the qualifying examination/research proposal (single spaced) are:
- Specific aims: one page
- Background and significance: two to three pages
- Preliminary studies and pilot data: three to five pages
- Research design and methods: six to seven pages
- Budget and justification (two to four pages including justification pages)
- References: (three to four pages)

**Oral Examination of Research Proposal**

Normally the oral examination is set within two to four weeks following the acceptance of the written examination. However, the oral exam component can only be scheduled if the members of the Dissertation Committee judge the written submission to be acceptable (or acceptable pending minor revisions). If the written proposal is acceptable by the members of the Dissertation Committee, the chair of the Dissertation Committee will schedule the oral portion of Part II of the examination.

The following guidelines should be reviewed by the student and his/her Dissertation Committee before scheduling the oral examination.

In the oral examination the student will make a professional formal presentation (using PowerPoint computer slides or similar media,) that clearly identifies the research area, hypotheses, and questions that they wish to pursue as part of his/her Ph.D. dissertation and pilot data that they have obtained (about 40 to 45 minutes). The chair of the Dissertation Committee will also chair Part II of the examination. The chair will permit members of the audience (faculty, graduate students, etc.) to ask questions of the graduate presenter for approximately 10 to 15 minutes. Thereafter the guests will be dismissed and the meeting will be closed except for the members of the student’s Dissertation Committee and other invited (i.e., non-voting) members of the graduate faculty that have been approved by the chair of the Dissertation Committee.

Failure of to successfully complete the comprehensive examination after two attempts is grounds for dismissal. Students will be permitted due process and the division chair will convene the graduate faculty as a whole, who will consider written appeals from any student who has been dismissed by virtue of failing the qualifying/candidacy examination.
Temporary Committee Substitutions

• Membership on a Doctoral Dissertation Committee signifies the highest level of commitment to all phases of the student's doctoral training. All committee members must therefore be present for the oral research design exam. If all the members of the committee are not present at the beginning of the oral defense for Part II, the oral examination cannot continue. Absence of a committee member from the exam is only acceptable in the event of illness or some other serious unforeseen problem.

• If a committee member is unexpectedly unable to participate in a scheduled oral examination, the examination should be rescheduled for another time within the next two weeks when all members can be present. The student may request that the examination not be rescheduled, provided that a substitute committee member can be found (if one is needed to meet minimal Dissertation Committee requirements). Requests for member substitution will be granted in only very rare and exceptional circumstances. The division chair must approve any temporary substitutions.

• The substitute must have adequate time to read the written proposal and prepare for the examination. The substitute must be a suitable graduate faculty with established expertise in an area previously represented by the absent committee member. It is not appropriate to substitute one faculty with another if a different research expertise would be represented by the substitution. Any substitute must be acceptable to both the student and the dissertation advisor, and the substitute must meet the requirements for dissertation committee membership. The substitute member will be considered a full-voting member of the Dissertation Committee for the purpose of administering and grading the examination. The substitute member will also be provided copies of the student’s written responses for Parts I and II. The final examining committee may contain no more than one substitute member, and the students’ advisor (normally Dissertation Committee chair) may not be substituted.

Qualifications For Advancement to Ph.D. Candidacy

The student must demonstrate:

• A wide base of knowledge in exercise physiology
• An ability to think independently
• Integration of existing knowledge into a practical research question, by identifying what known, what is not known, etc.
• Critical evaluation of literature
• Problem-solving skills
• Acceptable written and oral communication skills including the ability to “think on one’s feet.”

Submission of Written Research Proposal to a Funding Agency

The written candidacy examination also serves an additional purpose. Graduate students are expected to submit at least one grant proposal to an external granting agency by the end of his/her second year of enrollment. Constructing the proposal is a part of the requirements for graduation. The candidacy examination provides the graduate student the opportunity to complete these requirements for submitting the grant proposal, while also preparing for the qualifying examination and assembling ideas for the dissertation project.

The student should wait until successfully negotiating the candidacy examination (both written and oral components) and revise the grant according to the suggestions of his/her dissertation chair and Dissertation Committee. Graduate students should not submit a grant proposal without input, feedback, and approval of the committee chair and Dissertation Committee. It is acceptable and appropriate for the student to obtain feedback from all members of the Dissertation Committee before submitting it to a funding agency.

The submission of the grant proposal to a funding agency should be used to: (a) Seek a graduate student stipend and other research supplies as allowed by the external source; (b) Seek funding for travel to national/international meetings if it is permitted by the funding agency; (c) Obtain independent external review of the student’s research proposal/dissertation project; (d) Obtain experience in writing grants for external funding. The student should also notify the director of graduate studies of the grant submission. This will be accomplished by submitting a copy of the front page of the grant proposal (with the title, signatures, etc.), the budget page of the grant to the director of graduate studies.

General Dissertation Requirements

The purpose of the dissertation is to provide experiences that will assist the student in becoming an independent investigator and constructing manuscripts from the data collected in the research process. Typical dissertation projects will be about three years in length.
The student must complete a dissertation in which they have obtained original data that makes a novel and important contribution to knowledge in the broad field of exercise physiology and submit all manuscripts containing these data to peer-reviewed journals. Students must pass an oral examination based upon his/her dissertation.

The dissertation must be constructed in a format suitable to the graduate school and the advisor. Preferable formats will include writing the data chapters as if they have been submitted to peer-reviewed journals (including abstract, introduction, methods and materials, results, discussion, and literature cited in each chapter). In addition, the final one to two chapters of the dissertation should include an integrative discussion concerning the total research project and evaluation of hypothesis that were tested. The typical doctoral dissertation will yield three to five peer-reviewed manuscripts. To optimize feedback from the coauthors and to ensure timely publication, the manuscripts originating from dissertation work should be submitted for peer review prior to graduation, and some manuscripts may be published before the student graduates. Proper acknowledgment for funding of the research should be noted in both the dissertation and the manuscripts obtained from dissertation work. It is expected that several of these manuscripts that will be included in the dissertation will have been published prior to graduation. It is further expected that all of the manuscripts will be submitted to a peer-reviewed journal for consideration for publication before graduation. The student must have published a minimum of one manuscript as a first author from the completed dissertation work prior to graduation. The process of writing the chapters as journal manuscripts will facilitate this process.

Student Evaluations

Students will be formally evaluated by the program faculty on a yearly basis with respect to courses, research, teaching, professional development, and progress through the program. The student will be asked to fill out an activity report encompassing these areas and submit it to the chair of the Division of Exercise Physiology. The chair will convene the program faculty to evaluate each student. The chair will provide the students a written assessment of their progress.

Joint Doctor of Medicine and Doctor of Philosophy

The graduate program in exercise physiology fosters a high degree of collaboration among faculty with interests in clinical medicine and basic research. The faculty in exercise physiology have research expertise in exercise-induced adaption's and pathological tissue remodeling associated with aging, diabetes, and cardiovascular disease. Current areas of inquiry include:

- Aging and sarcopenia in skeletal muscle; muscle stem cells
- Mitochondria dysfunction and pathophysiological mechanisms of diabetic cardiomyopathy
- Regulation of renal and hepatic microvascular environments in diabetes
- Role of uncoupling protein-3 in aging and exercise; reactive oxygen species development in muscles with aging
- Biomechanical, biochemical and molecular investigation of acute and chronic skeletal muscle injury
- Regulation of ion channels in vascular smooth muscle in cardiovascular disease
- Microvascular dysfunction with the metabolic syndrome
- Cardiac and skeletal muscle growth and function
- Physiologic basis of lung disease
- Exercise-induced angiogenesis
- Extracellular matrix regulation and gene expression
- Stem cell biology and mechanical signal and tissue regeneration

Our Ph.D. program is intended to give exceptional students knowledge in basic medical and scientific areas to prepare them for careers as effective and knowledgeable researchers and teachers in the broad field of exercise physiology/kinesiology. In the Division of Exercise Physiology these goals are achieved by several means. Formal coursework in the sub-disciplines of exercise physiology, physiology, biochemistry, molecular biology, pharmacology and neuroscience provides the student with the opportunity to develop a solid foundation in basic subject matter of medical sciences that can be applied to aspects of exercise and disease. The student’s knowledge base will be further strengthened by participation in elective courses offered within the division, selected courses offered by other departments within the School of Medicine and by departments in other colleges of West Virginia University.
Ph.D. students are expected to:
- Take an array of courses in exercise physiology, physiology, biochemistry, molecular biology, and pharmacology.
- Conduct independent research, analyze and interpret the data, and defend the findings conclusions.
- Learn the process of writing and submitting grants.
- Present and discuss their research findings at national and international scientific meetings.
- Develop and improve teaching skills.
- Submit their dissertation research for publication prior to graduation.

The Division of Exercise Physiology actively engages in both basic science and clinically based research, with an emphasis on cardiovascular disease, aging, obesity, and diabetes.

Division of Occupational Therapy
Randy P. McCombie, Ph.D., O.T.R./L., Chair
http://www.hsc.wvu.edu/som/ot

Degree Offered
Master of Occupational Therapy

Introduction
In the fall of 1993, the West Virginia Board of Trustees approved the establishment of a new master's degree program at WVU, leading to an entry-level master's degree in occupational therapy. WVU accepted its first students into the professional program in the fall semester of 1996. The academic and fieldwork program requires three years to complete. Prior to application, students are required to complete approximately 50 to 55 hours of prerequisite courses, which in most instances will take two years to fulfill.

The Profession of Occupational Therapy
Occupational therapy is a health profession which provides services to people of all ages with physical, mental, or developmental disabilities. The purpose of occupational therapy is to help individuals achieve a maximum level of independence. The focus is on developing the capacity to function in all activities (occupations) of daily life, including self care, work, and leisure. Hence the name occupational therapy.

Occupational therapy is a health and rehabilitation profession designed to help people regain and build skills that are important for health, well-being, security, and happiness.

Occupational therapists work with people of all ages who, because of physical, developmental, social, or emotional deficits, need specialized assistance in learning skills to enable them to lead independent, productive, and satisfying lives.

Occupational therapists work in schools, hospitals, rehabilitation centers, home health agencies, skilled nursing homes, and private practice.

Accreditation Status
WVU's Division of Occupational Therapy has been granted accreditation status by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, M.D. 20824-1220. AOTA's phone number is (301) 652-AOTA. The OT program at WVU was initially awarded accreditation in 1998, and awarded re-accreditation in 2003. The next scheduled onsite visit for accreditation will be 2013.

Graduates of the program are able to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy Inc. (NBCOT). For more information, NBCOT can be contacted at (301) 990-7979 or at http://www.nbcol.org/. After successful completion of this exam, the individual will be an occupational therapist, registered (OTR). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note: A felony conviction may impact a graduate’s ability to take the NBCOT examination and/or obtaining a state license. For further information on NBCOT’s Character Review Program, interested parties can obtain information from that Board or their website.
**Note:** The following list of prerequisite courses and GEC requirements is subject to change without notice.

<table>
<thead>
<tr>
<th>Prerequisite Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
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</tr>
<tr>
<td>ENGL 102</td>
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</tr>
<tr>
<td>PSYC 101</td>
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</tr>
<tr>
<td>PSYC 241</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 281</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 101 or SOCA 105</td>
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</tr>
<tr>
<td>BIOL 101 and BIOL 103</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 102 and BIOL 104</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 101*</td>
<td>4</td>
</tr>
<tr>
<td>PSIO 241* (or PSIO 441*)</td>
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<td>STAT 211*</td>
<td>3</td>
</tr>
<tr>
<td>COMM 100</td>
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</tr>
<tr>
<td>COMM 102</td>
<td>2</td>
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</tbody>
</table>

*Note:* Check for prerequisites for PHYS 101, PSIO 241, and/or STAT 211 by contacting either the Division of Occupational Therapy, or the department under which those courses are housed.

Fulfillment of WVU's General Education Curriculum (GEC) not covered by the above. (See the WVU Undergraduate Catalog) ............................. 13

These include one three-credit course in each of the following objectives: 3, 5, 8, 9; plus the one-credit UNIV 101 *University Orientation.*

**Note:** Applicants holding a bachelor’s degree from an accredited institution are exempt from the GEC requirement.

WVU students must consult the Undergraduate Academic Services Center prior to enrolling in prerequisite courses. These courses may be taken at any institution which offers equivalent courses. Any questions regarding pre-requisite courses may be directed to the Undergraduate Academic Services Center, (304) 293-5805, and/or the Division of Occupational Therapy (304) 293-8828. Equivalence may be determined by contacting the transfer desk, Admissions Office, West Virginia University, P.O. Box 6009, Morgantown, WV 26506-6009.

**Admission Standards**

Normally, students apply to the program during their second year of college. They must have a minimum of 50 to 55 hours of college credit which includes the pre-requisites listed previously. Students who already have a degree in another field are also eligible to apply. All applicants must meet the following criteria:

- Minimum GPA of 3.0, including overall GPA and prerequisite GPA, is normally required (a higher GPA may be necessary given the competitive nature of the program).
- Minimum of 60 hours of volunteer experience with a licensed occupational therapist. Students should contact the Division of Occupational Therapy to determine the type of experience required. Students should keep a record of dates/hours, locations, and name of supervising occupational therapist. Forms to record volunteer experience can be found online at http://www.hsc.wvu.edu/som/ot.
- Two recommendations are also required, one from an occupational therapist who supervised the volunteer/work experience and the other from a college/university professor who has recently taught the applicant. These recommendation forms are included in the application packet.
- Completion of all prerequisite courses by the end of the semester of application (normally, second semester of sophomore year) is normally required.

Application packets are available from the Health Sciences Center Admissions and Records office beginning November 15 (P.O. Box 9815, Morgantown, WV 26505-9815; (304) 293-3523). The deadline for submission of application materials is typically February 15. The official deadline will be posted on the occupational therapy website and printed in the admissions packet.

Course information for the master of occupational therapy degree can be found on the following website: http://www.hsc.wvu.edu/som/ot.
What to Expect

Like many professional programs, the curriculum in the entry-level master’s occupational therapy program is fairly fixed and intense. The first professional year will include courses in basic sciences and introductory professional courses. The second and third professional years will deal more specifically with training in occupational therapy theory and practice as administered across a wide variety of settings. The professional curriculum includes two off-campus, full-time clinical experiences known as Level II Fieldworks. Students are financially responsible for transportation, housing, and meal expenses related to clinical assignments. Students in the program are required to participate in the School of Medicine’s laptop computer purchase lease-to-own program, which provides each student with a state-of-the-art computer that contains course- and program-relevant software.

Occupational Therapy Curriculum Plan

Note: This curriculum plan is subject to change without notice.

Junior Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hrs.</th>
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<td>OTH 300</td>
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<tr>
<td>OTH 480</td>
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<td><strong>Total</strong></td>
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First Semester

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<tr>
<td>OTH 302</td>
<td>2</td>
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<td>OTH 303</td>
<td>2</td>
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<td>OTH 304</td>
<td>4</td>
</tr>
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<td>OTH 306</td>
<td>4</td>
</tr>
<tr>
<td>OTH 335</td>
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Second Semester

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<td>OTH 308</td>
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<td>OTH 321</td>
<td>3</td>
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<td>OTH 360</td>
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<td>OTH 365</td>
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Senior Year

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<td>OTH 401</td>
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<td>OTH 403</td>
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<td>OTH 417</td>
<td>3</td>
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<td>OTH 430</td>
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<td>OTH 440</td>
<td>2</td>
</tr>
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<td>OTH 497</td>
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First Semester

<table>
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<tbody>
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<tr>
<td>OTH 503</td>
<td>3</td>
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<td>OTH 520</td>
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<tr>
<td>OTH 551</td>
<td>3</td>
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<tr>
<td>OTH 570</td>
<td>3</td>
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<tr>
<td>OTH 480</td>
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<td>OTH 697</td>
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<td><strong>Total</strong></td>
<td><strong>19</strong></td>
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Second Semester

<table>
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<td>OTH 550</td>
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<td>OTH 697</td>
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<td>OTH 640</td>
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<td><strong>Total</strong></td>
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Graduate Year

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<td>6</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

Program Timeframe

Students must complete all didactic coursework and Level II Fieldworks within a period of five years after commencing the occupational therapy program. Furthermore, all Level II Fieldwork must be completed within 18 months following completion of academic coursework while remaining within the five-year time frame.
Entry-Level Master's Program in Occupational Therapy

**Summer Session II**
OTH 300 Essentials of Clinical Anatomy
OTH 480 Current Topics in Occupational Therapy

**Fall Semester—First Year**
OTH 301 Professional Foundations
OTH 302 Survey of Clinical Problem Solving
OTH 303 Functional Movement Across the Lifespan
OTH 304 Physical Impairment and Function 1
OTH 306 Kinesiologic Foundations for Intervention
OTH 335 Therapeutic Activity

**Spring Semester—First Year**
OTH 307 Neurobiologic Foundations
OTH 308 Evaluation Procedures
OTH 321 Development Life Tasks
OTH 360 Research Methods in OT
OTH 365 Physiology of Human Occupation
OTH 480 Current Topics in Occupational Therapy

**Fall Semester—Second Year**
OTH 384 Level I Fieldwork 1
OTH 401 Physical Impairment and Function 2
OTH 403 Occupational Therapy in Pediatrics 1
OTH 417 Occupational Therapy in Geriatrics
OTH 430 OT in Mental Health
OTH 440 Vision and Perception
OTH 497 Senior Research

**Spring Semester—Second Year**
OTH 386 Level I Fieldwork 3
OTH 405 Prosthetics and Orthotics
OTH 408 Physical Impairment and Function 3
OTH 416 Professional Decision Making
OTH 419 Professional Values
OTH 432 OT Interventions—Mental Health
OTH 480 Current Topics in Occupational Therapy
OTH 497 Senior Research

**Summer Semester—Beginning Third Year**
OTH 540 Level II Fieldwork 1

**Fall Semester—Third Year**
OTH 480 Current Topics in Occupational Therapy
OTH 500 Health Care Issues in OT
OTH 503 OT in Pediatrics
OTH 520 OT in the Work Environment
OTH 551 OT in Prevention and Wellness
OTH 570 Advanced Theory in OT
OTH 697 Supervised Research in OT

**Spring Semester—Third Year**
OTH 480 Current Topics in Occupational Therapy
OTH 501 Management for OT Practice
OTH 550 Education in OT Practice
OTH 640 Level II Fieldwork 2
OTH 697 Supervised Research in OT
Division of Physical Therapy
MaryBeth Mandich, P.T., Ph.D., Chair
http://www.hsc.wvu.edu/som/pt

Degree Offered
Doctor of Physical Therapy (D.P.T.)

Nature of Program
The WVU Division of Physical Therapy was established in 1970 under the auspices of the School of Medicine to help meet the need for physical therapists in West Virginia. The program is accredited by the Commission on Accreditation in Physical Therapy Education, a specialized body recognized by the Council on Postsecondary Accreditation. The program became an entry-level doctoral degree program in Fall 2005. Thirty full-time students are admitted each year. Preference is given to West Virginia residents and non-residents who have attended a West Virginia college or university or who have ties to West Virginia. All other non-residents who meet program requirements will also be considered for admission.

Students admitted into the program complete three years of combined classroom, laboratory, and clinical education, and part-time and full-time supervised clinical practice in various clinics in West Virginia and other states. A doctor of physical therapy (D.P.T.) degree is awarded to those completing the program, and entitles the graduate to apply for examination for state licensure. A license to practice physical therapy is required by all states.

The Profession of Physical Therapy
Physical therapy is a hands-on health care profession that promotes optimal health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction. The goal of physical therapy is to help individuals reach their maximum potential and to contribute to society while learning to live within the limits of their capabilities.

Demand for physical therapy services is expected to continue over the next ten years. The demand for physical therapists in all practice settings is affected by such factors as an aging population and increased emphasis on a healthy, active lifestyle. The professional organization represents therapists on health care issues and is working hard to assure that physical therapy will continue to be a favorable career choice.

Physical therapists are respected members of the health care team. They work with other health care providers such as physicians, occupational therapists, rehabilitation nurses, psychologists, social workers, dentists, podiatrists, and speech pathologists and audiologists. Physical therapists work in hospitals, private physical therapy offices, community health centers, corporate or industrial health centers, sports facilities, research institutions, rehabilitation centers, nursing homes, home health agencies, schools, pediatric centers, and colleges and universities.

Some physical therapists work as employees in these settings, while others are self-employed as owners or partners in private practices. Settings, employment arrangements, career responsibilities, and career opportunities depend on the interests and skills of each practitioner.

The Admissions Process
Courses recommended for high school students in preparation for the preparatory and professional physical therapy program include, but are not limited to, biological sciences (e.g. anatomy, advanced biology, physiology, etc.), chemistry, algebra/trigonometry and/or pre-calculus, physics, and social sciences. Computer literacy is highly recommended.

Because individualized instruction in laboratories and clinics is an essential component of the professional physical therapy program, enrollment must be limited. The physical therapy program selects 30 students per year for entrance into the professional phase of the program. All students who wish to enter the program must apply for admission, must have a bachelor’s degree, and have completed or be enrolled in the pre-requisite coursework detailed below. These courses are available at most colleges.

The following requirements must be met to apply to the WVU Division of Physical Therapy:
• Applicant must have a minimum cumulative GPA of 3.0. Applicant must have a minimum prerequisite science GPA of 3.0 which includes two general biology courses, two chemistry courses, two physics courses, statistics, anatomy, and human physiology.
Applicants must have a minimum of 60 hours of clinical volunteer or work experience obtained from two different physical therapy settings. Though these hours may be obtained during high school and college, some volunteer hours obtained during the junior or senior college years is strongly recommended.

- Applicants must submit three letters of recommendation. Two letters must be from physical therapists with whom the student has worked or volunteered. These letters must be from licensed physical therapists; the Admissions Committee will not consider letters from non-physical therapists or relatives. The third letter must be from a professor in their undergraduate major.

The form for the letters of recommendation is available with the electronic application.

- Applicant must take the Graduate Record Examination (GRE). While no minimum score is required, a combined verbal/quantitative score of at least 1,000 and a writing score of at least 4.0 will be considered competitive. The institution reporting code for WVU is 5904.

- Applicant must have a minimum grade of C in each pre-requisite course.

<table>
<thead>
<tr>
<th>Pre-requisite Courses</th>
<th>WVU Course Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with lab (8 hours)</td>
<td>BIOL 101/103; 102/104</td>
</tr>
<tr>
<td>Chemistry with lab (8 hours)</td>
<td>CHEM 115, 116</td>
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<tr>
<td>Physics with lab (8 hours)</td>
<td>PHYS 101, 102</td>
</tr>
<tr>
<td>General psychology (3 hours)</td>
<td>PSYC 101</td>
</tr>
<tr>
<td>Developmental psychology (3 hours)</td>
<td>PSYC 241</td>
</tr>
<tr>
<td>Introductory statistics (3 hours)</td>
<td>STAT 211 or ECON 225</td>
</tr>
<tr>
<td>Human anatomy (3 hours)</td>
<td>ATTR 219 (recommended) or NBAN 205</td>
</tr>
<tr>
<td>Human anatomy (3 hours)</td>
<td>PSIO 241 or PSIO 441</td>
</tr>
</tbody>
</table>

It is recommended that prerequisite courses in human anatomy and human physiology be completed within two years prior to admission.

WVU maintains an online Course Equivalency System (CES) (http://tes.sa.wvu.edu/) that lists course equivalencies at many institutions in the state/region.

Applicants who complete any of their prerequisites outside of WVU should check the CES to see if each prerequisite course transfers directly to WVU as the required WVU course. If your undergraduate institution is not listed in the CES, or if you have taken prerequisite courses that transfer in as open credit or not equivalent, you must submit a photocopy of the catalog description of the courses in question. Upon receiving your application, the Admissions Committee may request that you submit a copy of the course syllabus for further review.

**Baccalaureate Preparation**

Applicants must have earned a baccalaureate degree, or plan on completing a baccalaureate degree by May of the year of entering the program. Students may apply with a number of different baccalaureate degrees; however, they must complete the pre-requisites for the physical therapy program as described no later than the Spring semester of the year of application.
Students who want careers in health care may find that physical therapy fulfills their goals. A recommended baccalaureate preparation is in the field of exercise physiology. At WVU, exercise physiology majors will be able to obtain all of the pre-requisites listed above during their course of study. Another common baccalaureate major may be biology. As discussed above, these are merely suggestions and students can apply from any institution of higher education with any degree background, as long as they meet the aforementioned pre-requisites.

Additional Information and Updates
For updates, be sure to periodically check the WVU Division of Physical Therapy website http://www.hsc.wvu.edu/som/pt. You may also contact the program manager for the physical therapy program, Brenda Wolfe, at bwolfe@hsc.wvu.edu.

Applications
The physical therapy program participates in the national electronic physical therapy standard application system, known as PTCAS (Physical Therapist Centralized Application Service). The website for PTCAS is http://www.ptcas.org. Typically, PTCAS opens for applications in mid-July. The deadline for first round applications is usually December 1st of the year before entry. A second round of applications will typically be reviewed prior to a January 15th deadline. Serious applicants are encouraged to meet the first round deadline. Applicants should receive initial communication regarding their application within 35 days of the deadline. Please check the program website frequently for any updates on deadlines or the admissions process. These are often adjusted on an annual basis.

Physical Therapy (PT)
For the most recent course information for the doctor of physical therapy degree, please refer to the division’s website: http://www.hsc.wvu.edu/som/pt.

Physical Therapy Curriculum
Note: This is subject to change without notice.

<table>
<thead>
<tr>
<th>Summer</th>
<th>Pre-First Year (II)</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>PT 705 Intro. to Evid. Based PT</td>
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<td></td>
</tr>
<tr>
<td>PT 706 Adv. Clinical Anatomy</td>
<td>5</td>
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<th>Hrs.</th>
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<th>Hrs.</th>
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<tr>
<td>PT 711 Professional Roles 1</td>
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<td>PT 724 Exercise Foundations</td>
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</tr>
<tr>
<td>PT 713 Fun. Mvmt. Across Lifespan</td>
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<td>PT 720 Clinical Education</td>
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<td>PT 714 Clinical Sciences 1</td>
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<td>PT 723 Developmental Life Tasks</td>
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<td>PT 715 Evidence Based PT 1</td>
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<td>PT 716 Kinesiologic Foundations</td>
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<td>PT 730 Clinical Ed. Symposium 1</td>
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</tr>
<tr>
<td>PT 732 Physical Thera. Agents 1</td>
<td>2</td>
</tr>
<tr>
<td>PT 733 Cardiopulmonary PT</td>
<td>3</td>
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<td>PT 742 Phys. Therapeutic Agents</td>
<td>2</td>
</tr>
<tr>
<td>PT 734 Clinical Sciences 2</td>
<td>2</td>
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<td>PT 738 PT Procedures 2</td>
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<table>
<thead>
<tr>
<th>Second Professional Year</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>PT 740 Clinical Ed. Symposium 2</td>
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<td>PT 750 Clinical Education 2</td>
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<td>PT 741 Professional Roles 2</td>
<td>4</td>
<td>PT 754 Clinical Sciences 4</td>
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<tr>
<td>PT 743 Geriatric Physical Therapy</td>
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<td>PT 755 Evidence Based PT 4</td>
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<td>PT 745 Evidence Based PT 3</td>
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<td>PT 756 Orthopedic PT 2</td>
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<td>PT 746 Orthopedic PT 1</td>
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<td>PT 757 Neurologic PT 1</td>
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<td>PT 744 Clinical Sciences 3</td>
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<td>PT 797 PT Research 1</td>
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Summer Years 2-3 (I, II) Hrs.
PT 760 Clinical Education 3 .......... 6
Total ........................................ 6

Third Professional Year
First Semester Hrs. Second Semester Hrs.
PT 791C Special Topics in PT .......... 3 PT 797 Research 2 ...................... 2
PT 770 Clinical Ed. Symposium 3 ...... 2 PT 780 Clinical Ed. 4 .................... 8
PT 761 PT Roles 3 ........................ 3
PT 762 Health Care Issues in PT ...... 2
PT 763 Pediatric Physical Therapy ...... 3
PT 767 Neurologic PT 2 ................. 2
PT 768 Prosthetics and Orthotics ...... 3
Total ............................................ 10

Medical Laboratory Science
Martha J. Lake, Ed.D, M.T. (A.S.C.P.). Professor and Medical Laboratory Science Division Director
Kimberly Feaster B.S., H.T.L. (A.S.C.P.) QIHC, Histotechnology Program Director
Peter L. Perrotta, M.D., Associate Professor and Medical Director

Degree Offered
Bachelor of Science in Medical Laboratory Science

The Degree Program
The B.S. in medical laboratory science has two areas of emphasis: Clinical laboratory science and histotechnology. Clinical laboratory scientists are healthcare professionals educated in all aspects of clinical laboratory analysis including test development, performance, and evaluation. Clinical laboratory scientists may work in many areas, including clinical chemistry, hematology, immunohematology, immunology, clinical microbiology, and molecular diagnostics.

Histotechnologists are healthcare professionals who are qualified through academic and applied science education and training to provide service, research, and management in histotechnology and areas related to anatomic pathology. Histotechnologists are integral to the success of the anatomic pathology department by performing routine and complex procedures to preserve and process tissue specimens for examination and diagnosis by a pathologist.

Practice settings for clinical laboratory scientists and histotechnologists include hospital, clinic, public health, or private clinical laboratories; research, cytogenetic, pharmaceutical, or in-vitro fertilization laboratories; technical or sales representatives for medical manufacturers and suppliers; biotechnology, food and cosmetic industries; and state or federal crime laboratories.

Nature of Program
Students are admitted into either the clinical laboratory science area of emphasis or the histotechnology area of emphasis of the medical laboratory science bachelor of science program after completing two years of pre-requisite courses in an accredited college or university. The undergraduate curriculum includes 61 semester hours of pre-requisite courses (pre-medical laboratory science curriculum), and may be completed at any regionally accredited institution of higher education. As the students complete the pre-requisite courses they apply to the medical laboratory science area(s) of emphasis.

Since the last two years are professional in nature, students must be enrolled in the WVU School of Medicine for the entire period. The junior year (the first year of the professional curriculum) includes core and area-specific courses to introduce the student to the medical sciences and to prepare for the senior year curriculum. During the senior year (the second year of the professional curriculum), the student receives both didactic instruction and practical experience. Students receive practical experience at one of the affiliated hospital laboratories including: Ruby Memorial Hospital, Morgantown, WV; Monongalia County General Hospital, Morgantown, WV; West Penn Allegheny Health System, Pittsburgh, PA; the WVU Eastern Division which includes City Hospital, Martinsburg, WV, and Jefferson Memorial Hospital, Ranson, WV; Excela Health, Latrobe and Greensburg, PA; Charleston Area Medical Center, Charleston, WV, United Hospital Center, Clarksburg, WV, and Thomas Memorial Hospital, Charleston, WV. Students are required to complete a two-, three-, or four-week rural rotation at an approved site in West Virginia.
The WVU medical laboratory science area of emphasis in clinical laboratory science program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018, (773) 714-8880. Graduates are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP). The medical laboratory science area of emphasis in histotechnology is a new program to WVU and is currently applying to NAACLS for accreditation.

Other Programs
An articulation program is available for certified medical laboratory technicians (clinical laboratory technicians) who want to complete the requirements for a B.S. degree in medical laboratory science (MLS). Further information may be obtained by contacting the Medical Laboratory Science Division Office.

A part-time curriculum is available. Part-time students must meet the same admission requirements and application deadlines as full-time students. For further information, contact the Medical Laboratory Science Division Office.

Admission to the Pre-Medical Laboratory Science Major
Students in the pre-medical laboratory science major and direct admit students must meet the admission criteria of WVU. Pre-medical laboratory science students are advised by the Undergraduate Academic Services Center. Medical laboratory science faculty advises direct admit students. Prospective students should take mathematics, chemistry, and biology in high school.

Qualified applicants may enter the pre-medical laboratory science major at the beginning of any semester, but the professional curriculum begins the fall semester after the student is admitted to either the clinical laboratory science or histotechnology area of emphasis. Admission to the pre-medical laboratory science program does not assure admission to the medical laboratory science areas of emphasis in clinical laboratory science or histotechnology.

Admission
Medical Laboratory Science Area of Emphasis in Clinical Laboratory Science or Histotechnology
Direct Admit
Students may be admitted directly into the medical laboratory science major as freshman with a minimum high school grade point average of 3.75 and a minimum math component ACT score of 26 or a minimum math component SAT score of 600. They are advised by the medical laboratory science academic advisor and are automatically admitted to the professional program as long as they meet all admission requirements listed below. MTEC 100, 101, 200, and 201 are required courses for direct admit students.

Traditional
Pre-medical laboratory science students apply for admission into the junior year (first year in the MLS area of emphasis) before the second semester of the sophomore year in college. Fulfillment of the pre-medical laboratory science curriculum does not assure admittance into either the clinical laboratory science or the histotechnology area of emphasis). A competitive admission process is used to select students for the professional programs. Requirements for admission to the areas of emphasis in clinical laboratory science and histotechnology include course requirements, grade point average, a personal interview, and letters of recommendation.

The course requirements (pre-requisites) are:
- English: Six credits of composition and rhetoric (ENGL 101 and 102).
- Biology: Eight credits of general biology (BIOL 101, 102, 103, and 104).
- Chemistry: Eight credits of inorganic (CHEM 115 and 116), and four credits of organic (CHEM 231)*.
- Mathematics: Three credits of college algebra (MATH 126).
- Statistics: Three credits of introductory statistics (STAT 211).
- GEC: 22–23 credits to satisfy objectives three through nine.

*Students who do not complete CHEM 231 must complete organic chemistry courses (eight hours) that includes aliphatic and aromatic compounds with laboratory.

Although not required for admission to the medical laboratory science areas of emphasis in clinical laboratory science and histotechnology, eight credits of organic chemistry and eight credits of physics are suggested electives for those students interested in applying to medical, dental, or other graduate programs. In addition, a foreign language is recommended for students who plan to do graduate work.
Admission decisions are based upon the applicant’s grade point average; recommendations; interview; and documented ability to successfully complete full-time academic work. Applicants should have a minimum grade point average of 2.5 (cumulative and science). Applicants may be admitted on probation if their GPA (cumulative or science) is less than 2.5. Applicants with less than a 2.0 GPA, either cumulative or science, will not be admitted. A GPA of 2.5 or above does not necessarily assure admission. Two letters of recommendation are required; at least one must be from a college science professor. A personal interview with the Medical Laboratory Science Admissions Committee is required.

Admission of international students is in compliance with WVU regulations. At least one science course (chemistry or biology) must be completed at a regionally accredited institution of higher education in the United States.

Application Procedure

Each year the Division of Medical Laboratory Science selects a limited number of students from the applications received for admission to the area of emphasis in clinical laboratory science and the area of emphasis in histotechnology. Application forms for admission to the Division of Medical Laboratory Science’s areas of emphasis are available after December 1 from the Office of the Assistant Director of Admissions, WVU Health Sciences Center, P.O. Box 9815, Morgantown, WV 26506-9815 or from the WVU Office of Admissions website: http://adm.wvu.edu/. The application fee is $25 for residents and $40 for non-residents. The priority date for returning complete application packets is February 15. The deadline is March 1 if the student expects to enter the program the following fall semester. If the class is not filled by those applications, the deadline may be extended until as late as the first business day in August.

Curriculum Plan
Pre-Medical Laboratory Science

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hrs.</th>
<th>Second Year</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td></td>
<td>Second Semester</td>
<td></td>
</tr>
<tr>
<td>CHEM 115 Fund. of Chemistry</td>
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<td>CHEM 116 Fund. of Chemistry</td>
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<tr>
<td>Elective*</td>
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<td>ENGL 101 Comp. and Rhetoric</td>
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<tr>
<td>MATH 126 College Algebra</td>
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<td>Elective*</td>
<td>3</td>
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<tr>
<td>BIOL 101 and 103</td>
<td>4</td>
<td>BIOL 102 and 104</td>
<td>4</td>
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<tr>
<td>MTEC 100 Medical Technology**</td>
<td>1</td>
<td>MTEC 101 Medical Technology**</td>
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</tr>
<tr>
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<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

* General education curriculum (GEC) courses to satisfy objectives three through nine.

**MTEC 100 and 101 are required for direct admit students and highly recommended for pre-medical laboratory science students.

***MTEC 200 and 201 are required courses for direct admit students and optional for pre-medical laboratory science students.
## Required Core Curriculum for Medical Laboratory Science Major

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>PATH 300 <em>Introduction to Pathology</em></td>
<td>3</td>
</tr>
<tr>
<td>PATH 320 <em>Basic Clinical Biochemistry</em></td>
<td>3</td>
</tr>
<tr>
<td>PSIO 441 <em>Mechanisms of Body Function</em></td>
<td>4</td>
</tr>
<tr>
<td>PATH 380 <em>Introduction to Immunology</em></td>
<td>1</td>
</tr>
<tr>
<td>PATH 303 <em>Laboratory Applications</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 323 <em>Microbiology</em></td>
<td>5</td>
</tr>
<tr>
<td>MTEC 329 <em>Basic Clinical Chemistry</em></td>
<td>1</td>
</tr>
<tr>
<td>MTEC 381 <em>Research, Ed. Methodology</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 465 <em>Laboratory Management</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 403 <em>Community Service Practicum</em></td>
<td>1</td>
</tr>
<tr>
<td>MTEC 475 <em>Medical Relevance</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 402 <em>Rural Health Practicum</em></td>
<td>1</td>
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<td><strong>Total</strong></td>
<td><strong>27</strong></td>
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</table>

## Required Courses for Clinical Laboratory Science Area of Emphasis

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATH 340 <em>Intro to Hematology</em></td>
<td>3</td>
</tr>
<tr>
<td>MICB 327 <em>Microbial Parasitology</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 310 <em>Clin Lab. Mycology</em></td>
<td>1</td>
</tr>
<tr>
<td>MTEC 470 <em>Clinical Microscopy</em></td>
<td>1</td>
</tr>
<tr>
<td>MTEC 472 <em>Urinalysis/TF Lab</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 440 <em>Hematology</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 460 <em>Instrumentation</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 450 <em>Clinical Microbiology</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 420 <em>Immunohem. &amp; BB</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 430 <em>Clinical Chemistry</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 480 <em>Clinical Immunology</em></td>
<td>2</td>
</tr>
<tr>
<td>MTEC 401 <em>Phlebotomy</em></td>
<td>1</td>
</tr>
<tr>
<td>MTEC 421 <em>Immunohem. &amp; BB Lab</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 431 <em>Clinical Chemistry Lab</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 441 <em>Clin. Hematology Lab</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 451 <em>Clin. Microbiology Lab</em></td>
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<tr>
<td>MTEC 481 <em>Clin Immunology Lab</em></td>
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## Required Courses for Histotechnology Area of Emphasis

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<tr>
<td>NBAN 205 <em>Intro. to Human Anat.</em></td>
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<tr>
<td>PATH 304 <em>Microanatomy for HTL</em></td>
<td>3</td>
</tr>
<tr>
<td>MTEC 200 <em>Medical Terminology</em></td>
<td>1</td>
</tr>
<tr>
<td>PATH 305 <em>Staining Techniques I</em></td>
<td>4</td>
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<tr>
<td>PATH 306 <em>Histotechnique I</em></td>
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<tr>
<td>PATH 405 <em>Staining Techniques II</em></td>
<td>4</td>
</tr>
<tr>
<td>PATH 406 <em>Histotechnique II</em></td>
<td>3</td>
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<tr>
<td>PATH 407 <em>Histology Laboratory</em></td>
<td>4</td>
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<tr>
<td>PATH 408 <em>HTL Practicum</em></td>
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</table>
Fourth Year (Medical Laboratory Science 2)

Students receive didactic and clinical instruction during the fourth (senior) year. The senior year includes summer, fall, and spring semesters. Any competencies not completed must be made up by the end of the school year (mid-May) or graduation may be delayed.

Graduation Requirements

Junior Year

Students must maintain a minimum grade point average of 2.0 for each semester to advance to the senior year. Failure to maintain at least a 2.0 GPA may result in probation or suspension. The Academic and Professional Standards Committee must recommend any student for advancement to the senior year. A satisfactory GPA does not assure advancement.

Senior Year

A student must maintain a minimum grade point average of 2.0 for each semester of the senior year. Graduation requires satisfactory completion of all academic work and the recommendation of the faculty of the School of Medicine.

Graduation is not dependent upon passing a national certification examination.

Pathologists’ Assistant

Cheryl Germain, M.H.S., P.A. (ASCP), Program Director
cgermain@hsc.wvu.edu
Tiffany Harper, M.D., Assistant Professor and Medical Director
http://www.hsc.wvu.edu/som/pa/

Degree Offered

Master of Health Science

The Profession

A pathologists’ assistant is a healthcare professional who is qualified through academic and practical training to provide services in anatomic pathology under the direction of a qualified pathologist. Pathologists’ assistants serve as “physician-extenders in the same manner as physicians’ assistants. The addition of pathologists’ assistants to the pathology team can reduce cost, increase revenue, and improve workflow in the anatomic pathology lab. In practice, pathologists’ assistants (PAs) are responsible for the processing of the surgical pathology specimen from receipt to dissection and description to submission of tissue to histology. In autopsy practice, the PA is involved in reviewing the medical record of the decedent, evisceration, dissection, and selection of tissue for submission to histology as well as formulation of a preliminary anatomic diagnosis and autopsy report under the direction of a pathologist. Many PAs are involved in laboratory management, teaching at the University level, training of residents and medical students, forensic investigation, or research.

Nature of Program

The graduate program for pathologists’ assistants began in January 2008 and is administered by the School of Medicine. Students are admitted into the master of health science program after earning a baccalaureate degree from a regionally accredited college or university. Students with a cumulative grade point average of 3.25 or higher in the B.S. degree program in medical laboratory science at West Virginia University may be provisionally admitted directly into the pathologists’ assistant program at the end of their junior year.

This program is a 24-month master’s level program that prepares graduates as allied health professionals for careers as pathologists’ assistants. During the second year, the student receives both didactic instruction and practical experience. Students receive practical experience at one of the program’s affiliated medical laboratories including, West Virginia University Hospital and Medical Examiner’s Office, Morgantown, WV; Allegheny General Hospital, Magee-Women’s Hospital of UPMC, UPMC Presbyterian and UPMC Shadyside, Pittsburgh, PA; Thomas Memorial Hospital and St. Francis Medical Center, Charleston, WV.

The WVU pathologists’ assistant program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415, (773) 714-8880. Graduates are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).
Admission to the Pathologists’ Assistant Program

All students seeking admission to the master of health science, pathologists’ assistant program must meet the following admissions requirements:

- Hold an earned baccalaureate degree from a regionally accredited institution of higher education.
- Successfully complete the specific pre-requisite coursework in mathematics and sciences.
- A GPA (cumulative and pre-requisite courses) of 3.0 on a 4.0 scale is preferred.
- Submit two letters of recommendation to the program director (these are not submitted with the application).
- Complete an interview with the Admissions Committee.
- Submit an admissions packet including the application form, personal statement, essential functions form, and official transcripts from all colleges and universities attended.

**Requirement**

**College Prep**

Baccalaureate Degree*

**Pre-requisite Courses**

- 8 Hr. Biology with laboratory
- 8 Hr. College Chemistry with lab
- 4 Hr. CHEM 231, Organic Chemistry: Brief course or 4 Hr. Biochemistry with laboratory or equivalent
- 4 Hr. Microbiology with laboratory
- 3 Hr. College Algebra

**Grade Point Average preferred**

- 3.0 cumulative
- 3.0 in the pre-requisite courses

**Essential Functions**

Review essential functions and submit the signed form

**Recommendations**

Two letters of recommendation (submitted directly to the program director)

**Interview**

A personal interview with the Pathologists’ Assistant Program Admission Committee

**Shadowing or Work Experience***

Applicant must complete a shadowing experience with a practicing pathologists’ assistant or have applicable work experience in surgical or autopsy pathology. A statement regarding this experience is required in the application packet. Please contact the program director for assistance if necessary.* Students must have a baccalaureate degree prior to beginning the professional sequence. However, the program has established the following admissions classifications:

- **Direct Admit.** A limited number of students completing the bachelor of science program in medical laboratory science who have a cumulative GPA of 3.25 may apply to the master of health science, pathologists’ assistant program at the end of their junior year. These students will be admitted into the program after completing the B.S. in medical laboratory science degree at West Virginia University.
- **Regular Decision.** A student applies in the admission cycle during their senior year. Typically, application will be submitted in April of the senior year. Admission is contingent upon satisfactory completion of the baccalaureate degree.

**Performance Standards**

Students are required to maintain a semester GPA of 3.0 to progress in the first and second year of the professional program.

**Application Procedure**

Each year the pathologists’ assistant program selects a limited number of students from the applications received for admission. Application packets for admission to the program are available after March 1 online or from the Office of the Assistant Director of Admissions, WVU Health Sciences Center, P.O. Box 9815, Morgantown, WV 26506-9815 or from the WVU Office of Admissions website: http://adm.wvu.edu. The application fee is $25 for residents and $40 for non-residents. Each applicant must arrange for transcripts to be sent directly from all undergraduate institutions attended to the Admissions Office. When the application is complete, the file is sent to the Pathologists’ Assistant Admissions Committee. A complete admissions packet contains: Completed application form and personal statement, official transcripts, two references**, and the essential functions form. Please note that the admissions office does not handle reference letters. Each application requires two letters of reference (one from a professor and one from a laboratory professional with whom you have worked.) An interview will be granted to qualified applicants after a review of the application packets.
Letters of reference should be mailed to: Cheryl Germain, Program Director, WVU Pathologists’ Assistant Program, P.O. Box 9203, Morgantown, WV 26506-9203.

Pathologists’ Assistant Program Essential Functions
In accordance with Section 304 of the 1973 Vocational Rehabilitation Act, the West Virginia University pathologists’ assistant program has adopted minimum technical standards for assessment of all applicants.

Because the master’s degree in health science/pathologists’ assistant signifies that the holder has obtained minimum competencies in all areas of the anatomic pathology laboratories, it follows that graduates must have the knowledge and skills to function in a wide variety of laboratory situations and to perform a wide variety of procedures.

1. Candidates for the master’s degree in health science/pathologists’ assistant must have somatic sensation (sense of touch) and the functional use of the senses of vision and hearing.
2. Candidates’ diagnostic skills will also be lessened without the functional use of the sense of equilibrium, smell, and taste.
3. Additionally they must have sufficient motor function to permit them to carry out the activities described in the sections that follow.
4. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data.
5. A candidate for the master’s degree in health science/pathologists’ assistant must have abilities and skills which include observation, communication, motor, conceptual, integrative, quantitative, behavioral, and social. Technological compensation can be made for some disabilities in certain areas but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate’s judgment must be mediated by someone else’s power of selection and observation.

- Observation: The candidate must be able to observe demonstrations, procedures, and instruments in the basic sciences and clinical courses. Observation necessitates the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.
- Communication: A candidate should be able to speak, hear, and observe people in order to elicit information and perceive nonverbal communications. A candidate must be able to communicate effectively and efficiently in oral and written form with members of the health care team.
- Motor: Candidates should have sufficient motor function to perform laboratory procedures. This action requires the coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.
- Intellectual—conceptual, integrative, and quantitative abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand spatial relationships of structures.
- Behavioral and Social Attributes: A candidate must possess the emotional health required for full utilization of his/her judgment, the prompt completion of all responsibilities, and the development of mature, sensitive relationships with patients and coworkers.

Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that should be assessed during admissions and education process. In its evaluation of applicants to the West Virginia University Pathologists’ Assistant program, the Admissions Committee will approach each applicant with the following questions in mind.

When an applicant does not meet a non-academic standard as defined above, and when this would, in the professional judgment of the committee, not satisfy the pathologists’ assistant objectives for the student in performing laboratory procedures, education, and research, such opinion will be documented by the Admissions Committee.

The questions are not designed to disqualify an applicant but rather to give the Admissions Committee more complete information about an applicant's ability to meet these nonacademic standards:
1. Is the candidate able to observe demonstrations and perform procedures in the basic sciences and clinical courses?
2. Is the candidate able to analyze, synthesize, solve problems, and make judgments about results obtained on patient specimens?
3. Does the candidate have sufficient use of the senses of vision, hearing, and somatic sensation necessary to perform the indicated laboratory procedures?
4. Can the candidate reasonably be expected to communicate the results of laboratory tests to other members of the health care team with accuracy, clarity, and efficiency?
5. Can the candidate reasonably be expected to learn and perform laboratory tests and operate instruments?
6. Can the candidate reasonably be expected to display good judgment in the analysis of procedure results?
7. Can the candidate reasonably be expected to accept criticism and respond by appropriate modification of behavior?
8. Can the candidate reasonably be expected to possess the perseverance, diligence, and consistency to complete the pathologists’ assistant program and to become a practicing pathologists’ assistant?

**Curriculum**

**Spring**

<table>
<thead>
<tr>
<th>Year One</th>
<th>Hrs.</th>
<th>Year Two</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>PATH 603 Human Anat. for PAs</td>
<td>6</td>
<td>PATH 627 Path Asst. Practicum I</td>
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<tr>
<td>PATH 625 Anatomical Path Tech</td>
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<td>PATH 630 Pathology Review I</td>
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<tr>
<td>FIDP 493B Adv. Forensic Photo</td>
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<td>PATH 728 General Pathology</td>
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**Summer**

<table>
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<td>PATH 628 Path Asst. Practicum II</td>
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<td><strong>Total</strong></td>
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**Fall**

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<th>Year One</th>
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<td>PATH 610 Ed. Methodologies</td>
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<td>PATH 629 Path Asst. Practicum III</td>
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<td>MICB 702 Microbiology</td>
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<td>MTEC 465 Clin. Lab. Management</td>
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<tr>
<td>PSIO 743 Fundamentals of Physio</td>
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<tr>
<td>PATH 620 Clinical Path.Seminar</td>
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<td><strong>Total</strong></td>
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<tr>
<td>PATH 693 Sp. Tp: Adv. Microanatomy</td>
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<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Graduation Requirements**

Students are required to maintain an overall GPA of at least 3.0 as a graduate student while enrolled in the pathologists’ assistant program. A minimum 3.0 GPA is required to graduate from the program.

**Medicine**

http://www.hsc.wvu.edu/som/students

**Degrees Offered**

*Doctor of Medicine*

*Joint Doctor of Medicine and Doctor of Philosophy*

*Joint Doctor of Medicine and Master's in Public Health*

The degree of doctor of medicine (M.D.) is granted to students who have completed the prescribed curriculum and who have been recommended for the degree by the faculty of the School of Medicine.

The M.D./Ph.D. program is available to students who show exceptional interest and scholarly promise. All admission requirements of the School of Medicine and the specific graduate program apply. An M.D./M.P.H. program is available for those interested in public health issues.

The following information applies only to students in the School of Medicine who are enrolled in the prescribed curriculum which culminates in the M.D. degree. All other students, undergraduates, or graduates enrolled in other programs in the School of Medicine are governed by the policies found elsewhere in this catalog.
Accreditation
The West Virginia University School of Medicine is accredited by the Liaison Committee on Medical Education (LCME).

Admission Requirements
The student preparing for any career in the health professions must have a keen interest in the sciences.

The following courses are required for consideration of an application to medical school:

- English 6 semester hours
- Biological sciences (with lab) 8 semester hours
- Inorganic chemistry (with lab) 8 semester hours
- Organic chemistry (with lab) 8 semester hours
- Physics (with lab) 8 semester hours
- Social or behavioral sciences 6 semester hours

Biochemistry and Cellular and Molecular Biology are strongly recommended. A total of 90 semester hours, exclusive of ROTC and general physical education, is required. Computer skills are required. All required courses must be passed with a grade of B or better. A grade of C does not constitute a passing grade. All required classes must be completed prior to January 1 of the year of admission.

An excess of credit hours or higher degrees does little to offset the disadvantage of low grades when being considered for admission to the School of Medicine. Repeating courses to raise the grade is discouraged. Applicants who have been subject to suspension from WVU or other medical schools can be admitted only in very exceptional cases and at the discretion of the Admissions Committee.

Pre-Admission Tests
The score of the Medical College Admissions Test (MCAT) is one of the factors used by the Admissions Committee in considering an applicant for admission. It is recommended that students take the MCAT during the spring of their junior year in college. The MCAT must be taken by September of the year of application. MCATS taken in January of the year of admission will not be considered. The dates for beginning and closure of application acceptances are available through AMCAS and on our website.

Information concerning the time and place of the test can be obtained from your premedical advisor, Admissions Committee, or the Office of Admissions at the Health Sciences Center.

Application Procedure
The admission process is initiated by completing the online American Medical College Application Service (AMCAS) forms. They are online at http://www.aamc.org.

Application for admission in August should be made at the end of the previous school year. The last date for filing an application is November 1. The applicant should file as early as possible, making certain that recent MCAT scores, current transcripts, and letters of recommendation are available to the Admissions Committee.

Admission preference is given to West Virginia residents and those non-resident applicants who have strong ties to the state, or verifiable interests in rural and primary care. No one specific factor is used to determine admission. However, careful consideration is given to those personal qualifications which apply to the study and practice of medicine. The criteria for admission include academic performance, course load, letters of recommendation, MCAT scores, motivation, interpersonal skills, community service, health care experiences, and a personal interview. An early decision program is available for those residents and non-residents with strong grades and MCATs who wish only to apply and attend WVU.

No applicant is admitted before an interview by the Admissions Committee. Residency status is determined by the Board of Trustees Policy Bulletin #36. Interviews and consideration of applicants begin in September. Acceptances are made on a rolling basis.

If an applicant is denied admission or does not enroll after acceptance, he or she must reapply in the regular manner for consideration in a subsequent year.

Advanced Standing
Advanced standing positions are considered only in very exceptional circumstances and only to students currently attending a medical school accredited by the Liaison Committee on Medical Education (LCME). A request for transfer is usually considered during the second year. The application must be received no later than April 1. The applicant must present certification of good academic and professional standing in the school from which he/she is transferring. An official transcript of all prior medical school work, and recommendations are required from all medical schools attended.
In addition, successful results of Step I of the United States Medical Licensure Examination must be available before action on an application can be finalized.

**Conditions Following Acceptance**

An applicant accepted into the first year or in advanced standing is expected to meet all entrance requirements and satisfactorily complete all undergraduate/medical school work in progress. Failure to do so may result in the withdrawal of the acceptance by the Admissions Committee.

The student must be aware that furnishing or causing to be furnished, false or incorrect information for the purpose of the School of Medicine application constitutes grounds for disciplinary actions, including, but not limited to, expulsion or revocation of the acceptance.

A criminal background check is required and must be successfully passed prior to matriculation. Certain convictions negate an offer to attend medical school at WVU.

Students in the School of Medicine agree to abide by the provision of an integrity code, which requires ethical and moral standards of conduct in all situations. Each student is required to return a signed statement to the Office of Student Services, indicating the student has read and understands the Student Professional and Academic Integrity Code of the West Virginia University School of Medicine. The code and copies of the statement are available on the Student Services website.

Prior to entering medical school, all students must complete certain prescribed immunization and diagnostic procedures. Personal health insurance is required.

**Promotion and Graduation Requirements**

**Evaluation of Student Progress**

Promotion of a student in the M.D. degree program is evaluated in four major areas: 1.) Successful completion of all required work; 2.) Successful completion of Step 1 and Step 2 of the United States Medical Licensure Examination (USMLE); 3.) Successful completion of the WVU School of Medicine Clinical Performance Exam; and 4.) Successful fulfillment of the professional standards of the School of Medicine, including 100 hours of community service.

The following information is only a brief outline of the School of Medicine policies and procedures. Detailed requirements and policies for evaluation of student progress and graduation may be found in the Policy on Academic and Professional Standards Governing the M.D. degree program at WVU School of Medicine on the Student Services website. The Committee on Academic and Professional Standards administers all promotion and dismissal rules.

**Academic Coursework Review**

The Committee on Academic and Professional Standards of the School of Medicine reviews the performance of each student in every course at the end of each academic period and makes recommendations to the dean. If a student has been found to have an unsatisfactory performance in any of the required courses, dismissal from the school may be recommended. In selected circumstances, the committee may recommend remedial work of all or a portion of the curriculum. Exceptions may be made only upon recommendation of the committee. The application of rules on dismissal is not automatically changed by removal of incomplete (I) grades or by the repetition of courses in other medical courses.

It is the policy of the School of Medicine that the departments conduct examinations to help in the overall evaluation of student progress. In addition to the departmental examinations, other examinations may be conducted for other purposes. At the end of each year a comprehensive examination, designed on an interdepartmental basis, may be required as a test of readiness for promotion.

A student may be subject to remedial work or dismissal on recommendation of the Committee on Academic and Professional Standards to the dean even though no unsatisfactory (U) grade has been received in a required course. Such an unusual event would occur only if, in the opinion of the committee, the student’s overall performance does not meet the academic/professional standards of the School of Medicine.

Readmission of a dismissed student is the prerogative of the Admissions Committee after careful review of the student’s performance, including but not limited to, recommendations of the Committee on Academic and Professional Standards.

**Grading Policy**

All courses required for the M.D. degree are graded as honors (H), satisfactory (S), or unsatisfactory (U) at the completion of the course in lieu of other letter grades. The H, S, and U designations are accompanied by a narrative report of the student’s progress, noting any factors requiring remedial work or counseling. The narrative is submitted by each course and filed in the Office of Student Services. A grade of U shall be regarded as a failing grade.
The grade of incomplete (I) is given when the instructor believes that the work is unavoidably incomplete or that a supplementary examination is justifiable. If a grade of I is not removed by satisfactory completion of the work before the end of the next semester in which the student is in residence, it becomes a failure (unsatisfactory) unless special permission to postpone the work is obtained from the Committee on Academic and Professional Standards (University rule). All students who have a health problem which they feel may be causing difficulty with their academic progress are strongly advised to notify an associate dean for student services. It is the responsibility of the student to consult the instructor about the means and schedule for making up incomplete courses.

No student will be permitted to register for any work of the second or subsequent year until all courses for the year before have been completed successfully.

United States Medical Licensure Examination (USMLE)

All states require that physicians be licensed to practice medicine. Satisfactory completion of all portions of the United States Medical Licensing Examination (USMLE) is the only mechanism by which this license may be obtained. The School of Medicine requires a passing grade on Step I and Step II for promotion and graduation. A failing grade will delay progress and require remediation. Students are limited to three attempts on each step.

Step I is required upon successful completion of all basic science coursework. A passing grade in Step I is required for promotion into the clinical rotations. Step II (clinical knowledge and clinical skills) is required after successful completion of third-year clinical rotations. A passing score on Step II is required before a recommendation can be made to grant the M.D. degree by the School of Medicine faculty and Committee on Academic and Professional Standards.

Licensure examinations are administered using a computer-based testing format.

Professional Standards Review

All non-disciplinary matters are governed by the concept of academic due process.

In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend to the president of the University the removal of any student from its rolls whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession. For further information the reader is referred to the Policy on Academic and Professional Standards Governing the M.D. Degree Program at West Virginia University School of Medicine, which is available at the School of Medicine Office of Student Services, and on the Student Services website.

Departure from Scheduled Work

Medical students are registered for all prescribed courses for each semester except by special permission from the Committee on Academic Standards and an associate dean for student services of the School of Medicine. This permission is not valid until it has been reported to the assistant director of admissions and records, Health Sciences Center, and for record, the Office of Student Services, School of Medicine.

Interruption of academic work must be approved by the Office of Student Services.

Curriculum

The field of medicine is rapidly changing. The following curriculum outline is the plan that is presently in place. However, the medical school curriculum at WVU will change as needs dictate.

Community Service

All students of the Health Sciences Center are required to perform community service as a component of their curriculum. Medical students must complete 100 hours of community service prior to graduation.

Medical Education Program of Study

The medical education curriculum was restructured in 1998 and again in 2007. The most significant changes include: 1.) Students begin clinical experiences early in their first year of medical school; 2.) The basic science disciplines have been integrated; 3.) Incoming medical students are required to lease a windows-based laptop to use in the curriculum that incorporates information and academic technology in the delivery of instruction.

With these principles in mind, the old semester (college-like) schedule of the independent discipline-based courses, for example, physiology, gross anatomy, biochemistry, neurobiology, microanatomy, epidemiology, and psychiatry has been replaced.
First Year

Medical students’ first year: 38-week academic year divided into three blocks (16 weeks, 15 weeks, and seven weeks). Approximately 24 scheduled instructional contact hours per week. Each block contains three courses: A basic science multidisciplinary course; public health (epidemiology, biostatistics, and preventive medicine) in the fall; and physical diagnosis and clinical integration (large group alternating every other week with small groups). While physical diagnosis and clinical integration runs throughout the year, the basic science component changes each block. The first block (16 weeks) contains a multidisciplinary run course: Human function (physiology, biochemistry, and genetics.). Second block (15 weeks) consists of human structure (gross anatomy, embryology, and microanatomy: large group and laboratory). Third block (seven weeks) consists of multidisciplinary neuroscience (ten hours large group, laboratory, and small group). A weekly problem-based learning group is maintained throughout the first year.

Second Year

Medical students’ second academic year is 34 weeks. The schedules of course material from Microbiology and Immunology, Pathology, Pharmacology, and Physical Diagnosis and Clinical Integration-2 courses are integrated by organ system. Each course maintains its autonomy with respect to assessment of student performance. This integrated, yet independent approach, assists students in finding remediation courses if they experience academic difficulty in any one particular discipline. In addition to the integration of the schedule of these four courses, there is an additional course, Behavioral Science and Psychopathology, in the fall and Health Care Ethics in the spring. There are approximately 26 scheduled instructional contact hours per week.

Clinical Years

The last two years of study take place in the clinics, hospitals, and community settings where students have the opportunity to help diagnose and treat patients under supervision of the faculty and staff. All students will serve a significant portion of the clinical years training at an off-campus or rural site.

Third Year

In the third year the student must spend a designated period of time in each of the major clinical disciplines: internal medicine, surgery, pediatrics, obstetrics and gynecology, psychiatry and neurology, and family medicine. This gives the student a foundation in history-taking, examination, patient relations, laboratory aids, diagnosis, treatment, and use of the medical literature in the major clinical disciplines. One month is spent in rural primary care.

Approximately one-third of each class is selected during their first year to spend the third and fourth year at the Charleston Division of the Robert C. Byrd Health Sciences Center of West Virginia University. A smaller number of students will also complete their clinical work on the Eastern Division Campus.

Fourth Year

The fourth year is a partially structured and partially elective year. Each student works with an advisor to select the program best suited to the individual’s abilities and goals. Courses selected are subject to approval of an associate dean in the Office of Student Services.

Four months of the senior year are committed to required clerkships at the home campus which include one month in internal medicine, family general medicine, surgery, or pediatric sub-internship; one month of acute care; and two months of rural primary care. The remaining 4.5 months of the senior year are elective at approved teaching sites.

A catalog is available online that lists the approved electives and selection guidelines at http://education.hsc.wvu.edu/ms4catalog.

Students interested in other extramural opportunities are advised to consult with the fourth-year curriculum coordinator in the Office of Student Services. Elective time must be spent in LCME (Liaison Committee on Medical Education) or JCAH (Joint Council of American Hospitals) accredited institutions. Foreign rotations, regardless of sponsorship, are limited to one month credit.
School of Nursing
Georgia L. Narsavage, Ph.D., R.N., F.A.A.N., Dean
Mary Jane Smith, Ph.D., R.N., Associate Dean for Graduate Academic Affairs
Elisabeth Shelton, Ph.D., R.N., A.N.E.F., Associate Dean for Undergraduate Academic Affairs
Cynthia Armstrong Persily, Ph.D., R.N., F.A.A.N., Associate Dean for Academic Affairs, Southern Region; Chair, Charleston Division
Stuart Wells, M.A., Director of Enrollment Management and Graduate Advising
Misti Michael, M.B.A., Assistant Dean for Student and Alumni Affairs
http://www.hsc.wvu.edu/son

Degrees Offered
Bachelor of Science in Nursing
Master of Science in Nursing
Doctor of Nursing Practice
Doctor of Philosophy in Nursing

Introduction
The mission of the WVU School of Nursing is to serve the people of West Virginia and the larger society through education, research, and service, including faculty practice. This mission is responsive to changing health care needs and emerging national and state changes in technology and health care delivery, and is enhanced by a supportive and open environment. The faculty’s educational effort is directed at providing high quality student-centered programs of instruction at all levels which prepare superb professional nurses to meet basic health care needs; advanced practice nurses to address complex health needs; and doctorally educated nurses to advance nursing knowledge through research, to assist in the formulation of policies to improve health care, and to serve as faculty in higher degree programs. Unique characteristics of the state mandate that the health care needs of rural populations and vulnerable groups be a major focus of education, research, and service, including faculty practice.

The School of Nursing offers undergraduate, graduate, and post-master’s programs of study. The baccalaureate program (B.S.N.) is available for high school graduates who aspire to a career in nursing (basic students) and to registered nurses (R.N.) who are licensed graduates of associate degree or diploma nursing programs seeking to continue their career development. In addition, a B.S./B.A. to B.S.N. programs are available for the college graduate seeking a B.S.N.

The master of science in nursing (M.S.N.) prepares graduates for advanced practice roles in rural primary health care. These roles include family nurse practitioner, pediatric nurse practitioner, neonatal nurse practitioner, geriatric nurse practitioner, and nursing leadership.

Post-graduate nurse practitioner certification programs in these role specialties are available for those who already had an M.S.N. The R.N. to M.S.N. program also has these role specialties available.

The doctor of nursing practice (D.N.P.) prepares advanced practice nurses who will practice at the highest level of professional nursing and will advance the application of nursing knowledge for the purpose of improving health care for diverse populations.

The doctor of philosophy in nursing (Ph.D.) prepares nurse scholars/educators for roles in teaching, service, and research in nursing. The program prepares graduates who will continue unique nursing experience to the collaborative development of knowledge to improve health and quality of life.

Accreditation
The baccalaureate program received initial accreditation with graduation of the first class in 1964. The master’s program was initially accredited in 1981. The doctor of nursing practice program was initially accredited in 2009. Currently, these programs are fully accredited by the national accrediting agency, the Commission on Collegiate Nursing Education, and approved by the West Virginia Board of Examiners for Registered Professional Nurses.
Fees, Expenses, Housing, Transportation, Immunization, Criminal Background Checks

Students enrolling at the Morgantown campus pay the fees as stated online at: http://adm.wvu.edu/home/cost_of_attendance, plus special fees and deposits as required. Students enrolling at other sites pay the fees shown for that site. Fees are subject to change without notice. Students’ expenses vary according to the course of study and individual preferences. Information concerning financial assistance, application forms, and the Free Application for Federal Student Aid (FAFSA) form may be obtained from the financial aid website: http://www.hsc.wvu.edu/fin/ or by contacting the HSC Financial Aid Office, Health Sciences North, P.O. Box 9810, Morgantown, WV 26506-9810, telephone (304) 293-3706.

The University Housing and Residence Life Office, telephone (304) 293-3621, provides information concerning University-owned housing. The Student Life Office, telephone (304) 293-5611, provides information for privately owned, off-campus housing.

Students are expected to provide their own transportation, equipment, and instruments for the clinical courses. Some clinical experiences require travel in a multi-county area.

Proof of specific immunizations is required for all health sciences students.

Students in the bachelor of science in nursing, bachelor of science/bachelor of arts to bachelor of science in nursing, and master of science in nursing programs must undergo a criminal background check prior to clinical courses. Felony convictions and serious misdemeanors may preclude participation in the clinical courses. This could, in turn, prevent the completion of course requirements and completion of the program.

Scholarships

The School of Nursing offers scholarships administered by the University’s Financial Aid Office and require completion of the Free Application for Federal Student Aid (FAFSA) form in order to be considered for financial aid.

Additional Information

Visit the School of Nursing website at http://www.hsc.wvu.edu/son. Call the WVU School of Nursing Office of Student Services at 1-866-WVUNURS or (304) 293-1386. Write to WVU School of Nursing at P.O. Box 9600, Morgantown, WV 26506-9600.

Undergraduate Program

The School of Nursing undergraduate program in nursing is recognized by health care agencies as providing excellent preparation for the nursing profession. Our graduates are in great demand and enjoy a large number of career opportunities. The B.S.N. curriculum includes courses in the humanities, social sciences, basic sciences, and nursing science. The clinical component of nursing courses enables students to apply their learning to actual client, family, and community situations that warrant nursing intervention. The curriculum has been carefully designed to equip graduates to begin professional nursing practice with clients of all ages in any health care setting where there is a position for the professional nurse at the start of his or her career. The program also provides an excellent foundation for graduate study in nursing and in other fields.

The baccalaureate program (B.S.N.) is available for high school graduates who aspire to a career in nursing (basic students). It is also available to registered nurses (R.N.s) who are licensed graduates of associate degree or diploma nursing programs seeking to continue their career development, and to individuals with college degrees in other fields who wish to attain the bachelor of science in nursing. The basic B.S.N. program can be completed in four years at WVU’s Morgantown campus or at WVU Institute of Technology. Programs with Glenville State College and WVU Potomac State College allow students to complete the first two years at those schools. Glenville students complete the program at WVU Tech; WVU Potomac State students complete the program in Morgantown.

The R.N. to B.S.N. program is completely Web-based, with asynchronous course delivery. Registered nurses can complete the B.S.N. requirements online through a completely web-based program. Registered nurses are admitted to the WVU program, and can request advising through the Morgantown, Charleston, or WVU Tech campus. Nursing courses for R.N. students are scheduled to provide opportunity for completion of degree requirements in three semesters if non-nursing courses are already completed. Credit may be earned by enrollment and by challenge through advanced placement and portfolio exams.
A B.S./B.A. to B.S.N. accelerated program are available for the college graduate with a degree in a field other than nursing. Following 18 months of continuous enrollment, students attain the B.S.N. degree and are eligible to take the R.N. licensing examination. The B.S./B.A. to B.S.N. program is offered at WVU in Morgantown.

In keeping with the University's commitment to the West Virginia Rural Health Education Partnerships (WVRHEP) program and to improving health care for all West Virginians, all health sciences students in state supported schools complete a rural clinical practice requirement as part of degree requirements. Nursing students complete the rural clinical practice requirement during their senior year.

**Direct Admission to Basic Program**

Applicants are eligible to enter the B.S.N. program as freshmen. Admission is based on a combination of high school grade point average and composite ACT or total SAT scores in a single testing session. Students admitted to the nursing major as freshmen have a total of four semesters to complete the required freshman coursework.

High school students eligible for admission to the University are admitted directly into nursing if they meet the following criteria.

<table>
<thead>
<tr>
<th>GPA</th>
<th>Composite ACT</th>
<th>Total SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6 or higher</td>
<td>25 or higher</td>
<td>1140 or higher</td>
</tr>
</tbody>
</table>

In addition, students must have completed the high school credits required by the University:

- **Units (years)**
  - 4 English (including courses in grammar, composition, and literature)
  - 3 Social studies (including U.S. history)
  - 3 College preparatory mathematics (algebra I, algebra II, and plane geometry)
  - 2 Laboratory science (biology, chemistry, physics, or other courses with a strong laboratory science orientation)

**Admission to Basic Program as Pre-Nursing or Other College Major**

If a student does not meet the nursing admission criteria to be directly admitted to the B.S.N. program as a freshman, the student can apply for admission to the B.S.N. program as a sophomore after completion of one semester of college coursework with a cumulative GPA of 3.0.

Application to the basic B.S.N. program must be made by February 1 of the year the candidate wishes to be admitted. Acceptance and placement in the program are dependent upon space available in the program. There are limited spaces available and the best qualified applicants are accepted. Application forms are distributed after December 1 by the Health Sciences Center Office of Admissions or are available online from the Admissions website. Qualified applicants will be invited for an interview as part of the admissions process.

**Note:** Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at: http://www.hsc.wvu.edu/son/.

**First Year Basic Student Curriculum**

All freshman basic students admitted to the school complete a common curriculum designed to provide the foundation for success in subsequent nursing courses.

The curriculum for the basic B.S.N. program is currently in the process of revision. Please see the School of Nursing website for details on the updated curriculum at http://www.hsc.wvu.edu/son. Note: Curriculum components are subject to change.

Students admitted to the School of Nursing as sophomores must have completed the freshman year courses prior to beginning the sophomore year. All freshman year courses must be completed with a grade of C or better, and the student must have a cumulative GPA of 3.0 or higher in science courses.

**Transfer Students**

Students with nursing credit from an accredited college or university are eligible for consideration for transfer admission by presenting a record of courses comparable to those required in this curriculum and meeting other School of Nursing admission requirements. Students must provide a statement of good standing from the nursing program in which they are currently
enrolled. Acceptance and placement in the program is dependent on the individual’s academic record and the number of spaces available. Transfer students must have a cumulative GPA of 3.0 for previous college coursework, and must have earned at least a C in all nursing and pre-and co-requisite non-nursing courses.

**B.S./B.A. to B.S.N. Admission**

Applicants for the B.S./B.A. to B.S.N. program must have a baccalaureate degree from an accredited college or university with a cumulative GPA of at least 3.0 on a 4.0 scale.

The following prerequisite courses must be completed with a grade of C or better prior to enrollment:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
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<tr>
<td>Chemistry</td>
<td>3–4</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
</tr>
<tr>
<td>Human Anatomy</td>
<td>3–4</td>
</tr>
<tr>
<td>Human Physiology</td>
<td>3–4</td>
</tr>
<tr>
<td>Microbiology</td>
<td>3–4</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Sociology or Introductory Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology Across the Lifespan</td>
<td>3</td>
</tr>
<tr>
<td>Human Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Note:** Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at: [http://www.hsc.wvu.edu/son](http://www.hsc.wvu.edu/son).

**Academic Standards and Graduation Requirements**

To be in good academic standing, students must:

1. Maintain a cumulative GPA of 3.0 or better in all college work attempted.
2. Pass all nursing courses and pre- or co-requisite non-nursing courses with a grade of C or better.

A student who receives a grade of D, F, WU, or W in a required nursing course or pre- or co-requisite non-nursing course may repeat that course once and must earn a grade of C or better when the course is repeated. Nursing courses and pre- and co-requisite courses in which students earn a grade of D, F, W, or WU must be repeated prior to the student’s progression to the next course in the nursing sequence. Nursing courses must be repeated in the next spring or fall semester that the course is offered. Anatomy, physiology, and microbiology must be completed with a grade of C or better before progressing to junior-level nursing courses.

Students who repeat a nursing course or a pre- or co-requisite non-nursing course and earn a grade of D, F, WU, or W will be dismissed from the school. A student may repeat only one nursing course. Students who do not maintain a cumulative GPA of 3.0 or better will be placed on probation for one semester. Students on probation who do not raise their cumulative GPA to 3.0 or better after one semester will be dismissed from the School of Nursing. Any general education course that is not a pre- or co-requisite of nursing courses and in which a grade of D has been earned must be repeated prior to graduation if it is to be counted toward graduation requirements. The baccalaureate of science in nursing degree is conferred upon completion of 128 hours and all required courses.

**Admission for R.N.-B.S.N. Program**

An unrestricted license to practice nursing and a grade point average of 2.5 or better on all college work attempted are required to be eligible for admission consideration. Acceptance and placement in the program are dependent upon the individual’s academic record and the number of spaces available.

**Note:** Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at: [http://www.hsc.wvu.edu/son](http://www.hsc.wvu.edu/son).
Curriculum for the Registered Nurse Student

Nursing courses in the R.N. to B.S.N. program are designed for completion in three semesters of full-time study after completion of the general education requirements for the University. All nursing courses are offered as Web courses. The associate’s degree and diploma graduates will be receive 50 hours of lower-division undifferentiated nursing credit upon evidence of licensure.

A minimum of 30 hours of general education courses that meet the University General Education Curriculum and School of Nursing requirements should be completed before enrolling in the first nursing courses. All registered nurse students must establish credit by enrollment, challenge, or acceptable CLEP examinations in:

### Curriculum Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 and 102</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 241</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 101 or 105</td>
<td>3</td>
</tr>
<tr>
<td>GEC</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
</tbody>
</table>

R.N.–B.S.N. Full-time Progression Plan

Progression will vary depending on the amount of non-nursing courses that must be completed, whether the student wishes to be part-time or full-time, and when courses are offered. This full-time progression plan is projected on the basis that all non-nursing requirements have been completed. The baccalaureate of science in nursing degree is conferred upon completion of 128 hours and all required courses.

<table>
<thead>
<tr>
<th>Term</th>
<th>First Semester Hrs.</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>NSG 333W .............</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NSG 340 .............</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NSG 361 .............</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NSG 476 .............</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total ................</td>
<td>12</td>
</tr>
<tr>
<td>Summer</td>
<td>NSG 441* ............</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NSG 445* ............</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>NSG 455 .............</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total ................</td>
<td>9</td>
</tr>
</tbody>
</table>

*Note: Based on background and experience, the R.N. student may establish credit by examination for all courses marked with *. A written examination is used for Nursing 441. A portfolio is used to establish credit for Nursing 445. Only those students who have adequate prior experience in the content areas covered by theses courses are eligible to use the credit by examination or portfolio option.

R.N. to M.S.N. and B.S./B.A. to B.S.N. curriculum details are available on the School of Nursing webpage at http://www.hsc.wvu.edu/son.

### Graduate Programs

**Master of Science in Nursing**

The School of Nursing offers a program of study leading to the master of science in nursing (M.S.N.) degree. The major areas of study available in advanced practice nursing are family nurse practitioner (FNP), pediatric nurse practitioner (PNP), neonatal nurse practitioner (NNP), geriatric nurse practitioner (GNP), women’s health nurse practitioner (WHNP), and nursing leadership. The school also offers post-master’s programs in these areas for those who already hold an M.S.N. The programs are offered at the University’s main campus in Morgantown and at the Charleston Division. Courses are offered via Web-based modalities. Courses are scheduled in the late afternoon at times convenient for working students and may require that students attend special sessions in Morgantown or Charleston. Dates of the special sessions are made available in advance so that students can plan their schedules in order to attend.
The master's program offers a curriculum that allows students to enroll on a part-time or full-time basis. Graduate students are strongly recommended to limit their credit load if they are also involved in full-time work. Students employed in full-time work should enroll for no more than six hours of master's-level coursework in any one term. Throughout the curriculum, students are guided in the process of self-development aimed at pursuing excellence in scholarly and professional endeavors. The program allows flexibility within the basic curricular structure through the individualization of learning experiences. The pattern and duration of the student's study plan is determined in consultation with a faculty advisor and is based upon the student's background and goals. The 44-credit program can be completed in five semesters (including a summer session) of full-time study. The average full-time load is nine to 12 credit hours per semester. Part-time options are also available.

Graduates meet all requirements to sit for the national certification examination in their major area of family nurse practitioner, pediatric nurse practitioner, neonatal nurse practitioner, geriatric nurse practitioner, women's health nurse practitioner, or nursing leadership. They are prepared to offer care at the advanced practice level to select populations, and are able to perform all activities encompassed in the traditional scope of practice.

**Goals of the Master's Program**

1. Synthesize theories, research findings, and broad-based perspectives for application in the advanced practice of nursing.
2. Utilize systematic inquiry and refined analytical skills in the provision of health care services.
3. Create a relationship with clients that build and maintain a supportive and caring partnership.
4. Articulate viewpoints and positions in order to improve the quality of health care delivery and outcomes of successful care.
5. Consult and collaborate in interdisciplinary and interagency endeavors to advance culturally sensitive health care to clients, groups, and communities.
6. Integrate prior and current learning as a basis for growth and accountability in enacting the role of the advanced practice nurse.

**Application Process**

The application process should be completed by April 1. The beginning sequence of courses in the M.S.N. program starts in the fall semester only. Class size and progression plans may be limited based on available faculty resources and space. Applicants to the M.S.N. program need to complete the following steps in order to be considered for admission:

1. Complete two application forms as indicated below and return to the appropriate offices by the deadline.
   a. Application for Admission to Graduate Studies (available at: http://apply.wvu.edu/).
   b. Supplemental Application for Admission to Graduate Study in the School of Nursing (available on the School of Nursing website at: http://www.hsc.wvu.edu/son). Students should be certain that all materials are sent to WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600.
2. Request an official transcript of records from each college or university attended. Transcripts and records should be sent directly to: WVU Health Science Center Office of Admissions, P.O. Box 9815, Morgantown, WV 26506-9815.
3. Send three letters of recommendation directly to the WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600.
4. Request a copy of Graduate Record Exam or Miller Analogies Test scores be sent to WVU Health Sciences Center Office of Admissions, P.O. Box 9815, Morgantown, WV 26506-9815.

   The Application for Admission to Graduate Studies is electronic and beginning in 2010–2011 it will include the option to submit the supplemental application and letters of recommendation electronically at the time of application, eliminating the need to send separate paper versions.

   The parameters used for review of applicants include: Academic achievement, Graduate Record Exam or Miller Analogies Test scores, career goals, and recommendations.

   For more information, write to the Assistant Dean for Student Services, West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; phone (304) 293-1386.
Admission Criteria

1. Satisfy WVU requirements for admission to graduate study.
2. Have a cumulative GPA of 3.0 or higher on a 4.0 scale on all college work attempted.
3. Have a competitive score on the Graduate Record Exam or Miller Analogies Test.
4. Have a current, unrestricted R.N. license in at least one state.
5. Hold a bachelor of science degree in nursing from a nationally accredited school. A bachelor
   of science degree in nursing is mandatory.
6. Have completed three credits of undergraduate statistics acceptable for transfer with a
   grade of C or better.
7. Have completed a health assessment course, including physical examination skills, with a
   grade of B or better that is acceptable for transfer.
9. Submit a typewritten essay describing professional goals (limited to two type-written, double-
   spaced pages). A bachelor of science degree in nursing is mandatory.

Applicants may be considered for provisional admission on an individual basis. The specific
provisions which must be met for progression to regular status will be noted in the admis-
sion letter.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-
date criteria at: http://www.hsc.wvu.edu/son/.

Nursing Core Courses for all Master's Degree Nursing Students

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 622</td>
<td>Theory and Disciplined Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>NSG 623</td>
<td>Concepts of Advanced Nursing</td>
<td>2</td>
</tr>
<tr>
<td>NSG 624</td>
<td>Advanced Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>NSG 626</td>
<td>Lifespan Health Promotion</td>
<td>2</td>
</tr>
<tr>
<td>NSG 627</td>
<td>Research and Systematic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>NSG 629</td>
<td>Advanced Practice/Families</td>
<td>2</td>
</tr>
<tr>
<td>NSG 628</td>
<td>Health Policy, Finance, and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>NSG 685</td>
<td>Clinical Scholarship</td>
<td>1</td>
</tr>
</tbody>
</table>

FNP Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 631</td>
<td>Advanced Pharmacotherapeutics</td>
<td>3</td>
</tr>
<tr>
<td>NSG 632</td>
<td>Advanced Assessment</td>
<td>2</td>
</tr>
<tr>
<td>NSG 633</td>
<td>Primary Care Rural Families 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 634</td>
<td>Primary Care Rural Families 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 635</td>
<td>Rural Family Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 636</td>
<td>Rural Family Practicum 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Pediatric NP Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 631</td>
<td>Advanced Pharmacotherapeutics</td>
<td>3</td>
</tr>
<tr>
<td>NSG 644</td>
<td>Pediatric Primary Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 645</td>
<td>Pediatric Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 646</td>
<td>Pediatric Practicum 2</td>
<td>5</td>
</tr>
<tr>
<td>NSG 647</td>
<td>Pediatric Assessment/Care 1</td>
<td>5</td>
</tr>
</tbody>
</table>

Neonatal NP Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 654</td>
<td>Neonatal Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 655</td>
<td>Neonatal Health Promotion</td>
<td>2</td>
</tr>
<tr>
<td>NSG 663</td>
<td>Neonatal Assessment/Care 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 664</td>
<td>Neonatal Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 655</td>
<td>Neonatal Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 666</td>
<td>Neonatal Practicum 2</td>
<td>5</td>
</tr>
</tbody>
</table>

*In lieu of NSG 624 and NSG 626, NNP students will take NSG 654 Neonatal Pathophysiology and NSG 655 Neonatal Health Promotion.
### Geriatric NP Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 671 Current Issues In Aging</td>
<td>3</td>
</tr>
<tr>
<td>NSG 672 Advanced Assessment/Older Adults</td>
<td>2</td>
</tr>
<tr>
<td>NSG 673 Geriatric Primary Care 1</td>
<td>2</td>
</tr>
<tr>
<td>NSG 674 Geriatric Primary Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 675 Geriatric Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 676 Geriatric Practicum 2</td>
<td>5</td>
</tr>
</tbody>
</table>

### Women's Health NP Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 683 Primary Care Women &amp; Girls 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 684 Primary Care Women &amp; Girls 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 686 Women's Health Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 687 Women's Health Practicum 2</td>
<td>5</td>
</tr>
</tbody>
</table>

### Nursing Leadership Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 610 Leadership in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 611 System Based Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>NSG 612 Leading Health System Change</td>
<td>4</td>
</tr>
<tr>
<td>NSG 613 Managing Health Care Resources</td>
<td>3</td>
</tr>
<tr>
<td>NSG 614 Health Care Informatics</td>
<td>3</td>
</tr>
<tr>
<td>NSG 615 Program Planning/Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 617 Leadership Practicum 1</td>
<td>2–5</td>
</tr>
<tr>
<td>NSG 618 Leadership Practicum 2</td>
<td>2–5</td>
</tr>
</tbody>
</table>

### Post-Graduate Nurse Practitioner Certificate Program

The post-master’s nurse practitioner certificate program requires a minimum of 19 credit hours. The program prepares master’s prepared nurses to sit for the national certification examination as a nurse practitioner in the selected area of focus (family, pediatric, neonatal, geriatric, women’s health, nursing leadership). To be considered for admission, the applicant must have a master’s degree in nursing from a nationally accredited program with a minimum cumulative GPA of 3.0 or better and an unrestricted R.N. license in at least one state. Students in the post-master’s program must maintain a 3.0 GPA and receive satisfactory clinical ratings to progress. Each student’s program will be individualized based on educational and experiential background. Prerequisites to registration for the required clinical courses in the program are evidence of competence in advanced pathophysiology and advanced pharmacotherapeutics.

The required courses for post-master’s certification follow:

#### Required Courses for Post Master’s Family Nurse Practitioner

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 632 Advanced Assessment</td>
<td>2</td>
</tr>
<tr>
<td>(Competency exam for exemption)</td>
<td></td>
</tr>
<tr>
<td>NSG 633 Primary Care: Rural Families 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 634 Primary Care: Rural Families 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 635 Rural Family Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 636 Rural Family Practicum 2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19</td>
</tr>
</tbody>
</table>

#### Required Courses for Post Master’s Pediatric Nurse Practitioner

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 647 Pediatric Assessment/Care 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 644 Pediatric Primary Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 645 Pediatric Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 646 Pediatric Practicum 2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19</td>
</tr>
</tbody>
</table>
### Required Courses for Post Master's Neonatal Nurse Practitioner

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 654</td>
<td>Neonatal Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>NSG 655</td>
<td>Neonatal Health Promotion</td>
<td>2</td>
</tr>
<tr>
<td>NSG 663</td>
<td>Neonatal Assessment/Care I</td>
<td>5</td>
</tr>
<tr>
<td>NSG 664</td>
<td>Neonatal Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 665</td>
<td>Neonatal Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 666</td>
<td>Neonatal Practicum 2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

### Required Courses for Post Master's Geriatric Nurse Practitioner

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 671</td>
<td>Current Issues in Aging</td>
<td>3</td>
</tr>
<tr>
<td>NSG 672</td>
<td>Advanced Assessment/Older Adults</td>
<td>2</td>
</tr>
<tr>
<td>NSG 673</td>
<td>Geriatric Primary Care 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 674</td>
<td>Geriatric Primary Care 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 675</td>
<td>Geriatric Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 676</td>
<td>Geriatric Practicum 2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

### Required Courses for Post Master's Women's Health Nurse Practitioner

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 683</td>
<td>Primary Care Women and Girls 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 684</td>
<td>Primary Care Women and Girls 2</td>
<td>4</td>
</tr>
<tr>
<td>NSG 686</td>
<td>Women’s Health Practicum 1</td>
<td>5</td>
</tr>
<tr>
<td>NSG 687</td>
<td>Women’s Health Practicum 2</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>17</strong></td>
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</tbody>
</table>

### Required Courses for Post Master's Nursing Leadership

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 610</td>
<td>Leadership in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 611</td>
<td>System Based Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>NSG 612</td>
<td>Leading Health System Change</td>
<td>4</td>
</tr>
<tr>
<td>NSG 613</td>
<td>Managing Health Care Resources</td>
<td>3</td>
</tr>
<tr>
<td>NSG 614</td>
<td>Health Care Informatics</td>
<td>3</td>
</tr>
<tr>
<td>NSG 615</td>
<td>Program Planning/Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 617</td>
<td>Leadership Practicum 1</td>
<td>2–5</td>
</tr>
<tr>
<td>NSG 618</td>
<td>Leadership Practicum 2</td>
<td>2–5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>22-28</strong></td>
</tr>
</tbody>
</table>

All students in post-master’s certificate program will complete a minimum of 600 supervised clinical hours.

### Doctor of Nursing Practice Online Program

**Program Description**

The School of Nursing offers programs of study leading to the doctor of nursing practice (D.N.P.) degree. Courses are offered via Web-based modalities in real time. Courses are scheduled in the late afternoon at times convenient for working students and may require that students attend special sessions in Morgantown or Charleston. Dates of the special sessions are made available in advance so that students can plan their schedules in order to attend.

The D.N.P. program offers a curriculum that allows students to enroll on a part-time or full-time basis. Graduate students are strongly recommended to limit their credit load if they are also involved in full-time work. Students employed in full-time work should enroll for no more than six hours of doctoral level coursework in any one term. Throughout the curriculum, students are guided in the processes of self-development aimed at pursuing excellence in scholarly and professional endeavors.

At the completion of the program, the Doctor of Nursing Practice (D.N.P.) graduate will be able to practice at the highest professional level to:
1. Use science-based theories and concepts to:
   • Determine the nature and significance of health and health care delivery phenomena
   • Describe actions and advance strategies to improve health care delivery
   • Develop, deliver, and evaluate theory-based health care.
2. Demonstrate organizational and systems leadership that emphasizes the primacy of clinical work, continually improving health outcomes, and ensuring patient safety.
3. Use analytical methods and research to develop best practices and practice guide lines and to facilitate the evaluation of systems of care that will improve patient outcomes.
4. Use information systems and technology-based resources that support clinical and administrative decision making, care systems, nurse-sensitive outcomes, and quality improvement.
5. Assume a leadership role in the development of health care policy.
6. Establish, participate, and lead interprofessional teams.
7. Utilize a strong conceptual foundation in clinical prevention and population health.
8. Base practice on biophysical, psychosocial, sociopolitical, cultural, economic, and nursing science and ethics.
9. Develop, implement, and evaluate practice and care delivery models, which are politically and culturally appropriate.

Admissions Criteria
1. Master’s or doctoral degree in nursing,
2. Unencumbered licensure as a registered professional nurse,
3. National certification as an advanced practice nurse in a direct care specialty,
4. Minimum GPA of 3.5 in prior program of study,
5. Graduate level course in research and statistics in the past five years,
6. Scheduled interview,
7. Online writing exercise.
Note: Admission criteria are subject to change. Please see the School of Nursing Web site for the most up-to-date criteria at: http://www.hsc.wvu.edu/son/.

Application Process
The application process should be completed by March 1. The beginning sequence of courses in the D.N.P. program starts in the fall semester only. Class size and progression plans may be limited based on available faculty resources and space. Applicants to the D.N.P. program need to complete the following steps in order to be considered for admission:
1. Complete two application forms as indicated below and return to the appropriate offices by the deadline.
   • Application for Admission to Graduate Studies (available at: http://apply.wvu.edu/).
   • Supplemental Application for admission to D.N.P. in the School of Nursing and D.N.P. application checklist (available on the School of Nursing website at: http://www.hsc.wvu.edu/son). Students should be certain that all materials are sent to WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600.
2. Request an official transcript of records from each college or university attended. Transcripts and records should be sent directly to: WVU Health Science Center Office of Admissions, P.O. Box 9815, Morgantown, WV 26506-9815.
   • Send three letters of recommendation directly to the WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600. Letters should address the applicant's expertise in the advanced practice of nursing and likelihood for success in doctoral work. One letter should be from a former professor of the applicant.
   • Submit a current curriculum vitae and evidence of national certification (applicants desiring preparation in a leadership role are exempt from this requirement).

The Application for Admission to Graduate Studies is electronic and beginning in 2010–2011 it will include the option to submit the supplemental application, curriculum vitae, and letters of recommendation electronically at the time of application, eliminating the need to send separate paper versions.
For more information, write to the Assistant Dean for Student Services, West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; phone (304) 293-1386.
Nursing Core Courses for Doctor of Nursing Practice

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 715 Scientific Underpinnings</td>
<td>3</td>
</tr>
<tr>
<td>NSG 716 Analytical Methods</td>
<td>4</td>
</tr>
<tr>
<td>NSG 717 Organization and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NSG 718 Population Health</td>
<td>3</td>
</tr>
<tr>
<td>NSG 719 Health Care Policy</td>
<td>3</td>
</tr>
<tr>
<td>NSG 741 Clinical Focus</td>
<td>2</td>
</tr>
<tr>
<td>NSG 742 *Clinical Application</td>
<td>2–8</td>
</tr>
<tr>
<td>NSG 761 Clinical Project 1</td>
<td>1</td>
</tr>
<tr>
<td>NSG 762 Clinical Project 2</td>
<td>1</td>
</tr>
<tr>
<td>NSG 763 Capstone 1</td>
<td>3</td>
</tr>
<tr>
<td>NSG 764 Capstone 2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>30–34</td>
</tr>
</tbody>
</table>

*NSG 742 can be taken any semester after NSG 741 is completed and must total a minimum of four credit hours.

Doctor of Philosophy Summer Program

The purpose of the Ph.D. program is to prepare nurse scholars/educators for roles in research, teaching, and service. The program prepares graduates who will contribute their unique nursing expertise to the collaborative development of knowledge to improve health and quality of life.

The goals of the program are to prepare graduates who will:
1. Critically analyze phenomena using a variety of approaches to contribute to the development of nursing science.
2. Synthesize, reorganize, and expand knowledge from nursing and related disciplines to inform nursing science and practice.
3. Contribute to the development of the science of caring to improve quality of life.
4. Disseminate advances in scientific knowledge to diverse audiences.
5. Assume collaborative leadership roles in academia, healthcare organizations, research teams, and scholarly networks to promote and improve health.
6. Demonstrate integrity in the design, conduct, analysis, interpretation, and dissemination of research.

Admission Criteria

1. Cumulative GPA of 3.0 of four points in master’s degree work.
2. Competitive achievement on the GRE.
   - At least 1000 total in verbal and quantitative,
   - Neither can be below 450, and
   - 3.0 analytic
3. A grade of B or higher in graduate statistics and research courses.
4. Congruence between the applicant’s career goals and program objectives; and between the applicant’s research interests and those of the faculty.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at: http://www.hsc.wvu.edu/son.

Application Process

The application process should be completed by January 1. The beginning sequence of courses in the Ph.D. in nursing program starts in the summer semester only. Class size and progression plans may be limited based on available faculty resources and space. Applicants to the Ph.D. in nursing program need to complete the following steps in order to be considered for admission:

1. Complete two application forms as indicated below and return to the appropriate offices by the deadline.
   a. Application for Admission to Graduate Studies (available at: http://apply.wvu.edu/).
   b. Supplemental Application for Admission to Ph.D. in the School of Nursing and Ph.D. application checklist (available on the School of Nursing website at: http://www.hsc.wvu.edu/son). Students should be certain that all materials are sent to WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600.
2. Request an official transcript of records from each college or university attended. Transcripts and records should be sent directly to: WVU Health Science Center Office of Admissions, P.O. Box 9815, Morgantown, WV 26506-9815.
3. Send three letters of recommendation directly to the WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600. Letters should address the applicant’s expertise in the advanced practice of nursing, skill in research and scholarly writing, and likelihood for success in doctoral work. One letter should be from a former professor of the applicant.

4. Submit a current curriculum vitae.

5. Submit two, two-page scholarly essays, one describing the applicant’s research interests and one describing the applicant’s career goals.

The Application for Admission to Graduate Studies is electronic and beginning in 2010–2011 it will include the option to submit the supplemental application, curriculum vita, scholarly essays, and letters of recommendation electronically at the time of application, eliminating the need to send separate paper versions.

For more information, write to the Assistant Dean for Student Services, West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; phone (304) 293-1386.

**Degree Requirements**

The nursing component of the Ph.D. program is offered during six-week summer sessions. Students attend class two days a week, taking six credits of nursing courses for four summers and then move on to the dissertation. Three curricular components comprise the 55 credits of post-master’s coursework. These are core, cognate/electives, and dissertation.

### Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>NSG 729</td>
<td>Quantitative Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>NSG 727</td>
<td>Contemporary Nursing Science</td>
<td>3</td>
</tr>
<tr>
<td>NSG 728</td>
<td>Theoretical Basis of Nursing</td>
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<td>NSG 731</td>
<td>Qualitative Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>NSG 734</td>
<td>Use of Data</td>
<td>3</td>
</tr>
<tr>
<td>NSG 735</td>
<td>Principles of Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NSG 735</td>
<td>Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NSG 730</td>
<td>Principles of Measurement</td>
<td>3</td>
</tr>
<tr>
<td>NSG 738</td>
<td>Issues in Nursing Scholarship and Role Development</td>
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<td><strong>Total</strong></td>
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### Cognate/Electives

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<tbody>
<tr>
<td>NSG 793</td>
<td>SPTP Univariate Statistics</td>
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<tr>
<td>NSG 793</td>
<td>SPTP Multivariate Statistics</td>
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<tr>
<td>Additional Cognates</td>
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<td><strong>Total</strong></td>
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### Dissertation

<table>
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<tr>
<td>NSG 781</td>
<td>Research Mentorship</td>
<td>2</td>
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<tr>
<td>NSG 783</td>
<td>Dissertation Seminar</td>
<td>2</td>
</tr>
<tr>
<td>NSG 797</td>
<td>Dissertation</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>
School of Pharmacy
Patricia A. Chase, Ph.D., Dean
Mary K. Stamatakis, Pharm.D, Associate Dean for Academic Affairs and Educational Innovation
W. Clarke Ridgway, B.S., Assistant Dean for Student Services
Rae R. Matsumoto, Ph.D., Associate Dean for Research and Graduate Programs

http://www.hsc.wvu.edu/sop

Degrees Offered
Doctor of Pharmacy
M.S., Ph.D. in Pharmaceutical and Pharmacological Sciences

Introduction
Pharmacy was first offered at West Virginia University as a department in the School of Medicine in 1914. The College of Pharmacy emerged as a separate entity in 1936 and became the School of Pharmacy in 1958. In 1960 the School of Pharmacy changed from a four-year to a five-year program and in 1998 to a six-year program. The doctor of pharmacy (Pharm.D.) program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy study in an accredited college of arts and sciences.

The mission of the West Virginia University School of Pharmacy is to improve the health and well-being of West Virginians and society at large by educating students and practitioners to provide optimal pharmaceutical care; conducting vital research that advances scientific knowledge, pharmacy practice, and economic development; and providing direct and supportive services to patients, the community, and the profession.

Most pharmacy graduates enter practice in community or institutional pharmacies; however, positions are also available in various government agencies, the pharmaceutical industry, long-term care, nuclear pharmacy, and home health-care organizations. Pharmacists are eligible for commissions in the armed forces and for positions with the U.S. Public Health Service. Pharmacists also may prepare for careers in teaching and research through graduate study.

The WVU School of Pharmacy offers M.S. and Ph.D. programs in the pharmaceutical and pharmacological sciences and health outcomes research.

Accreditation
The School of Pharmacy is fully accredited by the Accreditation Council for Pharmacy Education. The council is composed of members from the American Pharmacists Association, the National Association of Boards of Pharmacy, the American Association of Colleges of Pharmacy, and the American Council on Education.

The School of Pharmacy holds membership in the American Association of Colleges of Pharmacy, whose objective is to promote the interests of pharmaceutical education.

Legal Requirements and Reciprocity
To qualify for examination for licensure by the West Virginia Board of Pharmacy, the applicant must be 18 years of age or older and of good moral character. Further, the applicant must be a graduate of an accredited school of pharmacy and must meet the internship requirements set by the West Virginia Board of Pharmacy.

Interns must be registered with the West Virginia Board of Pharmacy and must be enrolled in or a graduate of an accredited school of pharmacy to gain experience acceptable for the internship requirement. Details may be obtained from the Office of Student Services.

School of Pharmacy graduates are eligible for examination to practice pharmacy in any state. Graduates who successfully pass the West Virginia Board of Pharmacy examination are privileged to reciprocate with 49 other states, the District of Columbia, and Puerto Rico provided they meet the licensure requirements of these states.

Pharm.D. Admission
All students seeking enrollment in the School of Pharmacy must comply with regulations appearing in this catalog and the WVU Undergraduate Catalog. Students preparing for the study of pharmacy may satisfy the coursework requirements for entrance into the School of Pharmacy Pharm.D. program by successfully completing the following course selections or their equivalents:
<table>
<thead>
<tr>
<th>Pre-Pharmacy Requirements</th>
<th>WVU Courses</th>
<th>Sem. Hr.</th>
<th>Meeting Requirements</th>
<th>Credit</th>
</tr>
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<tr>
<td>English Composition</td>
<td>ENGL 101 and 102 or 103</td>
<td>6</td>
<td>ENGL 101 and 102 or 103</td>
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</tr>
<tr>
<td>Introduction to Calculus</td>
<td>MATH 150 (MATH 155) or 153 and 154</td>
<td>3 (4)</td>
<td>MATH 150 (MATH 155) or 153 and 154</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>ECON 201</td>
<td>3</td>
<td>ECON 201</td>
<td>3</td>
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<tr>
<td>General Biology</td>
<td>BIOL 115 and 117</td>
<td>8</td>
<td>BIOL 115 and 117</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>CHEM 115 and 116</td>
<td>8</td>
<td>CHEM 115 and 116</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>CHEM 233/235 and 234/236</td>
<td>8</td>
<td>CHEM 233/235 and 234/236</td>
<td>8</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 101 and 102</td>
<td>8</td>
<td>PHYS 101 and 102</td>
<td>8</td>
</tr>
<tr>
<td>Introduction to Statistics</td>
<td>STAT 211 or ECON 225</td>
<td>3</td>
<td>STAT 211 or ECON 225</td>
<td>3</td>
</tr>
<tr>
<td>Microbiology</td>
<td>MICB 200 (ENVM 241)</td>
<td>3 (4)</td>
<td>MICB 200 (ENVM 241)</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Public Speaking</td>
<td>SPA 270</td>
<td>3</td>
<td>SPA 270</td>
<td>3</td>
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<tr>
<td>Electives*</td>
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<td>Total</td>
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<td>65–67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Electives must be designed to satisfy the University General Education Curriculum (GEC) requirements. (See “General Education Curriculum” for a listing of specific courses.)

Admissions are competitive. It should be noted that in recent years, applicants with GPAs below 3.3 have rarely been admitted. Criteria used to evaluate candidates include academic performance, as measured by the GPA for all the above-noted pre-requisite courses, and the cumulative grade point average achieved in all prior college-level coursework, Pharmacy College Admissions Test (PCAT) scores (including a written essay), a personal interview, and letters of recommendation. All prerequisite courses must be taken at a U.S. accredited institution of higher education and completed with a grade of C or better. Priority is given to qualified West Virginia residents and applicants who have performed the majority of their prerequisite coursework in a WV college or university. Careful consideration is given to those personal qualifications which bear upon the fitness of applicants for the study and practice of the profession of pharmacy.

All applicants must first file an initial electronic application with the Pharmacy College Application Service (PharmCAS). Instructions for completing the application are found on the PharmCAS website, http://www.pharmcas.org/. Supplemental applications specific to the WVU School of Pharmacy will then be sent to selected candidates deemed qualified by the Committee on Admissions. Application deadlines are subject to change; check PharmCAS, the School of Pharmacy webpage at http://www.hsc.wvu.edu/sop, or contact the school to verify current deadlines. A $50 application fee must accompany the supplemental application.

Each applicant who is recommended for acceptance is required to deposit $200 (if WV resident) or $400 (if non-WV resident) before his or her name is added to the official list of those accepted by the School of Pharmacy. If the applicant enrolls, this sum is applied to the first-semester tuition. If the applicant fails to enroll, this deposit is forfeited.

With enrollment in the School of Pharmacy, all students must comply with the immunization and diagnostic procedures required by the WVU Board of Governors, WVU, the WVU Robert C. Byrd Health Sciences Center, and/or the School of Pharmacy.

Complete information may be obtained from the Dean, School of Pharmacy, Robert C. Byrd Health Sciences Center, P.O. Box 9500, Morgantown, WV 26506-9500 or from the Office of Admissions, Robert C. Byrd Health Sciences Center, P.O. Box 9815, Morgantown, WV 26506-9815.

**Pharmacy College Admission Test**

Completion of the Pharmacy College Admission Test is a requirement for admission to the school. It is recommended that the student take this test in the summer or fall before making application for admission. Information concerning time and place of the test can be obtained from a pre-pharmacy advisor, the School of Pharmacy, or by writing: PsychCorp, PSE Customer Relations-PCAT, 19500 Bulverde Road, San Antonio, TX 78259; 1-800-622-3231 or (210) 339-8710; Fax 1-888-211-8276 or 210-339-8711 or http://www.PCATweb.info.

**Personal Interview**

The Committee on Admissions requires a personal interview with selected candidates who qualify for a supplemental application. The Committee on Admissions will determine which applicants are to receive the supplemental application. Interviews are held during the spring semester at the Robert C. Byrd Health Sciences Center in Morgantown.
Recommendations on Academic Performance

Two academic recommendations are required and must be provided by course instructors in any two of the pre-pharmacy science areas: biology, chemistry, math, and physics. The third recommendation may be provided by a course instructor of the student’s choice, an advisor, pharmacist, health professional, or employer.

Admission to Advanced Standing

If space is available, students from other accredited schools of pharmacy may be admitted, provided they meet the prerequisite course requirements of the WVU School of Pharmacy, have at least a 2.5 professional grade point average, are in good academic and professional standing at the school of origin, and are eligible for continuation toward a degree in pharmacy at the school initially attended. Grades of D in professional courses cannot be transferred.

Conditions Following Acceptance of Admission

An applicant accepted into the first year or with advanced standing is expected to have met all entrance requirements and satisfactorily completed all pre-pharmacy work in progress by the end of the spring semester prior to matriculation or, if a transfer student, prior to transfer. A satisfactory performance in the completion of such work is defined as one that is consistent with the student’s previous academic record and must include no grades of D or lower in prerequisite courses. Failure to do so will result in revocation of the acceptance by the Admissions Committee.

Furnishing or causing to furnish false or incorrect information for the purpose of gaining admission to the School of Pharmacy constitutes grounds for disciplinary action including, but not limited to, expulsion or revocation of acceptance.

Students in the School of Pharmacy agree to abide by the provisions of the Student Code of Academic and Professional Integrity. Upon admission each student is required to return a signed statement to the Office of Student Services indicating the student has read and understands the Policy on Academic and Professional Standards and the Student Code of Academic and Professional Integrity of the West Virginia University School of Pharmacy. The code and copies of the statement are available in the Office of Student Services in the School of Pharmacy, and on the School of Pharmacy website.

Academic and Technical Standards

In accordance with section 504 of the Rehabilitative Act of 1973 (PL 93-112) and incorporating the guidelines of the Americans with Disabilities Act (ADA PL 101-336) enacted by Congress in 1990, the West Virginia University School of Pharmacy has adopted minimal technical standards for the assessment of admission, scholastic advancement, and graduation for its professional degree (doctor of pharmacy) program.

Because the doctor of pharmacy (Pharm.D.) degree signifies that the holder is a pharmacist prepared for entry into the practice of pharmacy, it follows that graduates must have knowledge, skills, and demeanor to function in a broad variety of clinical situations and to conduct a wide spectrum of pharmaceutical care activities.

Candidates for admission, progression, and graduation in the Pharm.D. program must have the functional use of the senses of vision and hearing. Candidates’ pharmaceutical skills will also be lessened without the functional use of the senses of equilibrium, smell, and taste. Additionally, they must have sufficient motor function to permit them to carry out the activities described in the sections that follow. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data.

A candidate for the Pharm.D. degree must have abilities and skills of five varieties including observation; communication; motor; conceptual, integrative and quantitative; and behavioral and social. Technological compensation can be made for some handicaps in certain of these areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate’s judgment must be mediated by someone else’s power of selection and observation. For details, see the Technical Standards document published online at http://www.hsc.wvu.edu/sop/students/SoP_Technical_Standards.pdf.

Student Course Load

Students in the doctor of pharmacy program are expected to register for all required classes in a semester unless directed not to do so by the Committee on Academic and Professional Standards or the Office of Student Services. Full-time students in the School of Pharmacy may not
register for less than nine credit hours or more than 20 credit hours during any semester without written approval of the Committee on Academic and Professional Standards or the Office of Student Services. For an exception, a letter of petition must be submitted to the Committee on Academic and Professional Standards through the School of Pharmacy’s Office of Student Services.

**Promotion and Graduation Requirements**

**Evaluation of Student Progress**

Promotion of a student in the doctor of pharmacy program is evaluated in two major areas: successful completion of all required work and appropriate adherence to the professional standards of the School of Pharmacy.

The following information is only a brief outline of the School of Pharmacy policies and procedures. Detailed requirements and policies for evaluation of student progress and graduation can be found in the *Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree Program at West Virginia University School of Pharmacy* and may be viewed on the School of Pharmacy website. Copies are available at the Office of Student Services. The Committee on Academic and Professional Standards administers all promotion and academic penalty rules.

**Academic Coursework Review**

The Committee on Academic and Professional Standards of the School of Pharmacy reviews the performance of each student in every course at the end of each academic period and makes recommendations to the dean.

If a student has been found to have a marginal performance in any course as indicated by a grade less than a C or a semester GPA less than 2.5, probation will be recommended. Students on probation are not eligible to hold office in student organizations. Students on probation are expected to be present for all of their classes and laboratories. If a student fails to complete any required remedial actions or meet the specified performance requirements during the probationary period, academic suspension or dismissal may be recommended.

If a student has been found to have an unsatisfactory performance as indicated by a grade of F in any course, two or more grades less than a C in a semester, three or more grades less than C in a year, or an accumulation of narrative evaluations that indicate an academic deficiency or inadequate integration of curricular content, suspension or dismissal from the school may be recommended. In selected circumstances, the committee may recommend remedial work or repetition of all or a portion of the curriculum. Exceptions may be made only on recommendation of the committee.

After academic dismissal, a student may apply for readmission to the School of Pharmacy. Readmission of a student is the prerogative of the dean following a recommendation by the Committee on Academic and Professional Standards.

**Grading Policy**

Courses in the doctor of pharmacy degree program are graded either as A (excellent), B (good), C (fair), D (marginal), F (failing), I (incomplete), or on a (S) satisfactory/(U) unsatisfactory basis. Grades may be accompanied by a narrative report on the student’s progress, noting any factors requiring remedial work or counseling. It is customary that all experiential courses are accompanied by a narrative evaluation. Narrative evaluations are kept in the student’s file in the Office of Student Services.

The grade of incomplete (I) is given when the instructor believes that the work is unavoidably incomplete. If the grade of I is not removed by the satisfactory completion of the work before the end of the next semester in which the student is in residence, it becomes a failure (F) unless special permission to postpone the work is obtained from the Committee on Academic and Professional Standards. It is the responsibility of the student to consult the instructor about the means and schedule for completing incomplete courses. A contract specifying what work must be completed and when should be drawn up by the instructor and signed by the instructor and student.
Professional Standards Review
In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend to the president of the University the removal of any student from its rolls whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession. Further information is provided in The Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree at West Virginia University School of Pharmacy, which is available at the School of Pharmacy Office of Student Services.

Requirements for Degree
The awarding of a doctor of pharmacy degree to a student is approved by the dean of the School of Pharmacy after receipt of recommendations from the Academic and Professional Standards Committee. Candidates must meet the following criteria: 1.) Meet the academic and professional standards, criteria, and requirements outlined in The Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree at West Virginia University School of Pharmacy, which is available at the School of Pharmacy Office of Student Services and on the school’s website; 2.) Satisfactorily complete all of the required coursework in a timely fashion, which normally will not exceed five years from the date of initial enrollment into the professional program; 3.) Pay all fees; 4.) Complete the last year’s work in residence in this school; 5.) Be present at the commencement exercises unless excused by the dean of the School of Pharmacy in writing; 6.) Satisfactorily complete the required number of experiential rotations and demonstrate the attainment of minimum competencies; and 7.) Complete 100 hours of volunteer community service.

Special Requirements
The Board of Pharmacy requires 1,500 clock hours of internship experience for licensure in West Virginia. Students are required to obtain an Intern Certificate from the West Virginia Board of Pharmacy in order to accrue intern hours. Any hours worked before becoming a registered intern will not apply toward meeting the board requirements. Students must have a valid Intern Certificate throughout their entire experiential years of the Pharm.D. program. The certificate must be maintained until completion of the entire internship. The Board of Pharmacy holds final authority over internship rules and regulations. Up to 800 hours of the total of 1,500 required by the WV Board of Pharmacy may be obtained via the experiential program. Students in the Pharm.D. program will perform one two-week block of experiential rotations at the conclusion of both the first and second years of the professional curriculum and eight, five-week rotations during the final year of the program. Two of the eight blocks performed in the fourth year of the curriculum must be performed in designated rural sites. Site placement and sequencing will occur in the semesters prior to the experiential activities. Students may incur additional housing and/or travel costs when taking part in the experiential rotations. Opportunity will be provided for students to prioritize their site selection; however, ultimate authority for site selection will be maintained by the School of Pharmacy. All didactic coursework (required and elective) must be successfully completed prior to beginning the fourth-year experiential rotations.

Course Changes
A student who seeks exemption from one or more professional courses based upon previous academic experience must submit a written petition to the Committee on Academic and Professional Standards.

Entry-Level Pharm.D. Professional Curriculum

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall Semester</th>
<th>Hrs.</th>
<th>Spring Semester</th>
<th>Hrs.</th>
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<td>NBAN 301</td>
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School of Pharmacy
### First Year
**Summer Semester**

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### Second Year

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### Fourth Year

**Advanced Experiential Components (Students rotate through one-month experiences)**

- Community Practice: 1 rotation
- Institutional Practice: 1 rotation
- Acute Care: 1 or 2 rotations
- Ambulatory Care: 1 or 2 rotations
- Electives: 3 rotations

**Total advanced experiential**: 8 rotations

*Prior to beginning the experiential rotations, each student enrolled in the School of Pharmacy professional program must complete a minimum of ten credit hours of professionally-related electives as part of the pharmacy curriculum. Electives must be completed during the first three years of the four-year professional program. Beyond the required ten credit hours, the student may take any other electives. No course taken prior to admission into the School of Pharmacy may be used nor repeated to meet the elective requirements of the professional curriculum, and no reduction in elective requirements will be allowed for courses completed or degrees earned prior to enrollment in the program.

**Fourth-year students will be required to complete two rotations in the summer session, three in the fall semester, and three in the spring semester.**

The University pass-fail policy will be followed. Only selected professionally-related courses or additional free electives (in excess of the ten hours of required electives) may be taken on a satisfactory/unsatisfactory basis. No more than three credit hours of PHAR 749 *Pharmaceutical Investigations* will be permitted to count toward fulfillment of the pharmacy elective requirements.

### Graduate Programs

#### Pharmaceutical and Pharmacological Sciences

The School of Pharmacy offers a doctor of philosophy degree in pharmaceutical and pharmacological sciences with two tracks: health outcomes research, and pharmaceutical and pharmacological sciences aimed at educating competent researchers and educators. Programs for the degree of master of science (M.S.) and doctor of philosophy (Ph.D.) provide flexible, research-oriented curricula designed to develop the interests, capabilities, and potential of the individual student.
Admission Requirements

Applicants for admission into the graduate program must satisfy the WVU and Health Sciences Center general requirements for admission as graduate students. The applicant must possess a baccalaureate degree with background in a suitable area of study, an overall grade point average of at least 3.0, and the aptitude and interest for graduate work in the pharmacological sciences and health outcomes research to be admitted. Applicants not meeting the admission criteria may be considered for admission under alternate admission classifications as explained in the WVU Graduate Catalog. In addition, Graduate Record Examination (GRE) scores in the verbal, quantitative, and analytical essay portions are required from all students planning on entering the pharmaceutical and pharmacological sciences graduate program. TOEFL, or similar scores are required of all international students from countries where English is not the primary language.

Academic Standards

No credits are acceptable toward a graduate degree with a grade lower than a C. A graduate student must have a cumulative grade point average of at least 3.0 in all graduate courses to continue in the program and to qualify for a M.S. or Ph.D. degree.

Doctor of Philosophy (Ph.D.)

The School of Pharmacy offers programs of study leading to the doctor of philosophy (Ph.D.) degree in the pharmaceutical and pharmacological sciences via two tracks: health outcomes research, and pharmaceutical and pharmacological sciences. Specialty areas of study include medicinal chemistry, pharmaceutics, drug metabolism, and health outcomes and policy research.

Requirements for Ph.D. Degree

To obtain specific application and admission information about the Ph.D. program track in health outcomes and policy research and availability of fellowships or graduate assistantships please visit http://www.hsc.wvu.edu/sop/psp/programs/phd_graduate.html or e-mail smadhavan@hsc.wvu.edu. The program is housed in the Department of Pharmaceutical Systems and Policy.

Students planning on enrolling in the pharmaceutical and pharmacological sciences program track are enrolled in the health sciences center undifferentiated graduate program during the first year of study. During the first semester, students take a required set of courses and rotate through the laboratories of potential research mentors. This is continued in the second semester though some coursework in the Health Sciences Center thematic areas including the pharmaceutical and pharmacological sciences can be taken. At the end of the first year, students may formally enroll in the pharmaceutical and pharmacological sciences graduate program, a research advisor is selected, and the student’s Ph.D. committee established. While students may obtain an M.S. degree, it is not necessary for entry into the Ph.D. program.

Upon completion of the second year of graduate study, students in the pharmaceutical and pharmacological sciences program must submit a formal plan of study and a research plan that has been approved by their Ph.D. committee to the Health Sciences Center graduate program. Progress will continue with guidance from the student's Research Committee. Final admission to candidacy requires satisfactory performance on oral and written qualifying examinations. Subsequent to admission to candidacy, a substantial part of the program is devoted to an original research project which culminates in a dissertation. To be recommended for a Ph.D., the dissertation must be satisfactorily completed and defended at an oral examination.

Master of Science

The same program requirements for the first year of graduate study are required of the M.S. degree student as those described for the Ph.D. student. The School of Pharmacy offers programs of graduate study leading to the degree of master of science in two program tracks: health outcomes research, and pharmaceutical and pharmacological sciences. Students may specialize in health outcomes and policy research, pharmacology and toxicology, pharmaceutical chemistry, industrial pharmacy, medicinal chemistry, pharmaceutics, biopharmaceutics, and pharmacokinetics.
Requirements for M.S. Degree

To be eligible for the M.S. degree, the student must complete a minimum of 30 hours of graduate credit, of which no more than six hours may be for research and thesis. Upon completion of the coursework and research requirements and after submission of the thesis, an oral examination will be administered by the appointed examination committee.

For more specific information, contact the Associate Dean for Research and Graduate Programs, School of Pharmacy, P.O. Box 9500, Morgantown, WV 26506-9500. Graduate Council policy requires that any student in a master of science program has a minimum of 24 hours of regular coursework. A minimum of 24 hours of coursework other than thesis credit is standard and a minimum of 30 total hours is also standard.
Programs and Courses

Schedule of Courses

Before the opening of each term, a Schedule of Courses is posted to http://courses.wvu.edu/ announcing the courses that will be offered by the colleges and schools of WVU.

Plan for Numbering Courses

For convenience, each course of study is designated by the name of the department in which it is given and by the number of that course. The plan for numbering courses is as follows:

**Courses 1–99** Developmental and community college certificate courses (does not require WVU Faculty Senate approval) and undergraduate professional development courses (courses that are designed for professional development and require students to possess a high school diploma but the course would not count toward graduation).

**Courses 100** Freshman/Lower Division: Intended primarily for freshmen, although by upper-division students may take them if needed to complete degree requirements.

**Courses 200** Sophomore/Lower Division: Intended primarily for sophomores. These courses may have 100 or 200-level prerequisites.

**Courses 300** Juniors/Upper Division: Intended primarily for juniors. These courses may have extensive prerequisites or be limited to specific majors.

**Courses 400** Seniors/Upper Division: Intended primarily for seniors and selected graduate students. These courses are typically limited to advanced undergraduates within a particular major or degree program and selected graduate students. No more than 40 percent of the credits counted for meeting requirements for a graduate degree can be at the 400 level.

**Courses 500** Undergraduate Seniors and Master’s Level: Courses intended for advanced undergraduate and graduate students. Undergraduates in any class carrying a 500-level course number must have a 3.0 cumulative grade point average and written approval on an Application for Undergraduate Credit from the course instructor, student’s advisor(s) and academic dean. Seniors may count these courses for graduate credit only after completion and approval of a senior petition.

**Courses 600** Master’s Level: Courses intended for master’s degree students (no undergraduates permitted).

**Courses 700** Master’s and Doctoral Degree Level: Courses intended for doctoral students and advanced master’s students (no undergraduates permitted).

**Courses 900** Professional Development: Courses intended for professional development and require students to possess a bachelor’s degree; these courses do not count toward graduation and are not applicable towards a graduate degree. Grading is S/U only. Note: Graduate degree credit-hour requirements must include at least 60 percent at the 500–level and above.

Abbreviations Used in Course Listings

I a course given in the first (fall) semester
II a course given in the second (spring) semester
I, II a course given each semester
I and II a course given throughout the year
Yr. a course continued through two semesters
S a course given in the summer
Hr. credit hours per course
Lec. lecture period
Rec. recitation period
Lab. laboratory period
GLAB graded lab
WEB Web-based course
Conc. must register prior to or at the same time
PR prerequisite
Coreq. co-requisite
Consent consent of instructor required
CR credit but no grade
An asterisk (*) following credit hours listed as variable indicates that the course normally carries three credit hours. Exceptions are made only in emergencies and must be approved by the departmental chair and by the professor teaching the course.

**Common Course Numbers and Descriptions**

199. Orientation to [subject/field]. 1 Hr. Orientation to degree programs and requirements, departmental resources, curriculum options, student responsibilities, and opportunities.

293. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

393. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.

491. Professional Field Experience. 1-18 Hr. PR: Consent (may be repeated up to a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

492. Directed Study. 1-3 Hr. Directed study, reading, and/or research.

493. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

496. Senior Thesis. 1-3 Hr. PR: Consent.

497. Research. 1-6 Hr. Independent research projects.

498. Honors. 1-3 Hr. PR: Students in Honors Program and consent by the honors director. Independent reading, study, or research.

499. Global Service Learning. 3 Hr. PR: Consent. Theory and practice of global service-learning. The main objective will be to pair the experiential aspects of meaningful and sustained service in the host community with work from the student’s anchor course by offering a methodological framework for cultural immersion and community service as well as adding to the content of the anchor course.

590/690/790. Teaching Practicum. I, II, S. 1-3 hr. PR: Consent. Supervised practice in college teaching of _______ (Subject matter determined by department/division/college/school offering the course). Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

591/691/791. Advanced Topics. I, II, S. 1-6 hr. PR: Consent. Investigation in advanced topics that are not covered in regularly scheduled courses.

592/692/792. Directed Study. I, II, S. 1-6 hr. Directed study, reading, and/or research.

593/693/793. Special Topics. I, II, S. 1-6 hr. A study of contemporary topics selected from recent developments in the field.
594/694/794. Seminar. I, II, S. 1-6 hr. Special seminars arranged for advanced graduate students.

595/695/795. Independent Study. I, II, S. 1-6 hr. Faculty-supervised study of topics not available through regular course offerings.

696/796. Graduate Seminar. I, II, S. 1 hr. PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

697/797. Research. I, II, S. 1-15 hr. PR: Consent. Research activities leading to thesis (697), problem report (697), research paper or equivalent scholarly project (697), or a dissertation (797). (Grading may be S/U.)

698/798. Thesis or Dissertation. 2-4 hr. PR: Consent.
Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of students’ reports (698), theses (698), or dissertations (798). (Grading may be S/U.)

699/799. Graduate Colloquium. I, II, S. 1-6 hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residency requirements, use the University’s facilities, and participate in its academic and cultural programs. Note: Graduate students who are not actively involved in coursework or research are entitled, through enrollment in their department’s 699/799 Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by their program, and retain all of the rights and privileges of duly enrolled students. Grading is S/U; colloquium credit may not be counted against credit requirements for masters programs. Registration for one credit of 699/799 graduate colloquium satisfies the University requirement of registration in the semester in which graduation occurs.

Course Descriptions

School of Dentistry
Professional, Graduate, and Undergraduate Courses
Each course is designated by the name of the department teaching it, its number and title, the semester in which it is offered, and hours of credit. Generally, those courses given in the first year are numbered 700–724; second year, 725–749; third year, 750–774; and fourth year, 775–799. Other University courses may be taken with the approval of the student’s advisor and the associate dean for academic affairs. Courses included in the curriculum but offered by other colleges, schools, or departments may be located elsewhere in this catalog or in the WVU Graduate Catalog.

Anesthesiology (ANES)
ANES 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

ANES 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

ANES 701. Basic Sciences Applied to Anesthesiology. 1-6 Hr. PR: Consent. (Not offered during summer.) Examination and evaluation of date, decision-making, discussion of special procedures. (Max. enrollment: 10.)

ANES 731. Clinical Clerkship in Anesthesiology and Acute Medicine. O Hr. (Third year.) CR. Pre-anesthetic evaluation, local and systemic anesthesia, airway management, cardiopulmonary resuscitation, respiratory care, clinical pharmacology, toxicology, fluid and blood therapy, and pain management. Seminars and practical exercises in emergency cardiac life support clinical experience in ICU or OR. (Duration: 2 weeks.)

ANES 780. Surgical Critical Care Medicine. 0 Hr. Clinical rotation course. (See conjoined courses.)
ANES 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in the college teaching anesthesiology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

ANES 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

ANES 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

ANES 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

ANES 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

ANES 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

ANES 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

ANES 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

ANES 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

ANES 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s programs.)

Biochemistry (BIOC)

BIOC 339. Introduction to Biochemistry. 3-5 Hr. PR: General chemistry, organic chemistry. (For medical technology, undergraduate biochemistry majors, and other students.) A general introduction to biochemistry with emphasis on human biochemistry. (4 hr. lec., 1 hr. lab.)

BIOC 492. Directed Study. 1-3 Hr. Directed study, reading, and/or research.

BIOC 493 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

BIOC 494 A-Z. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

BIOC 496. Senior Thesis. 1-3 Hr. PR: Consent.

BIOC 497. Research. 1-6 Hr. Independent research projects.

BIOC 498. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.
BIOC 531. General Biochemistry. II. 4 Hr. PR: General chemistry, organic chemistry. (For Pharmacy students; others by consent) Consisting of the lecture portion of BIOC 705, this course is designed to be a general introduction to biochemical compounds, processes, and concepts for students in the pharmacy program. Master's program students and others by consent. Four lectures per week.


BIOC 552. Cell & Molecular Biochemistry 2. II. 4 Hr. PR: BIOC 351. Part II of a two-semester graduate-level course that instills comprehension of biochemistry, molecular biology and cell biology necessary for bio-medical research. This course covers metabolism, metabolic regulation, cell structure and cellular communication.

BIOC 595. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

BIOC 650. Supervised Teaching. 1-6 Hr. PR: Consent. Supervised college teaching of biochemistry.

BIOC 652. Journal Club. 1-6 Hr. Discussions of recent important topics in scientific literature.

BIOC 690. Teaching Practicum. 1-3 Hr. PR: Consent of chairperson. Supervised practice in college teaching of biochemistry. (Grading may be S/U.)

BIOC 693 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

BIOC 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

BIOC 698. Thesis. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

BIOC 705. General Biochemistry. II. 5 Hr. PR: General chemistry, organic chemistry. (For dental students.) General introduction to biochemical compounds, processes and concepts as part of the training for the practice of dentistry, including passage of the Dental Board Exam. Four lectures and one clinical correlation or small group discussion per week.

BIOC 750. Protein Chemistry/Enzymology. 4 Hr. PR: Consent. Advanced topics in protein structure function relationships and enzymology. Emphasis is placed on emerging topics in the literature.

BIOC 751. Advanced Molecular Biology. 4 Hr. PR: Consent. A study of contemporary topics in molecular biology. This is an advanced seminar-style class using material from the current literature.

BIOC 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of biochemistry. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

BIOC 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

BIOC 792 A-Z. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

BIOC 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

BIOC 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.
BIOC 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

BIOC 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

BIOC 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

BIOC 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University’s facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her departments Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s program.)

Behavior Medicine and Psychiatry (BMP)

BMP 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

BMP 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

BMP 741. Clinical Clerkship in Psychiatry. 3 Hr. This is a clinical rotation course required for all third-year medical students. Students will be assigned to work with both in- and out-patient psychiatric care. Focus will be on making psychiatric diagnoses and implementing appropriate treatments. Students will become familiar with various types of psychiatric disorders as well as their treatment. Students will learn about psychopharmacology, psychotherapy, and other biological treatments. Students will also be on call for and involved in the treatment of emergency department psychiatric patients.

BMP 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of behavior medicine and psychiatry. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading may be S/U.)

BMP 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

BMP 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

BMP 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

BMP 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

BMP 795. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

BMP 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.
BMP 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

BMP 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

BMP 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of dully enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

BMP 930. Professional Development. 1-6 Hr. Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g., education, community health, geology). These tuition waived continuing education courses are graded on a satisfactory or unsatisfactory grading scale and do not apply as graduate credit toward a degree program.

Biomedical Sciences (BMS)

BMS 700. Introduction to Biomedical Research. 1 Hr. A course in scientific ethics that is led by individual faculty and incorporates small and large group discussions of ethical and moral issues presented as scientific case studies.

BMS 705. Cell Structure and Metabolism. 1-4 Hr. This course emphasizes general principles of cell biology, membrane structure and transport, and signaling, proliferation, death and structure of cells and incorporates a literature-based journal club.

BMS 710. Fundamentals of Integrated Systems. 1-4 Hr. This course emphasizes four areas of integrated biology — endocrinology, neurobiology, immunology and microbial pathogenesis, with an overview of pharmacology and incorporates a literature-based journal club.

BMS 715. Molecular Genetics. 1-3 Hr. This course emphasizes general principles of molecular biology (DNA and RNA) of prokaryotes and eukaryotes and of molecular genetics and incorporates a literature-based journal club.

BMS 720. Scientific Writing. 2 Hr. This course introduces students to scientific writing and requires them to write a journal article and a pre-doctoral grant proposal, based on the format used by NIH.

BMS 730. Cancer Cell Biology. 2-3 Hr. This course emphasizes the cellular signals that direct tumor growth and invasive potential and explores how these same signals can be targeted for intervention to block tumor progression.

BMS 732. Cardiovascular and Respiratory Biology. 3 Hr. This course covers specific topics related to cardiovascular and respiratory biology with emphasis on endothelium-dependent control, permeability, and vascular remodeling of the microcirculation and pulmonary diseases and mechanics.

BMS 734. Cell Signaling Metabolism. 3 Hr. This course emphasizes the pathways involved in energy metabolism in living cells and introduces hormonal and nutritional signal transduction systems that control metabolic pathways.

BMS 736. Immunology. 3 Hr. This course focuses on concepts and mechanisms of immunology and microbial pathogenesis with emphasis on immune activation and response, host response to infection, Lyme disease and other pathogens, and biofilms.

BMS 738. Muscle Structure and Function. 2-3 Hr. This course exams in-depth the concepts in muscle structure and function with emphasis on normal physiology and applications to overload/exercise and disuse or aging.
BMS 740. Neuroscience 2. 2-3 Hr. This course provides a background in neuroscience, emphasizing cellular neurobiology, neurochemistry, learning and memory, sensory systems, neural development, autonomic nervous system, neuroendocrinology, and consciousness.

BMS 742. Microbial Pathogenesis. 1 Hr. This course emphasizes general principles of microbial pathogenesis and is taught in lecture and journal club format.

BMS 797. Research. 1-6 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

**Cell Cancer Biology (CCB)**

CCB 700. Basic and Clinical Aspects of Cancer. 3 Hr. PR: BMS 730 or Consent. This course is designed to introduce students to the integrative aspects of basic and clinical cancer research.

CCB 701. Oncogenes and Signaling Networks. 3 Hr. PR: BMS 730 or Consent. This course will focus on cellular transformation, mitogenesis, tumor survival, motility and kinase signaling.

CCB 702. Cancer Therapeutics. 3 Hr. PR: BMS 730 or Consent. Course will focus on therapeutic strategies, drug resistance drug, design, and clinical cancer trials.

CCB 705. Journal Club. 1 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field of cancer research.

CCB 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

CCB 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper, or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

**Conjoined Courses (CCMD)**

CCMD 712. Public Health. 4 Hr. PR: Medical students or with permission of instructor. Introduction to causal inference, study design, common statistical tests, interpretation of epidemiological studies (chance, bias, confounding), occupational health, health care systems, administrative aspects of health care, preventive medicine, social influences on health, and international health.

CCMD 713. Health of the Public. 2 Hr. PR: Medical student or Consent. An introduction to public health with an emphasis on West Virginia. Topics include occupational and environmental health, preventive medicine, social and behavioral aspects of health, and health services administration and management.

CCMD 721. Physical Diagnosis/Clinical Integration 2. 6 Hr. PR: Medical students only. This course will introduce clinical medicine topics, organized by organ system, as well as emphasize history and physical exam skills. Students will begin to use clinical reasoning techniques, integrating basic science and clinical knowledge. (Grading will be S/U.)

CCMD 722. Physical Diagnosis/Clinical Integration 2. 4 Hr. PR: CCMD 721. Continuation of CCMD 721. Students will build on skills and techniques learned in CCMD 721.

CCMD 725. Health Care Ethics. 2 Hr. For medical students only. Integrated approach to medical-ethical, legal, and spiritual aspects of health care. Includes lectures about basic principles and concepts, small-group discussion of cases, and large-group interactive case discussions.

CCMD 730. Human Function. 16 Hr. PR: For medical students and selected graduate students with instructor consent. Integrated approach combining biochemistry, genetics and physiology of the human body. Includes molecular, subcellular, and cellular components of the body, organ systems and whole body functions. Application of basic sciences to human health and disease. (Lec. 14 hr., other 2 hr., contact 16 hr.)
CCMD 740. Behavioral Science and Psychopathology 1.5 Hr. This course will introduce students to the biological, psychological, social, and spiritual dimensions of health care will be explored in the context of health care decision making.

CCMD 741. Behavioral Science and Psychopathology. 5 Hr. PR: CCMD 741. Continuation of CCMD 740. Students will build on skills and techniques learned in CCMD 740.

CCMD 745. Physical Diagnosis/Clinical Integration 1.3 Hr. This course will introduce the student to persons with health concerns. Students will begin development of skills of medical communication, data gathering, and physical examination techniques. (Lec. 5 hr., other 2 hr., contact 7 hr.)

CCMD 746. Physical Diagnosis/Clinical Integration 1.3 Hr. PR: CCMD 745. Continuation of CCMD 745. Students will build on skills and techniques learned in CCMD 745.

CCMD 750. Radiation Safety and Radionuclide Usage. 1-2 Hr. PR: PHYS 101 and PHYS 102, CHEM 115 and CHEM 116, or Consent. Chemical, physical, and biological aspects of radiation; safety; handling and storage of radioactive materials; NRC and WVU regulations and licensing; detection and instrumentation, research, and clinical use of radioisotopes.

CCMD 770. Medical Genetics. 2-4 Hr. PR: Second year medical student standing; graduate student in genetics and developmental biology; others by Consent. Introduction to clinical genetics including molecular, biochemical, and cytogenetic aspects of human biology. Application of genetic principles to human health and disease. (Also listed as GEN 570.)

CCMD 775. Neurobiology. 6 Hr. PR: CCMD 730 and NBAN 703 or Consent. Introduction to structure and function of the human nervous system with a focus on clinical application of basic science. Emphasis is on normal neurobiology (at cells/systems levels) essential to understanding human manifestations of neural pathology.

CCMD 776. Step-1 Board Prep. 2 Hr. Student prepares for USMLE Step 1, requirement for medical licensure, advancement to third year, and graduation. Passing course requires USMLE Step 1 passing score. National Board of Medical Examiners requires students to be enrolled to take USMLE.

CCMD 777. Step-2 Board Prep. 2 Hr. Student prepares for USMLE Step 3, requirement for medical licensure and graduation. Passing course requires USMLE Step 2 passing score. National Board of Medical Examiners requires to be enrolled to take USMLE.

CCMD 778. Professional Development. 2 Hr. Medical students explore clinical and research applications in variety of disciplines to enhance knowledge and skills related to future medical career paths. Assessment based on satisfactory completion of project as determined by supervising faculty member.

CCMD 779. Clinical Performance Exam. 1 Hr. The Clinical Performance Examination (CPX) assesses the clinical competency of fourth-year medical students based on the first three years of the curriculum. Successful completion of the CPX is a graduation requirement of the MD degree.

CCMD 788. Selective Experiences in Medicine. 6 Hr. PR: Satisfactory completion of the first three years of medical curriculum. The fourth year offers a wide range of opportunities. A one-month rotation in critical care, surgical subspecialty either a medicine, family medicine, or a pediatric sub-internship and two months of a rural primary care rotation are all required in the fourth year. The student works with an advisor to select the remainder of the individual program. This program must also be approved by the associate dean in the Office of Student and Curricular Affairs. The year is composed of ten one-month blocks, four months of which must have spent in programs in West Virginia. Selections are available in all departments within the School of Medicine. A catalog is available that list the specific guidelines for the fourth-year curriculum.
CCMD 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of conjoined courses. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading may be S/U.)

CCMD 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

CCMD 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

CCMD 793 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

CCMD 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

CCMD 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

CCMD 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

CCMD 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

CCMD 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

CCMD 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

Community Health Promotion (CHPR)
CHPR 170. Health of the Individual. 3 Hr. Examines personal health-related problems in terms of information, services, and actions, as they relate to attainment and maintenance of individual health.

CHPR 172. First Aid and Emergency Care. 2 Hr. Emergency aid for the sick and injured. Emergency services aimed at reducing the potential of permanent disability or threats to life, as well as pain, damage, or suffering of a less serious nature.

CHPR 210. First-Aid Teaching Practicum. 3 Hr. This class prepares students to conduct a first-aid course. Students work with the instructor in all aspects of course management. Students who complete this course are eligible to apply for instructor candidate training with the American Red Cross.

CHPR 250. History and Philosophy of Health Education. 3 Hr. Provides the student with a historical perspective of health education’s development, its present status, and its current philosophical foundations.

CHPR 260. Introduction to Peer Health Education. 3 Hr. Prepares students to become peer health educators through the study of health concerns of students in higher education and examination of effective teaching strategies that result in positive health outcomes.
CHPR 261. Advanced Peer Health Education. 3 Hr. Students apply a variety to teaching strategies based on the peer concept to health concerns of college students and other young adults.

CHPR 265. HIV/STD Prevention: Global Challenge. 3 Hr. Addresses personal, social, legal, medical, and cultural aspects of HIV and sexually transmitted diseases and the health education efforts to stem the pandemic.

CHPR 270. Alcohol/Drug Education for Athletes. 3 Hr. Chemical use and dependency has a significant impact on people in all walks of life. An overview of chemical dependency and current prevention and intervention is presented.

CHPR 271. Health in the Community. 3 Hr. Develops an understanding of the organization, structure, and function of official, voluntary, and professional community health components in terms of their protecting and maintaining the health of the community.

CHPR 275. Substance Abuse: Student Leaders. 3 Hr. Provides individuals, particularly those in organizational leadership roles, with an understanding of substance abuse, leadership roles, and decision-making skills for organizations.

CHPR 293 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

CHPR 301. Elementary School Health Program. 2 Hr. PR: Junior standing. The organization, educational aspects, and personnel relationships involved in elementary school health services, healthful school living, and health education.


CHPR 305. Disease Across the Life Span. 3 Hr. PR: CHPR 170. Students will identify causative factors, treatment, prevention, and educational implications for disease across the life span.

CHPR 320. Drug and Alcohol Abuse Prevention. 3 Hr. Experiences designed to prevent the development of abusive drug-taking relationships by focusing on psychological variables such as self-esteem, coping skills, and development of support networks.

CHPR 331. Accident Prevention and Control Principles. 3 Hr. Basic course which structures principles, concepts, and methodology of the safety movement into introductory experiences dealing with accident prevention and control efforts recommended for various social institutions and agencies.

CHPR 332. Safety Education Principles and Content. 3 Hr. PR: CHPR 331 or Consent. Study and analysis of content areas usually recommended for instructional programs within the field of safety, with emphasis on structured learning experiences.

CHPR 333. Foundations of Wellness. 3 Hr. Provides students with physical, mental, emotional, and environmental health concepts and experiences that will expand their knowledge and skills. These relate to the processes and techniques for promoting and maintaining individual and community health changes.

CHPR 365. Men’s Health. 3 Hr. Optimal health is a theme for men across the lifespan. This course will address men’s health specific to race, ethnicity and orientation, to provide skills to be an informed consumer of health information.

CHPR 375. Physical Lifestyle Management. 3 Hr. This course will provide an experience conducive to the understanding, exploration, experience, and development of scientifically sound physical health behaviors within the framework of the Transtheoretical Model of Health Behavior.
CHPR 376. Mental Lifestyle Management. 3 Hr. This course will provide experience conducive to the understanding, exploration, and development of mental, emotional, and spiritual health processes that comprise and support personal holistic health.

CHPR 380. Women and Health. 3 Hr. Examination of theories, myths, and practices surrounding women’s physical and mental health from both historical and present-day perspectives. Exploration of specific health issues and controversies and the rise of the women’s health movement.

CHPR 400. School Health Teaching Seminar. 2 Hr. PR: CHPR 250 and CHPR 301 and CHPR 302. This course is designed for students who plan to complete their student teaching requirement in health education. Format of the course will include lecture, discussion, and student teaching in a public school.

CHPR 436. Introduction to Worksite Wellness. 3 Hr. An introduction to the field of health promotion in a worksite setting. Persons with interest in exploring the possibility of employment in health promotion in a worksite setting will find this course helpful.

CHPR 490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.

CHPR 491. Professional Field Experience. 1-18 Hr. PR: Consent (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

CHPR 493 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

CHPR 494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

CHPR 495. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

CHPR 496. Senior Thesis. 1-3 Hr. PR: Consent.

CHPR 498. Honors. 1-3 Hr. PR: Students in Honors Program and consent by the honors director. Independent reading, study, or research.

CHPR 507. Community Health: Human Sexuality. 3 Hr. PR: Consent. Analysis of sex-related issues including parenting, sex education, sexual sanctions, pornography, sexual dysfunction, and sexual variance. Designed for teachers, health professionals, and interested lay people.

CHPR 509. Community Health: Drug Education. 3 Hr. PR: Consent. Designed to help students learn appropriate components of a drug education program, gain an understanding of drug taking in this society, and acquire insights into dependent behaviors.

CHPR 604. Advanced School Health. 3 Hr. PR: Admission to the school health master's program. Courses addresses the teacher’s role in organizing and implementing comprehensive school health programs at the elementary and secondary levels. Additional attention is paid to providing instruction specific to the health educator skills and standards.

CHPR 612. Social and Behavioral Theory. 3 Hr. The focus of this course is on the role of individual behavior in attaining health. Integration of the concepts of health education and behavioral science to facilitate changes in health behavior is addressed.

CHPR 613. Certified Health Education Specialist. 1 Hr. This course addresses competencies of a Certified Health Education Specialist (CHES), and prepares students for the national credentialing exam.
CHPR 614. Injury Prevention and Control. 3 Hr. The injury control problem is examined as a public health concern. Strategies and programs for injury prevention are studied for implementation with target groups who are over represented within the injury problem.

CHPR 633. Foundations of Wellness. 3 Hr. Wellness is examined as a component of health promotion. A wellness lifestyle is fundamental to promoting a holistic wellness concept. Quality-of-life issues and programs are explored for a variety of audiences.

CHPR 634. Health Promotion Research Methods. 3 Hr. PR: CHPR 612. This course is designed to introduce students to the basic elements of conducting effective evaluation of health promotion programs.

CHPR 635. Management for Community/Public Health. 3 Hr. PR: CHPR 612 and PUBH 601. The course provides students with the essential skills to be effective managers in the community and public health environment.

CHPR 638. Community Health Assessment/Evaluation. 3 Hr. PR: CHPR 612 and PUBH 601. This course is designed to convey theory and practice for developing health promotion programs. The course addresses assessment and evaluation principles appropriate to a wide range of health promotion programs.

CHPR 640. School Health Program Design. 3 Hr. PR: Admission to school health master’s program. Course provides a practical application experience for students to design a health education course curriculum, demonstrate classroom teaching, and self-evaluate their own teaching.

CHPR 642. Grant Writing for Public Health Research. 3 Hr. PR: CHPR 612. This course addresses various components of the grant writing process, including collaboration, funding sources, proposal preparation, and grants management for the health professional.

CHPR 648. Intervention Design. 3 Hr. PR: CHPR 638. Students will apply information learned in CHPR 638 and other foundation courses in designing a health promotion intervention for a health agency or enterprise. Students will defend their intervention before their faculty committee.

CHPR 650. Practicum. 1-12 Hr. PR: Consent. Students are assigned to a field placement based on prior health promotion work experience. Under the supervision of faculty, students assume major responsibility for a program with a community health promotion organization. (Grading may be S/U.)

CHPR 655. Intro to Health Promotion. 3 Hr. The course provides an overview of the health promotion/health education profession. Course material will assist health education/health promotion professionals-in-training to identify and pursue career goals.

CHPR 671. Community Health. 3 Hr. This course provides health educators with an introduction to community health focusing on organization, resources, programming, and special populations.

CHPR 680. School Health Concepts. 3 Hr. Addresses content areas for health education, the national health education standards, the CDC adolescent risk factors, and healthy people. 2010 objectives as applicable to: emotional health, injury prevention, disease and nutrition, and physical activity.

CHPR 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of community health promotion. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

CHPR 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
CHPR 693. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

CHPR 695. Independent Study. 1-6 Hr. Faculty supervised topics not available through regular course offerings.

CHPR 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or dissertation. (Grading may be S/U.)

CHPR 782. Supervised Applied Health Education Project. 1 Hr. PR: Advanced graduate standing or Consent. Doctoral students only. Plan and conduct a health education intervention in other than a classroom setting, i.e., a defined community.

CHPR 783. Supervised Health Education Research Report. 1 Hr. PR: Advanced graduate standing and Consent. Doctoral students only. A written report of empirical research of either a survey or an experiment.

CHPR 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of health-related learning experiences. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

CHPR 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses. Study may be independent or through specially scheduled lectures.

CHPR 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

CHPR 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

CHPR 794. Seminars. 1-6 Hr. Seminars arranged for advanced graduate students.

CHPR 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

CHPR 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

CHPR 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis (697), problem report (697), research paper or equivalent scholarly project (697), or a dissertation (797). (Grading may be S/U.)

CHPR 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

CHPR 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in the department's graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)
CHPR 900. Professional Development. 1-6 Hr. Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g., education, community health, geology.) These continuing education courses are graded on a satisfactory or unsatisfactory grading scale and do not apply as graduate credit toward a degree program.

CHPR 930. Professional Development. 1-6 Hr. Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g., education, community health, geology.) These tuition-waived continuing education courses are graded on a satisfactory or unsatisfactory grading scale and do not apply as graduate credit toward a degree program.

Community Medicine (CMED)

CMED 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

CMED 695. Independent Study. 1-6 Hr. PR: Consent. Faculty-supervised study of topics not available through regular course offerings.

CMED 697. Research. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.

CMED 698. Thesis. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

CMED 712. Medical Aspects of Environmental Health. 1 Hr. PR: MD degree or Consent. A review of issues illustrating the responsibilities and professional interaction of physicians in identifying, managing, and preventing casualties from environmental causes in air, water, soil, food, pesticides, and related subjects. (1 hr. lec.)

CMED 750. Statistics Biomedical Sciences. 1 Hr. This introductory biostatistics course for biomedical graduate students covers variables and descriptive statistics as well as parametric and non-parametric statistics.

CMED 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of anatomy. (Grading may be S/U.)

CMED 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

CMED 792. Directed Study. 1-6 Hr. PR: Consent. Directed study, reading, and/or research.

CMED 793. Special Topics. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

CMED 794. Seminar. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.

CMED 795. Independent Study. 1-6 Hr. PR: Consent. Faculty-supervised study of topics not available through regular course offerings.

CMED 796. Graduate Seminar. 1 Hr. PR: Consent. A one credit hour seminar is designed to assist students in identifying their career objectives and exploring opportunities to achieve their career objectives.

CMED 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project or a dissertation. (Grading may be S/U.)
CMED 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

CMED 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework but who wish to meet residence requirements, use University facilities, and participate in academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department’s graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s programs.)

Dentistry (DENT)
DENT 600. Advanced Oral Surgery. 1-12 Hr. PR: Consent. Advanced study of therapeutics, hospital protocol, and surgical aspects of oral surgery involving lectures, seminars, demonstrations, and clinical applications. (Grading may be S/U.)

DENT 687. Research Methods. 1 Hr. PR: Consent. Methods and techniques of research in dentistry. Major emphasis on conducting oral health surveys, designed experiments, and critically analyzing results and development of a thesis.

DENT 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading may be S/U.)

DENT 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

DENT 697. Master’s Degree Research or Thesis. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.

DENT 700. Anesthesiology. 1 Hr. Lectures on local anesthesia, including types, modes of action, indications, and contraindications for use. Premedication, toxic effects, and technics of administration are discussed.

DENT 701. Arts & Sciences of Preventive Dentistry. 2 Hr. Lectures dealing with the philosophy and techniques of preventive dentistry.

DENT 703. Introduction to Patient Care. 3 Hr. Lectures, laboratory, and clinical experiences designed to develop skill in performing thorough clinical assessments, defining ethical/legal issues in patient care, and performing procedures to prevent and control disease.


DENT 707. Introduction to Clinical Dentistry. 2 Hr. Observing, assisting and actively participating in the provision of limited care to patients assigned to the student clinics in the School of Dentistry.

DENT 710. Dental Anatomy and Occlusion. 4 Hr. Anatomy of individual teeth, both permanent and primary, in regard to form and function.

DENT 711. Periodontics. S. 2 Hr. Introduction to periodontal diseases, their diagnosis and treatment. Laboratory instruction is included.

DENT 712. Dental Materials. 3 Hr. Composition, physical, chemical, mechanical, and manipulative properties, and technical uses of dental restorative materials as related to dentistry.
DENT 715. Introduction to Community Dentistry. 2 Hr. PR: DENT 701. Preparation to conduct needs assessment of individuals and groups, and perform program planning, implementation and evaluation. Field experiences are included.


DENT 721. Endodontics. 2 Hr. Preclinical lectures and laboratory exercises on basic technical and biological requisites in the treatment of diseases of the dental pulp and the periapical tissues.

DENT 722. Tooth-Colored Restorations. 4 Hr. PR: DENT 710 and DENT 704. Preclinical course to include a variety of esthetic dental procedures. Teeth will be prepared for insertion of tooth colored restorations.

DENT 725. Practice Management. 1 Hr. A lecture course designed to prepare dental students in the concepts of four-handed dentistry.

DENT 726. Removable Partial Dentures. 7 Hr. A didactic and laboratory course that provides the fundamental knowledge and psychomotor skills necessary for the treatment of the partially edentulous patient with a removable partial denture by the general dentist.

DENT 727. Oral Radiology. 1 Hr. The physical and biological phenomena associated with x-radiation. Intraoral and extraoral techniques presented and instruction in interpretation of radiographs, with special emphasis relative to oral diagnosis.

DENT 729. Gold Direct and Indirect Restorations. 3 Hr. Lectures related to standard clinical procedures and laboratory instruction in direct and indirect cast gold restorations.

DENT 730. Community Dentistry. II. 2 Hr. Lectures provide the student with a basic knowledge of the principles of dental public health practice. Emphasis is placed on preparing students for their rural site rotation(s).

DENT 731. Occlusion. 2 Hr. PR: Consent. Didactic and clinic/laboratory instruction in the basic techniques and procedures associated with the treatment of conditions related to faulty occlusion.

DENT 732. Periodontics. 1 Hr. Lectures in the advanced theory and practice of preventive dentistry with emphasis on nutrition.

DENT 734. Complete Dentures. 6 Hr. Didactic and laboratory course which identifies, discusses and develops the fundamental knowledge and psychomotor skills necessary for the treatment of the edentulous patient by the general dentist.

DENT 735. Pediatric Dentistry. 1 Hr. PR: Consent. Didactic instruction foundational to the dental care to children presented in the following modules of instruction: oral diagnosis/treatment, planning/case presentation, prevention, restorative dentistry, pulpal therapy, management of the developing occlusion and trauma to the dentition and oral structures.

DENT 736. Fixed Prosthodontics. 8 Hr. PR: DENT 704 and DENT 722 and DENT 731. Lecture and laboratory course on principles and techniques of diagnosing, preparing, and restoring teeth with artificial crowns and fixed partial dentures by the general dentist.

DENT 737. Treatment Planning. 2 Hr. Introduction to the universal principles of professional treatment planning for adult patients.

DENT 739. Oral Surgery. 1 Hr. Didactic instruction in basic surgical principles as applied to the extraction of teeth and dento-alveolar surgery.

DENT 740. Periodontics. 1 Hr. Intermediate didactic instruction in periodontal therapy including basic surgery and post-operative care.
DENT 744. Diagnosis and Treatment Planning. 1 Hr. Analysis of orthodontic diagnostic records, diagnostic skills for various malocclusions, and formulation of a treatment plan for orthodontic cases.

DENT 745. Principles of Orthodontics. 1 Hr. Facial growth and development, the development of occlusion, and etiology and classification of malocclusions.

DENT 746. Orthodontic Techniques. 1 Hr. Technical instruction in taking diagnostic records and constructing basic orthodontic appliances.

DENT 747. Management of Medical and Dental Emergencies. 1 Hr. Assessment and treatment of the medical risk patient as related to the practice of dentistry. CPR instruction included.

DENT 751. Occlusion. 1 Hr. PR: Consent. Advanced study of the science of occlusion with particular attention to its impact on the clinical diagnosis and treatment of occlusal disorders.

DENT 752. Community Dentistry. 2 Hr. Seminars, proseminars, and field experience in selected topics of professional communication, health education, and the sociology and psychology of community health.

DENT 754. Introduction to Dental Implantology. 2 Hr. PR: Consent. Implant diagnosis, treatment planning, selection, placement, restoration, and maintenance are discussed utilizing a multidisciplinary team approach. Surgical and prosthetic experiences are gained during the laboratory sessions.

DENT 758. Senior Seminar. 2 Hr. More complex and advanced techniques for clinical practice in all disciplines in dentistry with emphasis on new developments in oral surgery and endodontics.


DENT 761. Pediatric Dentistry. 1 Hr. PR: Consent. Continued didactic instruction in dentistry for the child patient with the following learning packages programmed: Abnormal dental development, oral habits, and adolescent dentistry.

DENT 763. Periodontics. 2 Hr. Advanced didactic instruction in periodontal therapy including special surgical procedures.

DENT 765. Orthodontics. 1 Hr. Introduction to clinical orthodontics; lectures on case analysis, treatment planning, and clinical procedures involved in interceptive, preventive, and adjunctive treatment of malocclusions.


DENT 770. Clinical Oral Radiology. 0-6 Hr. Clinical application of principles presented in DENT 703 and DENT 727 with additional instruction in techniques and interpretation of radiographs with special emphasis to role played in oral diagnosis.

DENT 771. Practice Management. 2 Hr. PR: DENT 725. A lecture series on the fundamentals of practice management, including the organization and development of the practice, personnel and financial management, and the introduction to TEAM dentistry.
DENT 772. Case Based Treatment Planning. 1 Hr. This course will involve the comprehensive analysis of complex cases in order to formulate an appropriate ideal treatment plan with suitable alternatives. The student must assimilate patient information into the S.O.A.P format and present the case before faculty and peers.

DENT 773. Composite Restorations. 1 Hr. This course will provide theory and preclinical instruction in the selection and fabrication of optimal composite restorations that satisfy biologic, mechanical and esthetic requirements.

DENT 774. Principles of Medicine. 2 Hr. General diseases about which the dental student should have intelligent working knowledge. Students are assigned to specific hospitalized patients to review their findings with the class.

DENT 775. Practice Management. 0-6 Hr. PR: Consent. Clinical practice using auxiliaries, including those trained in expanded functions.

DENT 776. Removable Prosthodontics. 0-6 Hr. Continued application of the theory and practice of removable prosthodontics.

DENT 777. Periodontics. 0-6 Hr. Clinical experience in the diagnosis and treatment of periodontal diseases.

DENT 778. Law & Ethics in Dentistry. 2 Hr. Select legal concepts and the process of ethical decision making as related to the practice of dentistry. Case analysis is the primary method of instruction.

DENT 780. Endodontics. 0-6 Hr. Clinical endodontic instruction in order to develop the skills and judgement necessary to treat diseases of the dental pulp and their sequelae.

DENT 781. Patient Management. 1 Hr. (Repeated four times.) This course develops professional responsibility and time management through monitoring of patient care activity, which includes treatment, case presentations, diagnostic reviews and clinic service assignments. (Grading will be S/U.)

DENT 783. Operative Dentistry. 0-6 Hr. Instruction in the clinic setting includes comprehensive diagnosis and treatment planning, computer assisted records, plaque control, caries control, and single tooth restorations. Sufficient variety and depth of experience occurs to obtain competence for independent practice of operative dentistry.

DENT 784. Oral Surgery. 0-6 Hr. Clinical instruction in outpatient and inpatient oral surgery necessary to provide comprehensive care for the dental patient.

DENT 785. Orthodontics. 0-6 Hr. Clinical management of selected malocclusion problems.

DENT 786. Pediatric Dentistry. 0-6 Hr. Instruction in the clinical setting with the goal of developing the psychomotor skills and judgment necessary to provide comprehensive care for the child patient.

DENT 787. Clinical Oral Diagnosis. 0-6 Hr. Clinical application of principles presented in DENT 303 and DENT 337, providing opportunities for observation and analysis of clinical problems.

DENT 788. Clinic Completion Practicum. 1-15 Hr. Supervised patient care in selected clinical areas specified for each individual student according to their clinical competency requirements. (Grading will be S/U.)


DENT 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)
DENT 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

DENT 791 A. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

DENT 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

DENT 793 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

DENT 794. Special Seminars. 1-6 Hr. Seminars arranged for advanced graduate students.

DENT 795. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

Dental Hygiene (DTHY)

DTHY 100. Health Care Terminology. 1 Hr. This course provides the foundation for understanding common terminology used in health care. The components, pronunciation, proper use, and abbreviations of medical terminology will be discussed. Emphasis will be placed on dental terminology.

DTHY 101. Introduction to Dental Hygiene. 1 Hr. PR: Permission from the director of dental hygiene. Historical evolution of the profession, the professional association, and its code of ethics will be emphasized. Professionalism, the various roles of a dental hygienist, legal scope of practice, and specialties of dentistry will also be included.

DTHY 185. Oral Anatomy. 2 Hr. PR: Acceptance into dental hygiene. The human neck bones, muscles, nerves, blood supply, lymphatics, glandular tissue, fascia/spaces, TMJ, and spread of dental infection are the focus of this course.

DTHY 186. Dental Anatomy. 2 Hr. PR: DTHY 100 and DTHY 185 and NBAN 301. Classroom and laboratory study of normal human dental morphology, tooth anomalies, pulp function, eruption patterns and occlusal relationships.


DTHY 211. Dental Radiology. 1 Hr. PR: DTHY 210. The application of radiology principles and techniques. Clinical integration and case presentations will be emphasized.

DTHY 220. Dental Nursing Techniques. 2 Hr. PR: Enrollment in dental hygiene. Emergency first aid and principles of nursing applicable to the dental office.

DTHY 225. Dental Hygiene Techniques. 4 Hr. PR: Enrollment in dental hygiene. Fundamental principles and techniques of dental hygiene are presented through lectures, laboratory, and clinical participation.

DTHY 226. Clinical Dental Hygiene. 1 Hr. PR: DTHY 225. This course enables the sophomore dental hygiene student to gain proficiency in the treatment of patients.

DTHY 293 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.
DTHY 300. Anesthesia for Dental Hygiene. 1 Hr. Application of neuroanatomy, physiology, and pharmacology to the administration of regional anesthesia using local anesthetic agents. Management of complications encountered and the techniques of administering these agents will be presented.


DTHY 322. Dental Radiology. 1 Hr. PR: DTHY 320. The application of radiology principles and techniques. Clinical integration and case presentations will be emphasized.


DTHY 351. Dental Health Education. 3 Hr. PR: Enrollment in dental hygiene. Methods, materials, and resources used in teaching dental health to various population groups.

DTHY 360. Dental Materials. 3 Hr. PR: Enrollment in dental hygiene. Lecture and laboratory covering the science and manipulation of dental materials.

DTHY 361. Expanded Functions. 2 Hr. PR: DTHY 360. Lecture and laboratory covering specialty topics in dentistry and four-handed dental assisting. Assisting, and the placing and carving of amalgam and resin restorations in dentiform teeth. (1 hr. lec., 4 hr. lab.)

DTHY 363. Periodontics 1. 1 Hr. PR: Enrollment in dental hygiene. Tissues of the periodontium, histopathology of periodontal disease with emphasis on etiology, assessment, diagnosis, treatment, and prevention within the scope of dental hygiene.

DTHY 364. Periodontics 2. 2 Hr. PR: DTHY 363. A sequential course to DTHY 363.

DTHY 366. Technical Expression and Dental Literature. 1 Hr. PR: Dental hygiene major. Preparation and analysis of professional communications.


DTHY 380. Interdisciplinary Approach to Rural Health. 1 Hr. Fundamental principles of and background information on Appalachian history, poverty, and cultural diversity for the assessment of rural health needs. Assess the delivery of health care services and community development in rural settings.

DTHY 402. Dental Hygiene Practice. 2 Hr. PR: Enrollment in dental hygiene. Scope of practice for the dental hygienist including ethical and legal considerations. Public and professional relations as well as practice management are discussed.

DTHY 406. Advanced Clinical Dental Hygiene 2. 3-4 Hr. PR: Fourth year in dental hygiene. Continuation of clinical practice experience in dental hygiene procedures.


DTHY 409. Clinical Dental Hygiene. 1 Hr. PR: DTHY 374. This course enables senior dental hygiene student to gain proficiency in the treatment of patients.

DTHY 410. Clinical Dental Hygiene 3. 1-4 Hr. This course enables the senior dental hygiene degree completion student to maintain proficiency in the treatment of patients.

DTHY 411. Clinical Dental Hygiene 4. 1-4 Hr. This course enables the senior dental hygiene degree completion student to maintain proficiency in the treatment of patients.

DTHY 440. Senior Integration Seminar. 1 Hr. PR: Consent. A through analysis and integration of didactic, laboratory and clinical content via lectures, discussions and cases in preparation for licensure.

DTHY 445. Applied Pharmacology. 1 Hr. PR: PCOL 260. Case studies encountered in dental hygiene practice that require critical thinking and decision-making to manage the dental treatment needs and potential complications of patients taking multiple pharmacologic agents.


DTHY 478. Clinical Evaluation. 1 Hr. PR: DTHY 378. Preparation for clinical instruction and evaluation. Emphasis is placed on clinical evaluation procedures, proper instrumentation and the skills/strategies utilized to promote affective and psychomotor skill development in students.

DTHY 490. Teaching Practicum. 1-3 Hr. Teaching practice as a tutor or assistant.

DTHY 491. Professional Field Experience. 1-18 Hr. PR: Consent (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

DTHY 493 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

DTHY 494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

DTHY 495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

DTHY 496. Senior Thesis. 1-3 Hr. PR: Consent.

DTHY 498. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.


DTHY 680. Dental Hygiene Seminar and Practice 1. 3 Hr. PR: Graduate standing and Consent. Examination of the critical environmental issues affecting the future of health care; particular impact on oral health care trends will form major focus. Dental hygiene clinical practice is also included.

DTHY 681. Dental Hygiene Seminar and Practice 2. 3 Hr. Expanded services for the dental hygienist with emphasis on restorative and periodontal functions.

DTHY 685. Research Methods for the Dental Hygienist. 3 Hr. PR: EDP 613. Methods and techniques of research in dental hygiene. Major emphasis on planning and evaluating health programs, conducting oral health surveys, designing experiments and critically analyzing research results.

DTHY 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dental hygiene. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

DTHY 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

DTHY 695: Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

DTHY 697. Research. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

DTHY 698. Thesis. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during that writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

Emergency Medicine Certification Program (EMCP)

EMCP 501. Cardio/Hematologic Emergencies. 2 Hr. PR: PA-C, NP, DO, MD degree or by permission of the instructor. Clinical presentation, diagnostic evaluation, and management of cardiovascular and hematologic emergencies are covered.

EMCP 502. Neuro/Psych, Eye/ENT Emerg. 2 Hr. PR: PA-C, NP, DO, MD degree, or by permission of instructor. Emergency management of neurologic, psychiatric, ophthalmologic, and otolaryngologic disorders are emphasized. Clinical presentation, diagnostic evaluation and treatment option are covered.

EMCP 503. OB/GYN, Peds, Inf. Dis. Emerg. 2 Hr. PR: PA-C, NP, DO, MD degree, or by permission of the instructor. Emergency management of obstetric, gynecologic, pediatric, and infectious disease disorders is emphasized. Clinical presentation, diagnostic evaluation and treatment options are covered.

EMCP 504. Trauma and Musculoskeletal Emergencies. 2 Hr. PR: PA-C, NP, DO, MD degree, or by permission of instructor. Emergency management of the trauma patient is emphasized. Non-traumatic musculoskeletal disorders are also covered.

EMCP 593 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
Endodontics (ENDO)
ENDO 688. Clinical Endodontics. 1-5 Hr. (May be repeated for credit.) PR: Graduate of an accredited dental school and admission to the advanced education program in endodontics or Consent. Clinical endodontic practice in the areas of: ordinary endodontic cases, complex endodontic cases, hemisection, root amputation, replantation, transplantation, endodontic implantation, vital pulp therapy, apexification, and bleaching.

ENDO 689. Endodontic Theory. 2 Hr. (May be repeated for credit.) PR: Consent. Provides seminar discussions in the topics of: basic endodontic techniques, advanced endodontic techniques, endodontic literature review case presentation, and advanced endodontic theory.

ENDO 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry.

ENDO 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

ENDO 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis (697), problem report (697), research paper or equivalent scholarly project (697), or a dissertation (797). (Grading may be S/U.)

Exercise Physiology (EXPH)
EXPH 101. Introduction to Exercise Physiology. 1 Hr. A broad and foundational look at the function and adaptation of the systems of the human body in response to exercise.

EXPH 230. Exercise in American Culture. 3 Hr. Covers issues of exercise in America, specifically themes integral to American culture such as age, class, race, gender, and beauty.

EXPH 240. Medical Terminology. 1 Hr. PR: Sophomore standing. The study of medical language with special emphasis given to terms used in the field of exercise physiology.

EXPH 293 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

EXPH 364. Kinesiology. 3 Hr. PR: Junior standing or Consent. Anatomical, mechanical, and musculoskeletal study of the human body as the instrument for efficient performance of motor activities. (Laboratory work included.)

EXPH 365. Exercise Physiology 1. 3 Hr. PR: Junior standing or Consent. The study of the functioning of body systems during exercise and the acute and chronic adaptations that occur from exercise stress.

EXPH 368. Lab Techniques and Methods. 3 Hr. PR: Junior standing and EXPH 364 and EXPH 365 or Consent. Techniques and methods for designing and conducting exercise programs for asymptomatic, healthy individuals.

EXPH 369. Strength/Conditioning Methods. 4 Hr. PR: EXPH 364 and EXPH 365. Scientific foundations of strength and conditioning with skills and methods to apply that knowledge in clinical exercise training.

EXPH 370. Writing for Exercise Science. 3 Hr. PR: (ENGL 101 and ENGL 102) or ENGL 103. Writing for medical scientific fields. Students will develop a book review, analyze discipline-specific texts, and write scientific literature reviews. Includes a review of style and language use.

EXPH 450. Theory of Aquatic Therapy. 3 Hr. PR: Junior standing or Consent. An introduction to aquatic therapy. It covers the historical perspective, biophysiologic response to water immersion, and application of aquatic therapy to specific physical diagnoses.
EXPH 451. Application of Aquatic Therapy. 3 Hr. PR: Junior standing and Consent. Design and implementation of aquatic exercise prescriptions to meet rehabilitation goals. Aquatic therapy techniques will be demonstrated and practiced.

EXPH 452. Aquatic Therapy Facility Management. 3 Hr. PR: Junior standing and EXPH 451 and Consent. Facility design, water chemistry, water safety, and aquatic programming for special populations including rehabilitation, community re-entry, and wellness programs in a comprehensive continuum of care.

EXPH 460. Pathophysiology. 3 Hr. PR: EXPH 365 and Junior standing. CoReq: PHYS 241. The study of disease etiology and the physiological changes that occur from disease, with special emphasis given to the use of exercise in disease prevention and therapy.

EXPH 470. Research Methods. 3 Hr. PR: Senior standing. Coreq: EXPH 496. The study of the scientific method and research design as it relates to the field of exercise physiology and preventive medicine.

EXPH 475. Industry Organization in Exercise Physiology. 3 Hr. Prepares exercise physiology students to work in health care fitness related fields and promotes knowledge on how to “build a business plan” for entrepreneurship.

EXPH 490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.

EXPH 491. Professional Field Experience. 1-18 Hr. PR: Consent. (May be repeated up to a maximum of 18 hours.) Prearranged experimental learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

EXPH 493 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

EXPH 494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

EXPH 495. Independent Study. 1-6 hr. Faculty-supervised study of topics not available through regular course offerings.

EXPH 496. Senior Thesis. 1-3 Hr. PR: Consent.

EXPH 497. Research. 1-6 Hr. Independent research projects.

EXPH 498 A-Z. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.

EXPH 567. Exercise Physiology 2. 3 Hr. PR: Consent. Thorough and workable knowledge of the functioning of body systems during exercise, the acute and chronic adaptations that occur, and the practical application of work physiology.

EXPH 668. Diabetes and Exercise. 3 Hr. PR: Graduate standing, Consent. In-depth study of topics related to the comprehensive management of patients with diabetes mellitus, with special emphasis on the use of exercise in diabetes care.

EXPH 670. Lab Techniques and Methods 2. 3 Hr. PR: Graduate standing, Consent. This course teaches the techniques and methods used to monitor physiologic systems in humans during rest and exercise. It includes methods used to assess the health status of individuals desirous of exercise testing or prescription.

EXPH 671. Stress Testing. 3 Hr. PR: EXPH 670, Consent. In-depth study of graded exercise testing in laboratory or field situations. The course includes protocols for athletes, asymptomatic individuals, and special populations.
EXPH 672. Professional Field Placement. 1-18 Hr. PR: EXPH 370, and EXPH 371, Consent. Prearranged program to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development. (Internship.)

EXPH 673. Exercise Prescription. 3 Hr. This course will provide graduate students an understanding of the exercise prescription process and the exercise management of patients with chronic diseases.

EXPH 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

EXPH 693 A-Z. Special Topics. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

EXPH 695. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

EXPH 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or dissertation. (Grading may be S/U.)

EXPH 786. Musculoskeletal Biology. 3 Hr. Introduction to current research approaches in musculoskeletal biology of exercise physiology. This course will stress critical thinking, and refine skills related to research design and evaluation of research methods used in exercise physiology.

EXPH 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in teaching exercise physiology.

EXPH 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation in advanced subjects which are not covered in regularly scheduled courses. Study may be independent or through specially scheduled lectures.

EXPH 792 A-Z. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

EXPH 794. Seminar. 1-6 Hr. Special seminars arranged for advanced graduate students.

EXPH 795. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

EXPH 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program. (Grading may be S/U.)

EXPH 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

EXPH 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

EXPH 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework but who wish to meet residence requirements, use University facilities, and participate in academic and cultural programs.

Family Medicine (FMED)
FMED 731. Clerkship. 8 Hr. PR: Successful completion of first two years of medical school. An eight-week rotation in the office setting; rotations of four weeks to clinics within the university system and four weeks to private practitioner offices throughout the state. Lecture, laboratory, conference, and patient care.
Medical Technology (MTEC)

MTEC 100. Medical Technology. 1 Hr. Introduction to the profession of medical technology and the clinical laboratory specialties. (Pass/fail grading only.)

MTEC 101. Medical Technology 2. 1 Hr. Continuation of MTEC 100.

MTEC 200. Medical Technology Terminology. 1 Hr. General medical and basic medical technology terminology.

MTEC 201. Basic Medical Technology. 1 Hr. Basic medical technology laboratory techniques and professional issues related to medical technology. (Course will be graded pass/fail only.)

MTEC 302. Laboratory Math, Quality Control, Computers. 2 Hr. Lectures and practice sessions in laboratory mathematics, techniques, and calculations in quality control, quality assurance. Computer acquisition and evaluation.

MTEC 310. Clinical Laboratory Mycology. 1 Hr. How to isolate and identify the more commonly encountered pathogenic fungi as well as those fungi frequently seen as laboratory contaminants. The course will include basic taxonomy, isolation procedures, and identifying characteristics.

MTEC 329. Clinical Chemistry 1. 1 Hr. Lectures in clinical chemistry analysis, clinical significance, and implications of diagnosis.

MTEC 381. Research and Educational Methodology. 2 Hr. Lectures in ethics, techniques of research, and techniques of educational methodology for medical technology students.

MTEC 391. Research, Educational Methodology. 2 Hr. Lectures in ethics, techniques of research, and techniques of educational methodology for medical technology students.

MTEC 400. Orientation. No credit. (For senior students). Principles and practices of medical technology in relation to the hospital and clinics. (Pass/fail grading only).

MTEC 401. Phlebotomy. 1 Hr. PR: Enrollment in Medical Technology Program, MTEC 300 and MTEC 301. Clinical laboratory practice, including venipuncture, finger sticks, and heel sticks; isolation, universal precaution and other safety techniques are included.

MTEC 402. Rural Health Practicum. 1 Hr. PR: Senior year Medical Technology Program. Enrichment rotations in rural settings in west Virginia. (Grading will be pass/fail.)

MTEC 403. Community Service Practicum. 1 Hr. PR: Senior year in Medical Technology Program. Students will spend time performing community service projects. (Grading will be pass/fail.)

MTEC 404. Forensic Quality Assurance. 1 Hr. PR: Student currently enrolled in FIDP. Quality assurance in a laboratory setting to include quality control, quality assurance, and management techniques necessary to have an accredited laboratory.

MTEC 420. Immunohematology and Blood Banking. 3 Hr. Lectures on immunohematology and blood banking theory and practice.

MTEC 421. Immunohematology and Blood Banking Laboratory. Arranged. 3 Hr. Clinical laboratory practice in blood banking procedures. Emphasis on procedures required for collection and preparation of blood and blood components for transfusion, special techniques, antibody studies, and problem solving.

MTEC 430. Clinical Chemistry 2. 3 Hr. PR: MTEC 329. Continuation of MTEC 329, includes laboratory practice in methods of measurement.

MTEC 431. Clinical Chemistry Laboratory. 3 Hr. PR: MTEC 329 and MTEC 420. Application of clinical chemistry principles to laboratory medicine, to include routine and specialized procedures, specimen and result evaluation, and problem-solving.
MTEC 440. Clinical Hematology. 3 Hr. Lectures in hematologic theory and practice, including coagulation and body fluids laboratory.

MTEC 441. Clinical Hematology Laboratory. 3 Hr. PR: MTEC 440. Application of hematological principles to laboratory medicine, including coagulation, urinalysis, and body fluids. Emphasis on routine and specialized procedures, evaluations, and problem solving.

MTEC 450. Clinical Microbiology. 3 Hr. Presentation and discussion of methodologies employed in the processing of clinical microbiology specimens, isolation, and identification of clinically significant microorganisms, and determination of antimicrobial susceptibilities with laboratory.

MTEC 451. Clinical Microbiology Laboratory. 3 Hr. PR: MTEC 450. Practice in the clinical microbiology laboratory to include isolation and identification of microorganisms, processing of specimens and antibiograms.

MTEC 460. Clinical Laboratory Instrumentation. 2 Hr. Principles of clinical laboratory instrumentation for medical technologists including principles of operation, maintenance, and troubleshooting.

MTEC 465. Clinical Laboratory Management. 2 Hr. Laboratory organization and principles of laboratory management.

MTEC 466. Laboratory Management Practicum. 1 Hr. PR: MTEC 465. Problem-based learning and clinical laboratory management rotation. Application of management learned in MTEC 465. (Course will be graded pass/fail.)

MTEC 470. Clinical Microscopy. 1 Hr. PR: Senior standing in Medical Technology Program or Consent. The analeps of body fluids (urine, fluids, etc.) for abnormalities.

MTEC 472. Urinalysis and Body Fluids Lab. 1 Hr. Coreq: MTEC 470 or Consent. Clinical laboratory principles and procedures used in analysis of urine and body fluids.

MTEC 475. Medical Relevance. 2 Hr. Case studies of pathologic entities encountered in the clinical laboratory and a review of clinical laboratory science. Students will complete and give an oral presentation of the capstone experience and pass a comprehensive examination.

MTEC 480. Clinical Immunology. 2 Hr. Open only to MTEC students. Lectures in principles of immunological and serological procedures, immunological diseases, and significance of laboratory methods for diagnosis.

MTEC 481. Clinical Immunology Laboratory. 1 Hr. PR: Senior year Medical Technology Program. Clinical laboratory practice in immunological procedures. Emphasis on basic serological techniques, protein analysis, molecular methods, and tissue typing.

MTEC 490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.

MTEC 491. Professional Field Experience. 1-18 Hr. PR: Consent. (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

MTEC 493 A-Z. Special Topics. 1-6 Hr.

MTEC 494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

MTEC 495. Independent Study. 1-6 Hr.

MTEC 496. Senior Thesis. 1-3 Hr. PR: Consent.
MTEC 498. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.

MTEC 600. Seminar. 1 Hr. Seminars include topics in laboratory management and education in medical technology, and timely topics. Minimum of three semester hours to include all three topics is required of all graduate students in the medical technology program.

MTEC 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation in advanced subjects which are not covered in regularly scheduled courses.

MTEC 697. Research. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.

**Medicine (MED)**

MED 731. Clinical Clerkship in Medicine. 8 Hr. (Third year.) CR. Required of third-year medical students. The individual student is assigned responsibility for specific patients from the inpatient and outpatient services at West Virginia University Health Sciences Center or Charleston Area Medical Center service. The student is an integral part of the team providing diagnostic and treatment services needed by the patient, under direct supervision of members of the faculty of the department. The student elicits the patient's history, performs physical examinations, and performs or secures indicated laboratory and clinical studies. The student records findings and presents case reports for discussion by members of the faculty during hospital rounds or outpatient clinics. The student attends such conferences, as directed. Clerkship in medicine occupies eight weeks. (Grading will be S/U.)

MED 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

MED 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

**Microbiology and Immunology (MICB)**

MICB 200. Medical Microbiology. 3 Hr. PR: CHEM 111 and CHEM 112.

MICB 323. Medical Parasitology. 5 Hr. (For medical technology students; other students with Consent.) Biochemistry. Basic microbiology. Emphasis on immunology, pathogenic microorganisms, and clinical laboratory techniques.

MICB 327. Parasitology. 2 Hr. (For medical technology students; other students with Consent.) Study of animal parasites and disease vectors with emphasis on disease manifestations, parasite biology, and laboratory diagnosis.

MICB 397. Research. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

MICB 399. Special Topics in Microbiology, Cell Biology. 3 Hr. PR: Biochemistry; one year undergraduate biology; Consent. Lectures in selected areas of cell biology.

MICB 490. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of microbiology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

MICB 492. Directed Study. 1-6 Hr. Directed study, readings, and/or research.

MICB 493 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

MICB 494 A-Z. Seminar. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.
MICB 495. Graduate Seminar. 1 hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

MICB 496. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

MICB 497. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

MICB 498. Thesis. 2-4 hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

MICB 499. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University’s facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department’s graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s programs.)

MICB 592. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

MICB 593. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

MICB 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

MICB 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

MICB 698. Thesis. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)


MICB 781. Advanced Immunology. 3 Hr. PR: BMS 710 and BMS 736 or MICB 701 or permission from the instructor. Students participate in a study of contemporary topics using primary literature selected from recent developments in the field of immunology.

MICB 784 A-Z. Special Problems in Microbiology. 1-6 Hr. PR: Consent.


MICB 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of microbiology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)
MICB 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

MICB 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

MICB 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

MICB 794. Seminar. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.

MICB 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

MICB 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

MICB 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading will be S/U.)

MICB 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

MICB 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

**Neurobiology and Anatomy (NBAN)**

NBAN 205. Introduction to Human Anatomy. 3 Hr. Introductory human anatomy course that uses a combined regional and systemic approach to examine the relationships and organization of the major structures within the thorax, abdomen, head/neck, and back/limbs regions of the body.

NBAN 206. Human Anatomy Laboratory. 1-3 Hr. PR: NBAN 205 or NBAN 301 or Consent. Introductory human anatomy laboratory using a combined regional and systemic approach to examine the relationships and organization of the major structures with the thorax, abdomen, head/neck, and back/limbs regions of the body.

NBAN 293 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

NBAN 301. Principles of Human Anatomy. 3 Hr. PR: Admission to WVU's dental hygiene, nursing, or pharmacy program or Consent. Lectures and demonstrations on the gross and microscopic anatomy of the human body including development. Pre-requisite(s) and/or co-requisite(s) may differ on regional campuses.

NBAN 309. Oral Histology. 2 Hr. PR: NBAN 301. Histological structure and embryological development of the teeth, tissues and organs of the oral cavity. (Electronic delivery.)

NBAN 490. Teaching Practicum. 1-3 Hr. PR: Consent of chairperson. Supervised practice in college teaching of anatomy. (Graded as S or U.)

NBAN 491. Advanced Topics. 1-6 Hr. PR: Consent of chairperson.
NBAN 492. Directed Study. 1-6 hr. Directed study, readings, and research.

NBAN 493. Special Topics. 1-6 hr. A study of contemporary topics selected from recent developments in the field.

NBAN 495. Independent Study. 1-6 hr. Faculty-supervised study of topics not available through regular course offerings.

NBAN 496. Graduate Seminar. 1 hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program. (Graded S/U.)

NBAN 497. Research. 1-15 Hr. PR: Consent of graduate committee. (May be repeated as needed with consent of graduate studies committee.)

NBAN 498. Thesis. 2-4 Hr.

NBAN 499. Graduate Colloquium. 1-6 Hr.

NBAN 701. Advanced Gross Anatomy. 2-6 Hr. PR: NBAN 703 or NBAN 724 and Consent. Morphological and functional analysis of a selected region, with dissection.

NBAN 703. Human Structure. 1-17 Hr. PR: Admission to medical school or medical basic science graduate program or Consent. Integrated approach combining human gross anatomy, microanatomy and embryology. Includes human cadaver dissection, microscopic anatomy of cells, tissues and organs with application to human health and disease.

NBAN 705. Microanatomy. 5 Hr. PR: Admission to medical basic science graduate program or Consent. Study of cells, tissues, and organs.

NBAN 706. Advanced Neuroanatomy. 2-4 Hr. PR: CCMD 775 and Consent. (Course may be repeated.) Detailed study of selected areas of the nervous system.

NBAN 712. Special Topics in Anatomy. 2-4 Hr. PR: Consent. Different topics of current interest in anatomy that are not included in the regular graduate courses.

NBAN 714. Applied Anatomy. 2-6 Hr. PR: Consent. Detailed study of anatomy, adapted to the needs of the individual student.

NBAN 716. Craniofacial Growth and Maturation. 1 Hr. PR: Consent. The current concepts of craniofacial growth and maturation are presented and integrated for application to clinical problems.

NBAN 718. Dental Histology. 6 Hr. PR: Dental student standing or Consent of instructor or chairperson. Cells, tissues, organs. Structure, function, and development of oral tissues.

NBAN 719. Advanced Head and Neck Anatomy. 1 Hr. PR: Admission to medical, dental or basic science graduate programs, or Consent. Head and neck craniofacial anatomy as it applies to specialties in dental or medical practice.

NBAN 724. Human Gross Anatomy. 7 Hr. PR: Admission to dental school or medical basic science graduate program or Consent. Human anatomy including cadaver dissection for dental students. (4 hr. lec., 3 hr. lab.)

NBAN 751. Advanced Microanatomy and Organology. 2-4 Hr. PR: NBAN 705 or NBAN 709 and Consent. An extension of the major topics included in NBAN 705 or 709. Special emphasis on recent contributions.
NBAN 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of anatomy. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading may be S/U.)

NBAN 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NBAN 792. Directed Study. 1-6 Hr. PR: Consent. Directed study, readings, and/or research.

NBAN 793. Special Topics. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

NBAN 795. Independent Study. 1-6 Hr. PR: Consent. Faculty supervised study of topics not available through regular course offerings.

NBAN 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program. (Grading may be S/U.)

NBAN 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

NBAN 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

NBAN 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

Neurology (NEUR)

NEUR 741. Clinical Clerkship in Neurology. (Third year.) 2 Hr. Required of third-year students. Basic fundamentals of the neurological evaluation and neurological diseases. Evaluation and treatment of hospitalized patients and patients seen at the physician office center. All evaluations are performed under supervision of attending and resident physicians. Conferences and correlative instruction in neuropathology and neuroradiology.

NEUR 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NEUR 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

Nursing (NSG)

NSG 110. Health and Wellness. 3 Hr. Health promotion and risk reduction; data collection; cultural diversity; values that contribute to health; interpersonal communication in promoting professional relationships.


NSG 223. Seminar 1: Professional Role Development. 1 Hr. PR: NSG 110, Sophomore standing or Consent. Characteristics of self in role transition; values and beliefs; personal and professional behaviors in nursing care.
NSG 225. Nursing Interventions 1. 3 Hr. Coreq: NSG 221; PR: Sophomore standing or Consent. Critical thinking in application of the nursing process in individuals with altered mobility, comfort, or potential infection; health protection, promotion and maintenance interventions.

NSG 241. Concepts: Nursing 2. 2 Hr. PR: NSG 221 and NSG 225 and Coreq: NSG 245. Focuses on enhancing student understanding of human responses to minor deviations in health throughout the life span; emphasizes professional nursing role in health restoration and critical thinking; examines family health assessment.

NSG 245. Nursing Interventions 2. 4 Hr. PR: NSG 221 and NSG 225. Coreq: NSG 241. Critical thinking in the application of the nursing process to individuals with minor deviations in health protection, health restoration, and health promotion/maintenance. Pre-requisite(s) and/or co-requisite(s) may differ on regional campuses.

NSG 251. Basic Concepts of Nursing. 3 Hr. PR: BS/BA/BSN students only. An emphasis on the professional nursing role in health promotion and restoration, which enhances the student's understanding of human responses to health promotion activities and minor health deviations throughout the lifespan.

NSG 255. Basic Nursing Interventions. 3 Hr. PR: BS/BA/BSN students only. Clinical practicum with focus on critical thinking in application of the nursing process to individuals and families with minor deviations in health. Emphasis is on health protections, restoration, promotion, and maintenance.

NSG 293. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

NSG 322. Concepts: Pediatric Health. 2 Hr. PR: NSG 361 or Consent. Coreq: NSG 325. The focus is on the human response to physiological system dysfunction. The emphasis is on the professional nursing role in complex physiological health restoration for children.

NSG 325. Interventions: Pediatric. 2 Hr. PR: NSG 361 or Consent; Coreq: NSG 332. Nursing interventions specific to human responses to pediatric problems. Emphasis on advanced independent and collaborative nursing activities.

NSG 333. Ethics in Nursing. 3 Hr. PR: Junior standing or Consent. Focus on demonstrating caring behaviors through managing individual/family/group systems. Focus is on ethical decision-making in health care situations. The course emphasizes improvement of writing skills in conjunction with strengthening critical thinking.

NSG 334. Concepts: Adult Health. 3 Hr. PR: NSG 361 or Consent. Coreq: NSG 335. The focus is on the human response to physiological system dysfunction. The emphasis is on the professional nursing role in complex physiological health restoration for adults.

NSG 335. Interventions: Medical Surgical. 2 Hr. PR: NSG 361 or Consent; Coreq: NSG 332. Nursing interventions specific to human responses to multiple physiological system dysfunction. Emphasis on advanced independent and collaborative nursing activities.

NSG 340. Professional Role Transition. 3 Hr. PR: RN licensure. The course focuses on concepts and principles of professional nursing inherent in the curriculum of the School of Nursing. Emphasis is placed on how these concepts and principles affect nursing role.

NSG 345. Interventions: Psychosocial. 2 Hr. PR: NSG 361 or Consent; Coreq: NSG 356. Nursing interventions specific to human response to multiple psychosocial system dysfunction. Emphasis on advanced independent and collaborative nursing activities.

NSG 355. Interventions: Maternal Child. 2 Hr. PR: NSG 361 or Consent; Coreq: NSG 351. Nursing interventions specific to human responses related to individuals and families experiencing child bearing adaptations. Emphasis on advanced independent and collaborative nursing activities.


NSG 361. Health Assessment. 3 Hr. PR: NSG 225 or Consent. Comprehensive, in-depth assessment of the client's health status, health patterns, physical examination and health history. Interviewing techniques including taped interactions and accurate recording of data for clients across the life span.

NSG 371. Basic Parish Nurse Education. 3 Hr. Explore the nurse's role in managing care within faith communities. Focus is on dimensions of nurse's role: spiritual caregiver, health promoter, counselor, advocate, educator, care coordinator, resource agent and manager of developing practice.

NSG 376. Clinical Nursing Pharmacology. 3 Hr. PR: Junior standing; Coreq: NSG 332. Principle of pharmacology emphasizing on nursing role in accurate drug administration and patient assessment. Pharmacological management is analyzed with pathophysiology. Particular emphasis is on patient/family teaching of pharmacological goals in order to maximize health potential.

NSG 400. Spirituality and Health. 3 Hr. In this course, students will examine the mind/body/spirit connection that occurs in the process of healing and wellness. Theories and practices of relationships between mind/body/spirit will be examined as they impact health/wellness of patients.

NSG 421. Concepts: Critical Care. 3 Hr. PR: Senior standing in NSG or Consent. Coreq: NSG 425. Emphasis on professional nursing role in supporting individual/family/group responses to acute life threatening situations involving vulnerable populations; focus is on nursing role in providing care to unstable individuals/families/groups.

NSG 423. Leadership in Nursing. 2 Hr. PR: Senior status or Consent. Professional role in creating and managing the health care milieu. Focus is on the nurse teacher/manager roles and interventions in support of the client/family experiencing acute or long-term problems.

NSG 425. Interventions: Leadership. 6 Hr. PR: Senior standing in nursing or Consent. Coreq: NSG 421. Professional nursing role in supporting human responses to acute, life-threatening situations involving identified vulnerable populations; focus is on therapeutic nursing interventions specific to aid human responses of individuals with physiologic instability and their families.

NSG 433. Seminar 8: Professional Role Synthesis. 3 Hr. PR: NSG 343. Emphasis is on implementation of the professional nursing role within a changing health care system. Focuses on analysis of societal, institutional and economic factors that affect the delivery of health care.

NSG 434. Evidence-Based Practice. 4 Hr. PR: NSG 476; Coreq: NSG 433. Focus is on evidence-based practice in nursing, through analysis of clinical questions, appraisal of evidence for clinical decision making strategies to apply evidence, and exploring creation of a culture for evidence-based practice.

NSG 441. Concepts: Community. 3 Hr. PR: Senior standing in nursing or Consent. Coreq: NSG 445. Community health nursing processes with emphasis on the professional nursing role in the assessment of community health needs and identification of health action potential.

NSG 442. Review Clinical Problems. 2 Hr. PR: Senior status. Professional nursing role in dealing with advanced clinical problems in health promotion and disease prevention in vulnerable population groups. Emphasis is on interdisciplinary and multidisciplinary approaches to problem solving in health care.
NSG 443. Seminar 6: Professional Role Development. 2 Hr. Emphasis on professional nursing role in health promotion/risk reduction in groups/communities of vulnerable populations. Focuses on multidisciplinary team approaches to problem solving in community health.

NSG 445. Interventions: Community. 5 Hr. PR: Senior standing in nursing or Consent. Coreq: NSG 441 and NSG 455. Emphasis on the collaborative role of the nurse in assisting communities to develop and implement plans for health promotion/risk reduction across the life span. Focus on vulnerable populations.

NSG 455. Interventions: Capstone. 1 Hr. PR: Senior standing in nursing or Consent and PR or Conc: NSG 441 and NSG 476. Coreq: NSG 445. Synthesis of theoretical and practical knowledge acquired in undergraduate nursing career. Emphasis on critical thinking, ethical decision-making and civic responsibility in the design and implementation of a service-learning project addressing a community health need.

NSG 476. Introduction to Nursing Research. 3 Hr. PR: STAT 211 or Consent. Theory, concepts, and methods of the research process intended to provide a basic understanding that is necessary for intelligent consumership of research findings.

NSG 481. Cardiac Nursing. 2 Hr. Web-based. Mastery format. NSG juniors and seniors. Introduction to the interpretation and treatment of cardiac arrhythmia.

NSG 482. Palliative Care Basics. 2 Hr. PR: Junior rank in nursing, or one year of clinical coursework for other health science majors. Discussion surrounding end-of-life care of the patient and family in a variety of settings. Exploring these topics will enable the health care professional to provide quality patient care and advocacy for end-of-life care.

NSG 486. NCLEX Review. 1 Hr. PR: Senior status. Focuses on achievement of professional success by preparing for RN licensure. Preparation for NCLEX will be the focus of this by enhancing NCLEX testing skills.

NSG 493 A-Z. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

NSG 495. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

NSG 496. Senior Thesis. 1-3 Hr. PR: Consent.

NSG 497. Research. 1-6 Hr. Independent research projects.

NSG 498. Honors. 1-3 Hr. PR: Students in the Honors Program and Consent by the honors director. Independent reading, study, or research.

NSG 522. Culture and Health. 3 Hr. Healthcare is encountering increasing cultural diversity. By identifying cultural behaviors, beliefs, and meaning of health in diverse cultural contexts, students will become more culturally proficient in delivering care.

NSG 593 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

NSG 610. Leadership in Health Care. 3 Hr. PR or CONC: NSG 622 and NSG 623. Critical analysis of leadership frameworks, values and beliefs, and application of skills in the practice setting.

NSG 611. System Based Decision Making. 2 Hr. PR or CONC: NSG 622 and NSG 623. Decision making grounded in an understanding of the organization as an open living system.

NSG 612. Leading Health System Change. 4 Hr. PR: NSG 610 and NSG 611. Developing system-based change management critical to advanced nursing in various settings, including selection training, and support of effective teams and workgroups.
NSG 613. Managing Health Care Resources. 3 Hr. PR: NSG 622 and NSG 623. Management of financial and human resources to promote professional practice and organizational growth within organizational financial constraints.

NSG 614. Health Care Informatics. 3 Hr. PR: NSG 627. Explore technologies to improve health care practices and learn to utilize technology for outcomes management.

NSG 615. Program Planning/Evaluation. 3 Hr. PR: NSG 613. Health care program planning, strategies for program implementation, and program evaluation techniques.

NSG 617. Leadership Practicum 1. 2-5 Hr. PR or CONC: NRS 615. Supervised practicum designed to apply healthcare leadership principles to practice. Students participate in nursing leadership and administrative activities in a selected healthcare setting.

NSG 618. Leadership Practicum 2. 2-5 Hr. PR: NSG 617. Supervised practicum designed to build on initial application of healthcare leadership principles. Students participate in leadership and administrative activities in a selected health care setting.

NSG 622. Theory and Disciplined Reasoning. 3 Hr. Introduction to the theoretical foundations of the discipline of nursing as a basis for applying critical thinking skills to the development of a conceptual framework for nursing.


NSG 624. Advanced Pathophysiology. 4 Hr. Theoretical basis of pathophysiological changes in acute and chronic illness confronted in primary care across lifespan. This course lays the foundation for subsequent courses in diagnosis, management, and therapeutic interventions.

NSG 626. Lifespan Health Promotion. 2 Hr. An in-depth study of theoretical foundations, epidemiological principles, and advance practice strategies for the promotion of health and prevention of disease across the life-span.

NSG 627. Research and Systematic Analysis. 5 Hr. PR: NSG 622. An overview of research methods, evidence and epidemiological and statistical measures used in advanced practice nursing.

NSG 628. Health Policy, Finance, Ethics. 3 Hr. PR: NSG 622. Study of how health policy, the organization and financing of health care, and of how ethical principles shape professional practice.

NSG 629. Advanced Practice/Families. 2 Hr. PR: NSG 622 and NSG 623 and NSG 624 and NSG 626 and NSG 631 and NSG 632. Exploration and analysis of family theories, assessments, and interventions applicable to the advanced practice of nursing.

NSG 631. Advanced Pharmacotherapeutics. 3 Hr. PR: NSG 624. Examination of the relationship between pharmacologic principles and the selection of pharmacologic agents in altered health states across the lifespan. This course lays the foundation of subsequent courses in diagnosis, management, and therapeutic interventions.

NSG 632. Advanced Assessment. 2 Hr. PR: NSG 622 and NSG 623 and NSG 624. Preparation for the conduct of advance health assessment of patients. Diagnostic reasoning is emphasized as the student collects and analyzes data obtained from the patient history, physical examination, and diagnostic procedures.

NSG 633. Primary Care: Rural Families 1. 3 Hr. PR: NSG 622 and NSG 623 and NSG 624 and NSG 626, and NSG 631 and NSG 632. Introduction to the domains and competencies of the advanced practice nursing role that are fundamental to primary health care of the rural family unit.
NSG 634. Primary Care: Rural Families 2. 4 Hr. PR: NSG 633. Further development of the domains and competencies of the advanced practice nursing role introduced in NSG 633 that are fundamental to primary health care of the rural family unit.

NSG 635. Rural Family Health Practicum 1. 5 Hr. PR or Conc: NSG 634. Supervised practicum designed to apply theory- and evidence-based advanced practice nursing. Students develop the advanced practice role as they manage health care and participate in service learning.

NSG 636. Rural Family Health Practicum 2. 5 Hr. PR: NSG 635. Supervised practicum that builds upon NSG 635 and focuses on the application of theory- and evidence-based advanced nursing practice. With supervision, students manage health care and participate on interdisciplinary terms.

NSG 642. Advanced Pediatric Assessment. 2 Hr. PR: NSG 622 and NSG 623 and NSG 624 and PR or CONC: NSG 643. Preparation for the conduct of advanced health assessment of pediatric patients. Diagnostic reasoning is emphasized as the student collects and analyzes data obtained from the patient history physical examination, and diagnostic procedures.

NSG 643. Pediatric Primary Care 1. 3 Hr. PR: NSG 622 and NSG 623 and NSG 624 and NSG 631 and PR or CONC: NSG 642. Knowledge and skills basic to the assessment of health status, diagnosis, treatment, and evaluation of children in the primary care setting.

NSG 644. Pediatric Primary Care 2. 4 Hr. PR: NSG 643. Further acquisition of knowledge and skills central to the assessment of health status, diagnosis, treatment and evaluation of children in the primary care setting.

NSG 645. Pediatric Practicum 1. 5 Hr. PR or ConC: NSG 644. Supervised practicum designed to facilitate the student’s competency in the delivery of primary health care to children.

NSG 646. Pediatric Practicum 2. 5 Hr. PR: NSG 645. Supervised practicum designed to advance the student’s competency in the delivery of primary health care to children.

NSG 647. Pediatric Assessment/Care 1. 5 Hr. PR: NSG 622 and NSG 623 and NSG 624 and NSG 627. An Introduction to the knowledge and skills basic to the assessment of health status, diagnosis, and evaluation of children in the primary care setting.

NSG 654. Neonatal Pathophysiology. 4 Hr. An introduction to the scientific foundations underlying processes contributing to health/illness states in neonates. Principles from genetics, embryology, and developmental physiology lay the foundation for subsequent courses in assessment, diagnosis and management.

NSG 655. Neonatal health Promotion. 2 Hr. PR: NSG 622. Review of practices and services that contribute to healthy outcomes for sick and well neonates with focus on health promotion, disease prevention, and maintenance of function in the context of critical care and primary care.

NSG 656. Current Issues in Aging. 2-3 Hr. An overview of contemporary gerontology that offers a multidisciplinary approach to providing services to older people in the United States.

NSG 657. Advanced Assessment of Older Adults. 2 Hr. PR: NSG 624. Preparation for the conduct of advanced health assessment of older adults. Diagnostic reasoning is emphasized as the student collects and analyzes data obtained from the patient history, physical examination, and diagnostic procedures.

NSG 658. Geriatric Primary Care 1. 2-3 Hr. PR: NSG 631 and NSG 672. Study of constellation of symptoms in the older adult that may be manifestations of health problems.

NSG 659. Geriatric Primary Care 2. 3-4 Hr. PR: NSG 658. Study of common diseases and disorders seen in the older adult.
NSG 660. Women’s Reproductive Health. 2 Hr. PR: Graduate status or Permission. This course focuses on fertility control, reproductive health, menopause, and health promotion activities for women.

NSG 663. Neonatal Assessment/Care 1. 5 Hr. PR: NSG 622, NSG 623 and NSG 654. COREQ: NSG 655. Preparation for conducting advanced assessment of neonates/young infants. Diagnostic reasoning is emphasized through collecting and analyzing data obtained from patient history, physical examination, and diagnostic procedures.

NSG 664. Neonatal Care 2. 4 Hr. PR: NSG 663 and NSG 631. This course focuses on the management of common problems and conditions in neonates.

NSG 665. Neonatal Practicum 1. 5 Hr. PR: NSG 631. COREQ: NSG 664. This supervised practicum is designed to facilitate the student’s competency in the delivery of care to infant populations.

NSG 666. Neonatal Practicum 2. 5 Hr. PR: NSG 665. This supervised practicum is designed to facilitate the student’s competency in the delivery of care to infant populations.

NSG 670. Curriculum in Nursing. 3 Hr. A review of contemporary theory-based determinants of curriculum development in nursing, including analysis and evaluation of curricula for nursing education.

NSG 671. Clinical Practicum-Educators. 2 Hr. PR: NSG 635. Implementation of theory-based advanced nursing practice in an area of student’s clinical interest/expertise. Student develops the advanced practice role with a select population of clients and families.

NSG 672. Education Practicum. 5 Hr. PR: NSG 625. Specialty practicum 1 in area of interest. Supervised practice in the application of theories and methods related to nursing education.

NSG 674. Teaching in Nursing. 3 Hr. PR: NSG 670. A general methods course involving the principles of instruction in didactic and clinical nursing education including analysis of course planning, teaching methods, and evaluation of student outcomes.

NSG 675. Geriatric Practicum 1. 2 to 5 Hr. PR: NSG 674. Supervised practicum designed to apply essential skills and knowledge to develop the role of geriatric nurse practitioner. Students will engage in evidence-based advanced practice in the primary care setting.

NSG 676. Geriatric Practicum 2. 4 to 5 Hr. PR: NSG 675. Supervised practicum that focuses on evidence-based advanced practice in a variety of settings. The students, with supervision, will manage health care of geriatric clients and their families and participate on interdisciplinary teams.

NSG 683. Primary Care: Women & Girls 1. 3 Hr. PR: NSG 622, NSG 623, NSG 624, NSG 626, NSG 631 and NSG 632. Introduction to the domains and competencies of the advanced practice nursing role that are fundamental to primary health care of women and girls.

NSG 684. Primary Care: Women & Girls 2. 4 Hr. PR: NSG 683. Further development of the domains and competencies of the advanced practice nursing role introduced in NSG 683 that are fundamental to primary health care of the rural family unit.

NSG 685. Clinical Scholarship. 1 Hr. Co-Req: NSG 635 (for FNP track) or NSG 645 (for PNP track). Knowledge dissemination within the advanced practice role using disciplined reasoning and systematic inquiry to examine and incorporate evidence-based strategies in the caring/healing process.

NSG 686. WHNP Practicum 1. 2-5 Hr. PR or CONC: NSG 684. Supervised practicum designed to apply theory- and evidence-based advanced practice nursing. Students develop the advanced practice role as they manage health care and participate in service learning.
NSG 687. WHNP Practicum 2. 4-5 Hr. PR: NSG 686. Supervised practicum that builds upon NSG 686 and focuses on the application of theory- and evidence-based advanced nursing practice. With supervision, students manage health care and participate on interdisciplinary teams.

NSG 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NSG 693 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

NSG 695. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

NSG 697. Research. 1-3 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper, or equivalent scholarly project, or a dissertation guided by a student-graduate faculty contact based on the course objectives and culminating in a written product. (Grading may be S/U.)

NSG 715. Scientific Underpinnings. 3 Hr. Provides an understanding of the scientific underpinnings of the application of theory to health care at the highest level of advanced nursing practice.

NSG 716. Analytical Methods. 4 Hr. PR: NSG 715. Prepares the DNP student to translate research into practice, evaluate practice guidelines to improve care practices and outcomes, and to participate in collaborative research.

NSG 717. Organization and Leadership. 3 Hr. Provides a foundation for developing organizational and systems leadership skills critical to clinical care and health outcomes. Knowledge will help students to promote patient safety and excellence in health care organizations.

NSG 718. Population Health. 3 Hr. PR: NSG 716. Provides a foundation for analysis of clinical prevention and population health programs for individuals, aggregates, and populations.

NSG 719. Health Care Policy. 3 Hr. Provides a foundation for influencing, developing, implementing, and evaluating health care policies and legislation pertinent to issues in health care such as ethics, safety, costs, access, and quality.

NSG 727. Contemporary Nursing Science. 3 Hr. PR: 728. In-depth study of the theoretical, empirical, and methodological dimensions of foundational nursing science in the conceptual areas of empowerment, significant life transitions, and health system outcomes.

NSG 728. Theoretical Basis of Nursing. 3 Hr. PR: NSG 722. This course builds on philosophical basis of nursing. Discovery and verification of scientific knowledge are addressed by focusing on theory development. Methodologies include concept analysis and evaluation of middle-range theories of nursing and related sciences.

NSG 729. Research Methods 2. 3 Hr. PR: NSG 726 and PR or CONC: STAT 512. This course continues the study of the quantitative and qualitative research process extending from methodology to analysis and interpretation. It includes sampling theory, power, measurement, data collection procedures, and advanced analysis procedures.

NSG 730. Principles of Measurement. 3 Hr. PR: NSG 727 and NSG 728. The role of measurement in nursing research is studied. Measurement in the areas of attitudes, personality, competence, development, and group qualities is emphasized. Instrument development and reliability/validity issues are also discussed.

NSG 731. Qualitative Research Methods. 3 Hr. PR: NSG 727 and NSG 728. An exploration of the philosophical foundation and methods of qualitative inquiry. Research designs, ethical issues, rigor, integrity, data collection, interpretation, and representation are studied in depth.
NSG 734. Use of Data. 3 Hr. PR: NSG 726 and NSG 729. This course focuses on use of the following data bases: clinical, financial, health services, nursing, local, state, and national. The uses of existing data in clinical and policy decisions and in research will be explored.

NSG 735. Principles: Nursing Education. 3 Hr. PR: EDP 700. This course examines the research base of educational strategies in nursing education in classroom and clinical settings. The course also examines external determinants on nursing curriculum, accreditation issues, and evaluation of nursing programs.

NSG 737. Leadership. 3 Hr. PR: NSG 734. Through exploration of contemporary leadership theory and application to self, an authentic personal leadership style will be developed to enable the student to enact a leadership role in health care and/or education.

NSG 738. Issues In Nursing Scholarship. 3 Hr. PR: NSG 729, NSG 731, and NSG 737. Seminar focused on broad issues of ethics in the conduct of research and role acquisition of nurse scientist in academic, clinical, and health policy settings.

NSG 741. Clinical Focus. 2 Hr. Provides for the development of knowledge and skills relative to the state of the science in a particular area of clinical practice.

NSG 742. Clinical Application. 1-8 Hr. PR: NSG 741. Provides for the mastery of clinical skills relative to the state of the science in a particular area of clinical practice.

NSG 761. Clinical Project 1. 1 Hr. PR: NSG 715 and NSG 716. Identifies a practice problem and connects the problem to existing knowledge and science.

NSG 762. Clinical Project 2. 1 Hr. PR: NSG 761 and NSG 717 and NSG 718. Students design an initiative to address the practice problem identified in NSG 761 using the appropriate research methods and a variety of scientific principles.

NSG 763. Capstone 1. 3 Hr. PR: NSG 762. Develops leadership skills to create change relative to the practice problem as designed in NSG 762.

NSG 764. Capstone 2. 3 Hr. PR: NSG 763. Evaluates the change implemented in NSG 763 and analyzes the relationship of the findings to practice and policy.

NSG 781. Research Mentorship 1. 1 Hr. PR: NSG 729. In this guided practicum, the student’s research skills are developed and cultivated through participation in the mentorship process with an experienced researcher (the chairperson or his/her designee).

NSG 783. Dissertation Seminar 1. 2 Hr. PR: NSG 729. This seminar provides an opportunity for continued knowledge synthesis related to the selected topic of research. Students will participate in proposal presentation and critique. The expectation is a National Research Service Award Predoctoral Fellowship Application.

NSG 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NSG 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

NSG 793 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

NSG 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

NSG 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
NSG 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

NSG 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper, or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

NSG 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

NSG 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

Obstetrics and Gynecology (OBST)

OBST 741. Clinical Clerkship in Obstetrics and Gynecology. 8 Hr. (Required of third-year medical students.) Presents core knowledge of obstetrics and gynecology with small group instructional seminars, ward rounds, didactic teaching sessions and grand rounds conducted by faculty, house officers, visiting faculty, and students. Students participate in the care of all inpatients and attend all departmental clinics.

OBST 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

OBST 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

Occupational Therapy (OTH)

OTH 100. Introduction To Occupational Therapy Profession. 1 Hr. Provides students with an introduction to the profession of occupational therapy including knowledge base, practice areas, professional education and professional organizations. Intended for pre and non majors.

OTH 300. Essentials of Clinical Anatomy. 4 Hr. PR: OTH student status. A study of human gross anatomy, micro anatomy and embryology with major emphasis on the musculoskeletal system.

OTH 301. Professional Foundations. 3 Hr. PR: OTH student status. Introduction to fundamentals of professional behavior for the occupational therapist. Includes units on history, paradigms, communication, documentation, ethics, interdisciplinary teamwork, licensure requirements, and medical terminology.


OTH 303. Functional Movement Across the Lifespan. 2 Hr. PR: OTH student status. Including acquisition of developmental patterns, motor control, motor skill acquisition. This course also provides an overview of the effects of normative processes of aging on neuromotor patterns in occupational performance.

OTH 304. Physical Impairment and Function 1. 4 Hr. Introduction to disease and injury and its functional implications on OT treatment. Emphasis is placed on the impact of orthopedic and general disorders on performance in areas of occupation, remediation, or compensation of these impairments.

OTH 307. Neurobiologic Foundations. 4 Hr. PR: OTH student status. Basic and clinical applications or neuroanatomy and neurology. Includes lectures on neurophysiological basis of physical and occupational therapy practice.


OTH 321. Development Life Tasks. 3 Hr. PR: OTH student status. Life-span human development across cognitive, psychosocial and neuromotor domains with particular emphasis on applications to physical or occupational therapy interventions. Includes focus on cultural influences in health and illness.

OTH 360. Research Methods in Occupational Therapy. 3 Hr. PR: OTH student status. An introduction to principles of research methodology and data analysis in the realm of occupational science/occupational therapy. Includes a focus on scientific methodology, research design, data collection, data analysis, and ethical considerations.

OTH 384. Level I Fieldwork 1. 2 Hr. CPR training and clinical instruction in the occupational therapy process, OT documentation, basic measurement skills, experiences with people with disabilities, and participation in professional activities. (Grading will be pass/fail.)

OTH 385. Level I Fieldwork 2. 2 Hr. PR: OTH student status. Students will be provided with fieldwork experience in the occupational therapy process, and ADL perceptual, and mental health assessments. Students will be placed in a variety of settings where mental health issues may be observed. (Grading will be pass/fail.)

OTH 386. Level I Fieldwork 3. 2 Hr. PR: OTH student status. Students will be provided with fieldwork experiences in occupational therapy processes. (Grading will be pass/fail.)

OTH 401. Occupational Science 2. 4 Hr. PR: OTH student status. An introduction to signs and symptoms and management and effect of neurological dysfunction and disabilities on human occupation encountered by the occupational therapist. Includes theories of treatment and basic treatment technologies.

OTH 406. Cardio-Pulmonary Rehabilitation. 3 Hr. PR: OTH student status. Lectures on cardiovascular and pulmonary conditions including medical interventions. Discipline specific laboratory sessions include stress testing, physical capacity assessment, ecological analysis, use of monitoring equipment, and evaluation and planning rehabilitation protocols.

OTH 408. Tests and Measures in Occupational Therapy. 3 Hr. PR: OTH student status. Presentation of tests and measures used by occupational therapists in the assessment of various conditions. Emphasis will be placed on the clinical and functional evaluation of clients within the domain of occupational therapy practice.

OTH 414. Developmental Disabilities. 2 Hr. PR: OTH student status. Overview of occupational therapy approaches toward developmental disabilities, including focus on etiology, pathology, and progression of conditions specific to various developmental disabilities.

OTH 416. Professional Decision-Making. 2 Hr. PR: OTH student status. Students are provided with opportunities to develop critical thinking, clinical reasoning, and decision-making skills in occupational therapy. Emphasis is on autonomous practice and referral decisions.
OTH 417. Occupational Therapy in Geriatrics. 3 Hr. PR: OTH student status. Overview of normative aging using an occupational therapy frame of reference. Common problems of seniors are discussed.

OTH 419. Professional Values. 3 Hr. PR: OTH student status. An introduction to ethics and how it specifically applies to rural health and life in West Virginia. Students will be given an opportunity to explore their own conceptions of ethics in health care.

OTH 430. Occupational Therapy in Mental Health. 3 Hr. PR: OTH student status. Clinical and functional science lectures pertaining to OT practice in mental health environments. Course includes introduction to occupational therapy clinical and functional assessment, and management protocols.

OTH 432. Occupational Therapy Interventions in Mental Health. 4 Hr. PR: OTH student status. Interventions commonly used by occupational therapists in the field of mental health. Emphasis on group processes, life skills, reintegration strategies.

OTH 435. Therapeutic Activity. 3 Hr. PR: OTH student status. Students will develop skills in performance component analysis, performance context analysis, and occupational performance analysis.

OTH 440. Cognition and perception in Occupational Therapy. 2 Hr. PR: OTH student status. Study of cognitive and perceptual impairments that accompany common adult neurological conditions. Emphasis is on application of occupational therapy assessment and treatment principles to understand the impact of impairments on functional performance and societal participation.

OTH 480. Current Topics in Occupational Therapy. 1-3 hr. PR: OTH student status. (Not to exceed 18 hr.) A seminar course designed to provide a forum for discussing the frontiers of the occupational therapy profession. Topics may include: research in progress, new developments, and salient professional issues.


OTH 495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

OTH 497. Research. 1-6 Hr. Independent research projects.

OTH 500. Health Care Issues in Occupational Therapy. 3 Hr. PR: OTH student status. Occupational therapy practice models in diverse health care delivery systems are discussed, including hospital-based, home health, outpatient/private practice, long term care settings, and public schools. (2 hr. lec., 2 hr. other.)

OTH 501. Management for OT Practice. 4 Hr. PR: OTH student status. This course reviews the structure and recent changes in the United States health care system with attention to those aspects of managed care of importance to the entry level occupational therapist. (3 hr. lec., 2 hr. lab.)

OTH 503. Occupational Therapy in Pediatrics. 3 Hr. PR: OTH student status. This course reviews the medical and developmental conditions of pediatric populations commonly encountered by occupational therapists. Emphasis is placed on OT assessment and interventions. (2 hr. lec., 2 hr. lab.)

OTH 505. Prosthetics and Orthotics. 3 Hr. PR: OTH student status. Principles of practice applications of upper and lower limb prosthetics and orthotics commonly encountered and/or manufactured by the occupational therapist. (1 hr. lec., 4 hr. lab.)
OTH 520. Occupational Therapy in the Work Environment. 3 Hr. PR: OTH student status. A holistic approach to evaluation and intervention commonly practiced by occupational therapists in work settings. This course will focus on task analysis in various work settings using an occupational performance frame of reference. (1 hr. lec., 4 hr. lab.)

OTH 540. Level 2 Fieldwork 1. 1-6 Hr. PR: OTH student status. Students are placed full-time for six weeks in a facility under the supervision of a licensed occupational therapist. Students are required to register for OTH 540 for a full 12-week summer term for six credits in fieldwork experience. (Course will be graded S/U.)

OTH 550. Education in Occupational Therapy. 3 Hr. PR: OTH student status. Principles of community and adult education are provided. Students are taught to prepare instructional materials, workshops/seminars, and how to assess instructional outcomes. Use of various media are used and reviewed.

OTH 551. Occupational Therapy in Prevention & Wellness. 3 Hr. PR: OTH student status. Students are taught occupational therapy principles and strategies to develop community health promotion and wellness programs in a variety of settings.

OTH 593. Special Topics. 1-6 Hr. A Study of contemporary topics selected from recent developments in the field.

OTH 640. Level II Fieldwork 2. 6 Hr. PR: OTH student status. Students are placed in one 12-week, or two six-week placement(s), depending on the facility and the needs of the student. Students will be placed in facilities where individualized instruction can occur. (Grading will be S/U.)

OTH 697. Research. 1-5 Hr. PR: OTH student status. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

Orthodontics (ORTH)
ORTH 616. Biomechanics. 2 Hr. PR: Consent. Design and function of the teeth and their surrounding structures, and response of these tissues to orthodontic procedures.

ORTH 617. Orthodontic Technique. 2 Hr. PR: Consent. Laboratory course in techniques related to fabrication and manipulation of orthodontic appliances.


ORTH 619. Orthodontic Diagnosis. 1-3 Hr. PR: Consent. Seminar-type class on technique of patient examination, acquiring diagnostic records, and analyzing and correlating this information to the treatment of clinical problems.


ORTH 621. Orthodontic Mechanics. 1-4 Hr. Seminar and laboratory course on basic orthodontic mechanical properties.


ORTH 625 A-Z. Orthodontic Seminar. 1-8 Hr. PR: Consent. Discussions including all branches of dental science, with special emphasis on the orthodontic interest. Assigned topics and articles in the literature discussed.
ORTH 626. Orthodontic Clinic. 1-12 Hr. PR: ORTH 616 and ORTH 617. Clinical treatment of selected patients.

ORTH 627. Surgical Orthodontics. 1 Hr. PR: Consent. Diagnosis and treatment of patients that require surgical orthodontic treatment.

ORTH 628. Early Treatment. 1 Hr. PR: Consent. Diagnosis and treatment of young patients that require early orthodontic and orthopedic treatment.

ORTH 629. Patient Management. 1 Hr. PR: Consent. Addresses the skills needed to effectively manage an orthodontic practice.

ORTH 630. Craniofacial Anomalies. 1 Hr. PR: Consent. Diagnosis and treatment of patients presented with craniofacial anomalies.

ORTH 631. Journal Club. 1 Hr. PR: Consent. Review of literature in the orthodontic journals.

ORTH 632. Dentofacial Orthopedics. 1 Hr. PR: Consent. Diagnosis and treatment of young patients that require orthopedic treatment.

ORTH 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry.

ORTH 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

ORTH 692. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

ORTH 693. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

ORTH 694. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

ORTH 695. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

ORTH 696. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate will present at least one seminar to the assembled faculty and graduate student body of his/her program.

ORTH 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

ORTH 716. Craniofacial Growth and Maturation. 1 Hr. PR: Consent. The current concepts of craniofacial growth and maturation are presented and integrated for application to clinical problems.

**Pathology (PATH)**

PATH 300. Introduction to Pathology. 3 Hr. A study of principles and processes of pathology from cellular to system, including etiology, pathogenesis, and clinical features of representative or commonly occurring disorders and diseases.

PATH 301. Basic Pathology. 2 Hr. PR: Enrollment in dental hygiene or physical therapy, or Consent. A study of the basic pathologic processes in man.

PATH 302. Oral Pathology. 3 Hr. PR: PATH 301, Dental hygiene major, or Consent. Application of fundamental knowledge of general pathology to pathological conditions that occur in the oral cavity.

PATH 303. Clinical Lab Applications. 2 Hr. Lectures and laboratory experience on laboratory safety, measurement, use and maintenance of laboratory equipment, preparation, and storage of reagents and solutions, and basic laboratory techniques.
PATH 304. Histotechnology Microanatomy. 3 Hr. Microscopic identification of the morphology of human cells, tissues and organ systems with relationship to structure and function.

PATH 305. Staining Techniques 1. 4 Hr. A lecture and laboratory course focusing on the theory and methodology of routine and special staining and the basic principles, components and use of instruments in the histopathology laboratory.

PATH 306. Histotechnique 1. 3 Hr. A lecture and laboratory course focusing on the principles and theories of routine histologic techniques and the basic principles, components and use of instruments in the histopathology laboratory.

PATH 320. Basic Clinical Biochemistry. 3 Hr. Introduction to basic biochemistry and human metabolism of amino acids, proteins, enzymes, carbohydrates, liquids, and nucleotides. Molecular biology and applications to the clinical laboratory are included.

PATH 340. Introduction to Hematology. 3 Hr. Lectures and laboratory sessions to cover structure, morphology, and function of the cells of the blood, bone marrow and body fluids, with an overview of hematologic abnormalities.

PATH 380. Introduction to Immunology. 1 Hr. Lectures in basic immunology, with emphasis on its structure and function. Antigens, antibodies, and complement will be discussed and related to immune disorders and simple immunological tests.

PATH 405. Staining Techniques 2. 4 Hr. PR: PATH 305. A lecture and laboratory course focusing on the theory and methodology of immunohistochemistry.

PATH 406. Histotechnique 2. 3 Hr. PR: PATH 306. A lecture and laboratory course focusing on the principles and theories of routine and advanced histologic techniques and the basic principles, components and use of instruments in the histopathology laboratory.

PATH 407. Histology Laboratory. 4 Hr. This course consists of rotations in clinical and research histopathology. (Grading will be pass/fail).

PATH 408. Histotechnologist Practicum. 10 Hr. Students will utilize their knowledge in routine and advanced histological techniques in a clinical setting.

PATH 520. Seminars in Molecular Diagnostics. 1 Hr. This course provides an overview of molecular diagnostic theory and procedures.

PATH 601. Special Studies in Oral Pathology. (For dental and graduate students, residents, and interns.) I. 1-3 Hr. PR: PATH 738 and PATH 753. Advanced study of local or systemic disease processes affecting oral structures through seminars, assignment of specific topics, or research activities.

PATH 603. Pathology and Anatomy. 6 Hr. This course will cover gross and microscopic human anatomy including embryology, histology and microanatomy lab.

PATH 610. Pathology Assistant Education Methods. 1 Hr. Techniques in educational methodology for pathologist’s assistants.

PATH 620. Clinical Pathology Seminar. 2 Hr. This course presents a review of clinical pathology, including pertinent forensic molecular, toxicologic and radiologic diagnostics.

PATH 625. Anatomical Pathology Techniques. 4 Hr. This course will cover standard techniques in surgical and autopsy dissection, preparation of reports, basic forensic investigation techniques, basic histological and immunological staining techniques.
PATH 627. Pathology Assistant Practicum 1. 9 Hr. Rotations in surgical and autopsy pathology to include forensics and pediatrics.

PATH 628. Pathology Assistant Practicum 2. 9 Hr. Rotations in surgical and autopsy pathology to include forensics and pediatrics.

PATH 629. Pathologists’ Assistant Practicum 3. 7 Hr. PR: PATH 628. This course is a continuation of PATH 628 and advanced procedures and application of advanced techniques in surgical and autopsy pathology.

PATH 630. Pathology Review 1. 2 Hr. This course includes an intense review of clinical and anatomical pathology theory and techniques, and presentation of scientific journal articles and clinical cases.

PATH 631. Pathology Review 2. 2 Hr. PR: PATH 630. This course is a continuation of PATH 630 and includes an intense review of clinical and anatomical pathology theory and techniques, and presentation of journal articles and clinical cases.

PATH 693. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PATH 728. General Pathology, II. 5 Hr. PR: Consent. A study of the pathophysiological changes associated with human disease and a study of disease of major organ systems.

PATH 738. Oral Pathology 1. 3 Hr.

PATH 751. Mechanisms of Human Disease. 12 Hr. (For medical and selected graduate students in the medical sciences, with instructor consent.) Integrated study of disease using structure-function relationships. Includes participation in pathology departmental activities (postmortem exams and other diagnostic procedures), student presentations of clinical materials, case study discussions, and lectures.

PATH 753. Oral Pathology 2. (For dental students.) 2 Hr. PR: PATH 738 or Consent. Continuation of PATH 738.

PATH 755. Clinico-Pathologic Correlation Conference. (For dental students,) 1 Hr. PR: PATH 738 and PATH 753 or Consent. Histopathologic correlation with clinical case histories and presenting signs and symptoms presented in a case-based learning format.

PATH 782. Advanced Oral Histopathology. (For dental and graduate students, residents and interns,) 1-2 Hr. PR: PATH 738 and PATH 753 or Consent. An elective seminar stressing the significant microscopic features and diagnosis of various oral lesions.

PATH 790. Teaching Practicum. 1-3 Hr. PR: (PATH 301 and PATH 302) or (PATH 728 and PATH 738 and PATH 753.) Supervised practice in college teaching of pathology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

PATH 791. Advanced Study. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PATH 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

PATH 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PATH 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.
PATH 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

PATH 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

PATH 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PATH 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

PATH 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University’s facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department’s Graduate Colloquium to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s programs.)

Pediatrics (PEDI)

PEDI 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PEDI 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

Pharmacology and Toxicology (PCOL)
PCOL 260. Pharmacology. 3 Hr. Interactions of clinically useful therapeutic agents with the mammalian systems.

PCOL 449. Drugs and Medicine. 3 Hr. PR: ANPH 301 or BIOL 235 or EXPH 365 or PSIO 241 or Consent. Introduction for interested students to information about drugs and pharmaceutical preparations including administration, mechanisms, therapeutic and adverse effects, drug interactions, and drug abuse.

PCOL 549. Applied Pharmacology. 4 Hr. PR: For exercise physiology and other graduate students or selected undergraduate seniors with consent. Effect of drugs in humans with emphasis on application of drugs relevant to health professionals.

PCOL 562. Occupational Toxicology. 3 Hr. PR: Consent. General principles of toxicology with special emphasis on occupational health. Classes of chemicals which pose problems in the workplace will be emphasized.

PCOL 743. Pharmacology 1. 3 Hr. PR: Second year professional standing or Consent. Cellular and biochemical effects that explain the therapeutic or adverse effects of drugs. These will be integrated into considerations of drug effects, toxicities and interactions between drugs.
PCOL 744. Pharmacology 2. 3 Hr. PR: Second year professional standing or Consent. Continuation of Pharmacology 1. Cellular and biochemical effects that explain the therapeutic or adverse effects of drugs. These will be integrated into considerations of drug effects, toxicities and interactions between drugs.

PCOL 745. Advanced Pharmacology 1. 1-4 Hr. This course contains three modules and addresses general pharmacological principles and contemporary topics in integrative, cellular, and molecular aspects of cardiovascular, inflammatory, endocrine, and pulmonary pharmacology, and toxicology.

PCOL 746. Advanced Pharmacology 2. 1-3 Hr. This course contains three modules and addresses contemporary topics in integrative, cellular, and molecular aspects of neuropharmacology (first two modules) and cancer pharmacology (third module).

PCOL 760. Pharmacology and Therapeutics. (For dental and graduate students.) 5 Hr. PR: Second year dental students or graduate students with Consent. Lecture and demonstrations relevant to explaining how drugs function in the human body. Team teaching by basic science faculty and clinical dental faculty.

PCOL 761. Medical Pharmacology. 7 Hr. (For medical and selected graduate students in the medical sciences with instructor’s consent.) PR: Basic principles of drug action, mechanisms of therapeutic effects and undesirable effects. Emphasis on the classes of drugs currently used in medical practice.

PCOL 762. Literature Survey. 1 Hr. per semester. PR: Graduate status in pharmacology and toxicology or Consent. Current literature pertinent to pharmacology and toxicology including journals of allied biological sciences.

PCOL 764. Advanced Pharmacology. 1-6 Hr. PR: PCOL 761 or Consent. Advanced lectures and discussion of general principles of pharmacology and toxicology and advanced lectures in biochemical, endocrine, pulmonary, and cardiovascular pharmacology. (1-6 hr. lec.) (Alternate years.)

PCOL 770. Summer Medical Pharmacology. 7 Hr. Online course covering basic principles of drug action, mechanisms of therapeutic effects, and undesirable effects. Emphasis on the classes of drugs currently used in medical practice.

PCOL 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of pharmacology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience.

PCOL 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PCOL 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

PCOL 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PCOL 795. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

PCOL 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

PCOL 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)
PCOL 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

PCOL 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

Pharmacy (PHAR)

PHAR 497. Research. 1-6 hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation.

PHAR 498. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.

PHAR 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PHAR 693. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PHAR 694 A-Z. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students. (Grading may be S/U.)

PHAR 696 A-Z. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program. (Grading may be S/U.)

PHAR 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PHAR 700. Pharmacy as a Profession. 1 Hr. PR: First professional year standing or Consent. Introduces students to the concept of professionalism, the scope of pharmacy practice opportunities, the health care system as it relates to pharmacy, and other contemporary issues in pharmacy practice. (Grading will be S/U.)

PHAR 701. Pharmaceutical Care Lab 1. 2 Hr. PR: First professional year standing or Consent. Students will develop skills in medical terminology, communications, information retrieval, dispensing, compounding, calculations, pharmaceutical care, and problem-solving skills.

PHAR 702. Physical Pharmacy. 3 Hr. PR: First professional year standing or Consent. Designed to teach students the basic principles related to physical phenomena and stability as well as introduce them to a variety of factors that influence drug dosage form design and stability.

PHAR 703. Pharmacy Practice Experience 1. 1 Hr. PR: First professional year standing or Consent. Provides an overview of the roles and responsibilities of community pharmacists and provides experiential learning in a community pharmacy setting. First courses in a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 708. Pharmaceutics. 3 Hr. PR: PHAR 702. Pharmaceutics builds upon the concepts discussed in physical pharmacy and focuses on drug dosage forms and delivery systems, their design, drug delivery to the body through a variety of routes, and factors affecting drug delivery.
PHAR 709. Immunology and Biotechnology. 3 Hr. PR: First year professional standing or Consent. Students will learn basic functions of the immune system, elements of the pharmaceutical applications of biotechnology, and be introduced to the chemotherapy of infections.

PHAR 710. Pharmacy Practice Experience 2. 1 Hr. PR: PHAR 703 or Consent. Provides an overview of the roles and responsibilities of community pharmacists and provides experiential learning in a community pharmacy setting. Second course in a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 711. Chemical Properties of Drugs. 2 Hr. PR: First year professional standing or Consent. Principles of chemical stability and chemical properties as they relate to drug molecules. Topics to be covered include functional group analysis, solubility, oil/water partitioning, organic acids and bases, and drug decomposition and metabolism.

PHAR 712. Pharmaceutical Care Lab 2. 2 Hr. PR: First professional year standing or Consent. Continuation of PHAR 701.

PHAR 714. Introduction to Community Rotation. 2 Hr. PR: PHAR 710. Students will gain experience preparing prescriptions, providing basic drug information to patients, and participating in disease prevention activities in a community pharmacy setting.

PHAR 715. Pathophysiology/Therapeutics 1. 4 Hr. PR: Second professional year standing or Consent. Principles and concepts of pathophysiology and pharmacotherapeutics. An organ system approach to disease states and their therapeutic management will be followed.

PHAR 716. Chemistry of Drug Action 1. 3 Hr. PR: PHAR 711 or Consent. Provides a basic understanding of relationships between the chemical structure of a drug and its biological effect. Physiochemical properties, enzymatic transformations and structure-activity relationships (SAR) of important pharmaceutical agents are discussed.

PHAR 717. Pharmacy Practice Experience 3. 1 Hr. PR: Second professional year standing or Consent. Introduces students to the principles of service learning through development of an on-site healthcare-related service project. Third course of a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 719. Pharmacy Practice Experience 4. 1 Hr. PR: PHAR 717 or Consent. Introduces students to the principles of service learning through implementation of an on-site healthcare-related service project. Fourth course of a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 720. Patient Health Education. 2 Hr. PR: Second professional year standing or Consent. Interpersonal communication skills will be enhanced in the areas of patient-centered and colleague-centered communications. Students will learn processes for providing pharmaceutical care (e.g., interviewing and counseling patients; formulating a plan; monitoring; and documenting information).

PHAR 723. Pharmaceutical Care Lab 3. 1 Hr. PR: Second professional year standing or Consent. Continuation of PHAR 712.

PHAR 724. Pharmaceutical Care Lab 4. 2 Hr. PR: Second professional year standing or Consent. Continuation of PHAR 723.

PHAR 725. Pathophysiology/Therapeutics 2. 4 Hr. PR: PHAR 715 or Consent. A continuation of PHAR 715.

PHAR 726. Chemistry of Drug Action 2. 2 Hr. PR: PHAR 716 or Consent. A continuation of PHAR 716.
PHAR 727. Medical Literature Evaluation. 2 Hr. PR: Second professional year standing or Consent. Emphasis is placed on the critical analysis and evaluation of the primary literature. Secondary and computerized information resources are also discussed, including other selected aspects of drug information.

PHAR 728. Pharmacy Management. 2 Hr. PR: Second professional year standing or Consent. This course provides an introductory survey of the basic principles of personnel and fiscal management as they apply to organizational planning and decision-making, organizational design and structure, leadership and control in organizations, and the issues facing pharmacy managers.

PHAR 729. Intro Institutional Rotation. 2 Hr. PR: PHAR 719. Second professional year standing or Consent. Gain experience in an institutional pharmacy setting.

PHAR 730. Pathophysiology/Therapeutics 3. 4 Hr. PR: PHAR 725 or Consent. A continuation of PHAR 725. An organ system approach to disease states and their therapeutic management will be followed.

PHAR 731. Biopharm & Pharmacokinetics. 3 Hr. PR: Third year professional standing or Consent. Fundamental principles of biopharmaceutics (physicochemical and biological processes affecting drug transit into the systemic circulation) and pharmacokinetics (kinetic and biological processes a drug undergoes upon entering the body).

PHAR 732. Non-Prescription Drugs. 3 Hr. PR: Third year professional standing or Consent. An advanced-level course on the appropriate selection, and use of non-prescription drug products in the contemporary practice setting, the basis for self-medication, assessment of patient condition, and approach to patient counseling.

PHAR 733. Pharmacy Systems. 2 Hr. PR: Third-year professional standing or Consent. Basic principles of financial management as they apply to the day-to-day operations in pharmacy systems present in institutional, community, long-term care facilities and other pharmacy venues.

PHAR 734. Pharmacy Law and Ethics. 3 Hr. PR: First professional year standing or Consent. The legal and ethical basis of pharmacy practice. Students learn about federal and state statutes, rules, and regulations that affect pharmacy practice. Ethics related situations that can arise during pharmacy practice will also be discussed.

PHAR 735. Pharmaceutical Care Lab 5. 1 Hr. PR: PHAR 724. Continuation of PHAR 724.

PHAR 736. Pharmaceutical Care Lab 6. 1 Hr. PR: Third-year professional standing or Consent. Experience in pharmaceutical compounding, patient assessment and monitoring, professional/ethical decision making, pharmacokinetic dosing of medications, and prevention of adverse drug-related events and medication errors.

PHAR 737. Disease Prevention Health Promotion. 2 Hr. PR: Third-year professional standing or Consent. This course exposes pharmacy students to pharmacoepidemiology and public health. Instruction focuses on pharmacists as integral to preventing and detecting disease and promoting community health. Emphasis is given to rural health care and Appalachian culture.

PHAR 738. Outcomes Assessment and Quality Improvement. 2 Hr. PR: Third professional year standing or Consent. Outcomes assessment and quality improvement will expose students to the development and implementation of formularies, drug use evaluations, outcomes assessment, and quality improvement. Emphasis will be placed on how these issues relate to pharmaceutical services.

PHAR 739. Therapeutic Patient Monitoring. 3 Hr. PR: Third professional year standing or Consent. Employs both didactic and experiential instruction to provide students with the knowledge and skills required to assess the health status of medicated patients with special emphasis on monitoring therapeutic endpoints.
PHAR 740. Pathophysiology/Therapeutics 4. 4 Hr. PR: PHAR 730 or Consent. A continuation of PHAR 730.

PHAR 741. Clinical Pharmacokinetics. 3 Hr. PR: PHAR 731 or Consent. This course will review advanced concepts in pharmacokinetics and cover the basic pharmacokinetic properties of commonly used drugs and apply these principles to drug dosing, patient management, and rational therapeutic drug monitoring.

PHAR 742. Pharmacy Practice Experience 5. 1 Hr. PR: Third professional year standing or Consent. Provides experiential learning in an acute or ambulatory care pharmacy practice setting. Fifth course in a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 746. Pharmacy Practice Experience 6. 1 Hr. PR: PHAR 742 or Consent. Provides experiential learning in an acute or ambulatory care pharmacy practice setting. Sixth course in a six-semester sequence that introduces students to various pharmacy practice settings.

PHAR 747. History of Pharmacy. 2 Hr. Gives the student a deeper appreciation of the background of pharmacy and its development from ancient times to present.

PHAR 749 A-Z. Pharmaceutical Investigations. 2-3 Hr. PR: Consent. Original investigation in pharmaceutics, medical chemistry, pharmacology, pharmaceutical systems and policy, or clinical pharmacy. (Grading may be S/U.)

PHAR 750. Automation and Technology. 2 Hr. PR: Second year professional standing or Consent. Provides an understanding of the newest technology that is available to a pharmacist in a retail or institutional setting. Students will learn to use PowerPoint, and gain experience making presentations and public speaking.

PHAR 751. Geriatrics and Gerontology. 2 Hr. PR: Second or third year pharmacy students. A review of common pharmacotherapeutic and social issues of importance to older adult patients.

PHAR 760. Medicine Rotation 1. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in an acute care setting.

PHAR 761. Medicine Rotation 2. 5 Hr. PR: Fourth year professional standing or Consent. Experience in the delivery of pharmaceutical care in an acute care setting.

PHAR 762. Ambulatory Care Rotation 1. 5 Hr. PR: Fourth year professional standing or Consent. Experience in the delivery of pharmaceutical care in an ambulatory care setting.

PHAR 763. Ambulatory Care Rotation 2. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in an ambulatory care setting.

PHAR 764. Elective Rotation 1. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in a pharmacy practice setting, such as acute care, ambulatory, community, hospital, poison center, drug information, home health, long term care, or research.

PHAR 765. Elective Rotation 2. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in a pharmacy practice setting, such as acute care, ambulatory, community, hospital, poison center, drug information, home health, long term care, or research.

PHAR 766. Elective Rotation 3. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in a pharmacy practice setting, such as acute care, ambulatory, community, hospital, poison center, drug information, home health, long term care, and research.

PHAR 767. Elective Rotation 4. 5 Hr. PR: Forth year professional standing or Consent. Five-week experience in a pharmacy practice setting, such as acute care, ambulatory, community, hospital, poison center, drug information, home health, long term care, and research.
PHAR 768. Elective Rotation 5. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in a pharmacy practice setting, such as acute care, ambulatory, community, hospital, poison center, drug information, home health, long term care, and research.

PHAR 770. Community Rotation 1. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in a community pharmacy setting.

PHAR 771. Community Rotation 2. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in a community pharmacy setting.

PHAR 772. Institutional Rotation 1. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in a health system setting.

PHAR 773. Institutional Rotation 2. 5 Hr. PR: Fourth year professional standing or Consent. Five-week experience in the delivery of pharmaceutical care in a health system setting.

PHAR 775. Advanced Biopharmaceutics. 3 Hr. Concepts of biopharmaceutics and pharmacokinetics in relation to the design and evaluation of dosage forms and determination of rational dosage regimens in health and disease.

PHAR 779. Drugs: Bench to Market. 3 Hr. PR: Graduate standing or permission of instructor. This is an introductory course that describes the process of drug discovery to the development of new forms for therapeutic use. Topics covered include drug design/discovery, pharmacokinetics and dynamics, pharmaceutics and industry pharmacy.

PHAR 780. Introduction to Molecular Modeling. 4 Hr. PR: Graduate standing or permission of instructor. Introduction to molecular modeling describes computational methods for chemical and biological problems and is designed to enable the student to use molecular modeling methods as a research tool in these current or future research activities.

PHAR 781. Drug Metabolism. 3 Hr. PR: Graduate standing or permission of instructor. This course presents a comprehensive review of the field of drug metabolism with an emphasis on the chemistry and enzymology of drug biotransformation, and current methods in drug metabolism research.

PHAR 786. Claims Data Research/Analysis. 3 Hr. PR: PHAR 785. This course presents various topics related to claims data research including common study designs, advantages and limitations, and basic steps to extracting and analyzing claims data.

PHAR 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of pharmacy. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

PHAR 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PHAR 792 A-Z. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

PHAR 793 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PHAR 794 A-Z. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

PHAR 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

PHAR 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.
PHAR 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PHAR 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)

PHAR 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department's Graduate Colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U); colloquium credit may not be counted against credit requirements for master's programs.

**Physical Therapy (PT)**

PT 191. Special Topics. 1-3 hr.

PT 419. Professional Values. 3 Hr. PR: Majors only. Students investigate various professional, ethical, and practice issues through written assignments and class presentations. Students study Appalachian culture and the effects of cultural mores on professional practice.

PT 498. Honors. 1-3 Hr. PR: Students in Honors Program and Consent by the honors director. Independent reading, study, or research.

PT 503. Pediatric Physical Therapy. 2 Hr. Survey of developmental conditions commonly seen in pediatric physical therapy. Includes laboratory practice of evaluation, treatment planning and clinical problem solving.

PT 591. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PT 593. Special Topics. Variable 1- 6 Hr. A study of contemporary topics selected from recent developments in the field.

PT 595. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

PT 690. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of physical therapy. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

PT 691. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PT 693. Special Topics. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

PT 697. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PT 706. Advanced Clinical Anatomy. 5 Hr. This course presents advanced study of clinical applications of gross anatomy to physical therapy practice through lecture and lab. Laboratory includes dissection, computer-based instruction and clinical palpation.

PT 711. Professional Roles 1. 3 Hr. PR: PT 705. Introduction to fundamentals of professional behavior for the physical therapist. Includes units on professionalism, culture, health care ethics, and clinical documentation.

PT 713. Lifespan Functional Movement. 2 Hr. An overview of motor learning including acquisition of developmental patterns, motor control, motor skill acquisition. This course also provides an overview of the effects of normative processes of aging on neuromotor patterns in occupational performance.

PT 715. Evidence Based PT 1. 2 Hr. PR: PT 705. The purpose of this course is to give the student the information needed to begin to apply research findings to individual patients. Research design and methods, ethics, appraisal and evidence-based practice will be emphasized.

PT 716. Kinesiologic Foundations. 4 Hr. PR: Admission to professional program in PT. Functional anatomical correlations and human movement. Statics, biomechanics, dynamics and functional movement analysis. (2 hr. lec., 4 hr. lab.)


PT 720. Clinical Education 1. 1 Hr. Students observe various members of the health care team in practice. Students practice verbal and written communication skills. Course open to PT majors.

PT 723. Developmental Life Tasks. 3 Hr. Life-span human development across cognitive, psychosocial and neuromotor domains with particular emphasis on applications to physical or occupational therapy interventions. Cultural influences in health and illness.

PT 724. Exercise Foundations. 3 Hr. Principles of aerobic and resistance training for rehabilitation populations. Includes laboratory experience in exercise testing and development of exercise programs for therapeutic purposes.

PT 725. Evidence-Based Physical Therapy 2. 3 Hr. PR: PT 705 and PT 715. Continuation of critical thinking and scientific inquiry. Emphasis is on understanding quantitative and qualitative research designs and data analysis.

PT 727. Neurobiologic Foundations. 4 Hr. PR: Enrolled in professional sequence. Basic and clinical applications of neurophysiological basis of physical and occupational therapy practice.

PT 728. Physical Therapy Procedures 1. 4 Hr. Introduction, theoretical basis, and laboratory practice of procedures basic to physical therapy practice.

PT 730. Clinical Education Symposium 1. 1 Hr. PR: PT 720. Coreq: PT 733. Students attend and evaluate case presentations applicable to physical therapy practice, and practice documentation skills. Case topics will coincide with didactic material presented in PT 733.

PT 732. Physical Therapeutic Agents 1. 2 Hr. Theory and practical application of modalities used in physical therapy practice. Therapeutic agents of this course include but are not limited to, hydrotherapy, therapeutic heat and cold, and ultrasound.

PT 733. Cardiopulmonary PT. 3 Hr. Medical lectures on cardiovascular and pulmonary conditions, including surgical and pharmacologic treatments. Course includes topics on stress testing, using of monitoring equipment and evaluation and planning of rehabilitation protocols.
PT 734. Clinical Sciences 2. 2 Hr. PR: PT 714. Introduction to radiology for the physical therapy student. Study includes plain file radiology of the musculoskeletal and cardiopulmonary systems, an overview of advanced imaging techniques, and exposure to tests and intervention treatments performed by radiologists.

PT 738. Physical Therapy Procedures 2. 3 Hr. Theory and clinical application of therapeutic exercise techniques. (Contact: 1 hr. lec. 4 hr. lab.)

PT 740. Clinical Education Symposium 2. 1 Hr. PR: PT 720 and PT 730. Coreq: PT 746. Students evaluate and present patient cases applicable to physical therapy management. Case topics will coincide with didactic material presented in PT 746.

PT 741. Professional Roles 2. 4 Hr. PR: PT 711. Provides information on educational theories and methods for use when working with patients, peers, students, and community members. Students use educational principles to design prevention, screening, and wellness programs for various community agencies.

PT 742. Physical Therapy Agents 2. 2 Hr. PR: Physical therapy majors only; must have successfully completed the required previous coursework in the professional sequence. Continuation of therapeutic physical agents 1. Includes, but is not limited to, practical application and theory in electrotherapeutic modalities used in physical therapy practice. (Contact: 1 hr. lec., 2 hr. lab.)

PT 743. Geriatric Physical Therapy 1. 2 Hr. Students are provided information about medical and psychosocial factors associated with aging. Study of the role of physical therapy in geriatrics, including laboratory practice of common evaluation and treatment procedures. (Contact: 1 hr. lec., 2 hr. lab.)

PT 744. Clinical Sciences 3. 2 Hr. PR: PT 714 and PT 734. Introduction to pharmacology for the physical therapy student. Includes study of pharmacotherapeutics and an overview of selected medications. The emphasis is on clinical application and the therapist’s role as a health care team member.

PT 745. Evidence Based PT 3. 2 Hr. PR: PT 705 and PT 715 and PT 725. Continuation of preparation for critical thinking and clinical decision making. Emphasis is on generating a clinical research proposal and small group learning aimed at utilizing evidence to support clinical judgment in simulated patient cases.

PT 746. Orthopedic Physical Therapy 1. 5 Hr. PR: PT 706 and PT 708 and PT 716. The first of two courses in physical examination of the musculoskeletal system, including mechanisms of injury, differential diagnosis and medical, surgical, and physical therapy interventions for musculoskeletal problems.

PT 750. Clinical Education 2. 2 Hr. PR: PT 720 and PT 730 and PT 740. A four-week, full-time clinical education experience provided in an acute care setting. Students participate in direct patient care opportunities including examination, intervention, and documentation under the direction and supervision of a licensed physical therapist.

PT 754. Clinical Sciences 4. 4 Hr. Introduction to selected topics in clinical medicine basic to physical therapy practice, beginning with an overview of genetics related to disease and medical conditions. Include integumentary, metabolic and endocrine disorders, oncology and rheumatology (Contact: 4 hr. lec.)

PT 755. Evidence Based PT 4. 2 Hr. PR: PT 705 and PT 715 and PT 725 and PT 745. Continuation of preparation for clinical thinking and decision making in the clinic. Emphasis is on autonomous practice. Students will work in small groups in a case-based learning format, utilizing evidence to make clinical decisions.
PT 756. Orthopedic Physical Therapy 2. 3 Hr. PR: PT 706 and PT 708 and PT 716. The second of two courses in physical examination of the musculoskeletal system, including mechanisms of injury, differential diagnosis and medical, surgical, and physical therapy interventions for musculoskeletal problems.

PT 757. Neurologic Physical Therapy 1. 3 Hr. PR: PT 727. Issues related to physical therapy management of patients with neurologic disorders are presented. Through lecture and lab, students learn assessment and intervention for several common problems based on theories of motor control, learning and function.

PT 760. Clinical Education 3. 6 Hr. PR: PT 750. Students practice full-time for 12 weeks under the direction of licensed physical therapists and participate in rural health projects.

PT 761. Professional Roles 3. 3 HR. PR: PT 741. Principles of business and management as they apply to contemporary physical therapy practice. Fiscal management, risk management, marketing, and program improvement are addressed.

PT 762. Health Care Issues in PT. 2 Hr. PR: PT 741. The role of physical therapists as advocates for people with disabilities is discussed. Investigation of community and home barriers is included. Students discuss the roles of and demands on physical therapists in various practice settings.

PT 763. Pediatric Physical Therapy. 3 Hr. Students learn assessment and interventions for a variety of conditions that uniquely affect children. Students will explore current topics that influence pediatric practice. Practical experience sessions include observations in pediatric settings.

PT 768. Prosthetics and Orthotics 1. 3 Hr. Presents biomechanical principles applies to prosthetic and orthotic prescription and fabrication. Student learns how to plan and implement rehabilitation programs for patients that must use orthotic or prosthetic devices. (2 hr. lec.; 1 hr. lab.)

PT 770. Clinical Education Symposium 3. 2 Hr. PR: PT 730 and PT 740. Students prepare oral and written case reports based on their patient care experiences.

PT 780. Clinical Education 4. 8 Hr. PR: PT 720, and PT 750 and PT 760. Students practice full-time for sixteen weeks under the direction and supervision of licensed physical therapists.

PT 781. Advanced Cardiopulmonary PT. 1 Hr. This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of cardiovascular and pulmonary physical therapy.

PT 782. Advanced Integumentary PT. 1 Hr. This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of integumentary physical therapy.

PT 783. Advanced Orthopedic PT. 2 Hr. This course emphasizes knowledge and skills necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of orthopedic physical therapy.

PT 784. Advanced Neurologic PT. 1 Hr. This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and contemporary literature are applied to analysis of patient cases.


PT 792: Directed Study. Variable 1-6 Hr. Directed study, reading, and/or research.
PT 795. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

PT 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or dissertation. (Grading may be S/U.)

Physiology (PSIO)

PSIO 241. Elementary Physiology. 4 Hr. PR: College biology and chemistry, or Consent. (For undergraduate students in paramedical sciences and nursing students on regional campuses.) Systematic presentation of basic concepts.

PSIO 441. Mechanisms of Body Function. 4 Hr. PR: College chemistry, biology, physics, and algebra or graduate status and Consent. A systematic examination of the homostatic functions of the human body with emphasis on the physicochemical mechanisms involved. Pathophysiology and clinical correlations are introduced in relation to normal physiology. (4 hr. lec.)

PSIO 495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.


PSIO 743. Fundamentals of Physiology. 5 Hr. PR: College physics, algebra, chemistry, and Consent. (For dental students and a limited number of full-time graduate students.) Analysis of basic facts and concepts relating to cellular processes, organ systems, and their control.

PSIO 744. Graduate Seminar. 1-3 Hr. PR: Graduate standing and Consent. (Grading may be S/U.)

PSIO 746. Neurophysiology. 1-4 Hr. PR: (MATH 126 or MATH 341) and (PHYS 101 and PHYS 102) or Consent. (For graduate students in the Health Sciences Center’s basic sciences departments and a limited number of regular full-time graduate students.) Properties of excitable tissues (nerve and muscle), synaptic transmission, reflexes and central nervous system function, and behavior. (1-3 hr. lec., 1 hr. conference.)

PSIO 750. Graduate Physiology. 7 Hr. (For graduate students in HSC graduate programs and a limited number of other full-time graduate students.) PR: Consent. Survey of quantitative level of basic concepts and experimental approaches to cellular, endocrine, and neural mechanisms controlling physiological processes.

PSIO 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of physiology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading may be S/U.)

PSIO 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

PSIO 792. Directed Study. 1-6 Hr. Directed study, reading, and/or research.

PSIO 793. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PSIO 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.
PSIO 795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

PSIO 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

PSIO 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PSIO 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student’s reports, thesis, or dissertations. (Grading may be S/U.)

PSIO 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use University’s facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department’s graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)

**Prosthodontics (PROS)**
PROS 688. Advanced Clinical Prosthodontics. 1-6 Hr. Advanced prosthodontic practice in the areas of fixed and removable partial dentures, complete dentures, tempomandibular dysfunction, maxillofacial prosthetics and implant prosthodontics.

PROS 689. Advanced Prosthodontic Theory. 1-6 Hr. Advanced theories and techniques in fixed and removable partial dentures, complete dentures, maxillofacial prothetics, implantology and geriatric prosthodontics to include case presentations, literature surveys and articulator analysis seminars.

**Public Health (PUBH)**
PUBH 501. Advanced Professional Writing. 3 Hr. A review of English syntax and usage in professional writing; constructing and developing ideas; research and writing based on careful reading of author’s instructions, using the APA style manual, using library resources, and academic honesty.

PUBH 536. Worksite Wellness. 3 Hr. Overviews the field of health promotion in a worksite setting, offering a comprehensive introduction. Persons with interest in exploring the possibility of employment in health promotion in a worksite setting will find this course helpful.

PUBH 580. Prevention through Resilience. 3 Hr. The principles of resilience, resiliency theories and current research, resilience and stress and the mind-body implications, recognizing and eliciting resilience and resilient outlooks and behaviors in ourselves and clients, professional and public health implication.

PUBH 581. Rural Gerontology. 3 Hr. This course is designed to provide students with a broad understanding of current research information regarding health and social aspects of rural elderly in the United States. The course consists of lecture and class discussions.

PUBH 586. Public Mental Health. 3 Hr. This course will teach the students the principles, concepts, and methods of general epidemiology, and how to apply them to the study of the distribution and causes of mental disorders in populations.

PUBH 595. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.
PUBH 601. Introduction to Community/Public Health. 3 Hr. An introduction to the field of community/public health with an emphasis on the relationship and role of public health to other disciplines in resolving public health problems.

PUBH 605. International Public Health. 4 Hr. This course identifies and explores major global issues in public health including infectious diseases, malnutrition, famine, and water sanitation. Approaches for devising solutions to these problems in developing countries will be explored.

PUBH 611. Applied Biostatistics for Health. 3 Hr. Statistical models, distributions, probability, random variables, tests of hypotheses, confidence intervals, regression, correlation, transformations, F and Chi-square distributions, analysis of variance and multiple comparisons. For students in the MPH and CHPR programs.

PUBH 615. Nutrition/Chronic Disease Prevention. 3 Hr. This course addresses the role of nutrition and food components in primary, secondary, and tertiary disease prevention. Through cooperative learning, students will practice critical thinking skills in the study of nutrition in chronic disease prevention.

PUBH 617. Ethical/Legal Issues in Public Health. 3 Hr. This course provides an opportunity for sustained reflection on the many ethical and legal issues involved in public health. Ethical and legal frameworks will be identified and applied to the analysis of critical issues.

PUBH 618. Health Services/Outcomes Research Methods. 3 Hr. This course covers the key issues facing the health care system today and teaches the basic skills needed to evaluate health care programs addressing these issues.

PUBH 619. Issues in Men’s Health. 3 Hr. Men are markedly at risk for specific health problems and complications. This course will provide skills for students to research and develop educational programs to improve health and well-being of men.

PUBH 620. Women and Violence. 3 Hr. This course examines the issue of violence in the lives across the lifespan and from a socio-cultural perspective. Implications for health concerns and educational interventions will be addressed.

PUBH 621. Issues in Women’s Health. 3 Hr. This course examines a broad array of health issues and causes of illness that shape and define women’s access and understanding of health concerns across the lifespan, which includes examination of cultural diversity.

PUBH 623. Public Health Disaster Response. 3 Hr. This course addresses the basics of how public health practitioners respond to disasters, develop response protocols and reform as skillful leaders in the 21st century.

PUBH 628. Aging Women & Culture Issues. 3 Hr. This course will use a multi-disciplinary approach to examine the impact of gender, race/ethnicity, and culture on aging and the aging population.

PUBH 629. Survey Methods. 3 Hr. This course presents scientific knowledge and practical skills used in survey research. Focus is on question construction and development, questionnaire design, sampling and survey modes, interviewing techniques, and survey data analysis.

PUBH 630. Policy and The Health System. 3 Hr. Overview and analysis of the development of health-related public policy in the United States, with particular emphasis on aging populations, policy development, process, and implementation on the state and national levels.

PUBH 645. Fundamentals of Gerontology. 3 Hr. This course introduces students to a broad spectrum of topics and issues related to aging by drawing upon several core disciplines and their contributions to the corpus of gerontological knowledge and research.
PUBH 646. Public Policy of Aging. 3 Hr. Analysis of major policy and public programs for older adults, including Medicaid, Medicare, Social Security and the Older Americans Act. A major emphasis is placed on programs in West Virginia.

PUBH 650. Environmental Health. 3 Hr. A review of issues illustrating the responsibilities and roles of the public health work force in identifying, managing, and preventing casualties from environmental causes in air, water, soil, food, pesticides, and related subjects. Problems are illustrated using policy dilemmas facing West Virginia.

PUBH 660. Public Health Epidemiology. 3 Hr. Examines mortality and morbidity trends, disease and injury models, data sources classification, measures of frequency and association, research design, casual assessment, data interpretation, and screening from an epidemiological perspective.

PUBH 661. Advanced Epidemiology. 3 Hr. PR: PUBH 611 and PUBH 660 CON. Causality and threats to validity in epidemiologic research are presented, focusing on assessment and control of bias, including selection bias, information bias and confounding. Assessment and control of effect modification (interaction) are included.

PUBH 665. Work Site Evaluation. 2 Hr. Students are introduced to health and safety hazards associated with industrial operations through in-plan inspections, interaction with plant medicinal and safety staff and in class discussions.

PUBH 679. Public Health Seminar. 1 Hr. Students are given opportunities to synthesize information about latest developments within the field of public health through dialogue.

PUBH 680. Health-Based Leadership. 3 Hr. PR: CHPR 635 or equivalent. Gain personal understanding, knowledge, and growth in the human dimensions of leadership: developing rapport, trust, teamwork, and mentoring; managing tone and facilitating “problem” situations; evaluating systems and leading system change; articulating vision, mission and strategy.

PUBH 686. Occupational Medicine Practicum. 5 Hr. This course provides occupation medicine residents with the opportunity to develop practical skills and professional competencies by applying the knowledge and techniques gained from their MPH and occupational medicine coursework to public health practice.

PUBH 687. Practicum Proposal. 2 Hr. PR: PUBH 611 and PUBH 630 and PUBH 650 and PUBH 660 and (PUBH 691E or CHPR 634). A structured, faculty-supported process for developing a proposal for the 300-hour practice and theory based practicum.

PUBH 688. MPH Practicum Report. 3 Hr. PR: PUBH 611 and PUBH 630 and PUBH 650 and PUBH 660 and PUBH 687 and PUBH 689 and (PUBH 691E or CHPR 634). Provides students with the opportunity to report the results of their practicum projects to others via a professional paper and presentation.

PUBH 689. Practicum. 3 Hr. PR: PUBH 611 and PUBH 630 and PUBH 650 and PUBH 660 and PUBH 687 and CHPR 612 and (PUBH 691E or CHPR 634). Implementation of the practicum proposal; a planned, supervised, and evaluated public health-oriented experience encompassing 300 hours of activity reflecting public health practice and theory. Students are required to take three credit hours of the practicum but may spread credits among semesters.

PUBH 691 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PUBH 693 A-Z. Special Topics. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

PUBH 695. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
PUBH 701. Qualitative Research Methods. 3 Hr. Application of qualitative research methods to public health issues. Students will learn about theory of public health qualitative research methodology, hypothesis generation, data collection, preparation, analysis, reporting and conclusion.

PUBH 702. Public Health Program Evaluation. 3 Hr. Application of scientific public health program evaluation methods. Students will learn about theory and methods of program evaluation, identification of stakeholders, data collection, preparation, analysis, reporting and conclusion.

PUBH 703. Social and Behavioral Measurement. 3 Hr. Theory and development of effective tools for measuring social and behavioral public health phenomena. Students will learn how to find, construct and analyze effective social and behavioral measurement instruments.

PUBH 704. Mortality and Survival. 3 Hr. PR: PUBH 660 or equivalent, and basic proficiency in Excel. Life table and other population-based techniques and approaches to studying international and oceanographic patterns and differentials in mortality, morbidity, and disability.

PUBH 705. Injury Control Research Methods. 3 Hr. PR: PUBH 660 or equivalent and PUBH 611 or equivalent. Evidence-based approach to increasing the knowledge and methodological skills necessary for basic injury (unintentional and intentional) control research.

PUBH 706. Current Research Issues. 2 Hr. The purpose of this course is to utilize research-based discussions to stimulate a unique information gathering environment of current research and investigation.

PUBH 707. Applied Multivariable Stats. 3 Hr. Basic theory and application of survival analysis, multivariate analysis of variance (MANOVA) and exploratory factor analysis.

PUBH 766. Medical Toxicology. 2 Hr. This course introduces healthcare providers to the clinical aspects of toxicology, including the evaluation and treatment of individuals and populations with potential toxic exposures.

PUBH 790. Teaching Practicum. 1-3 Hr. PR: Consent. Supervised practice in college teaching of public health. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.)

PUBH 791 A-Z. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PUBH 794. Seminar. 1-6 Hr. Seminars arranged for advanced graduate students.

PUBH 796. Graduate Seminar. 1 Hr. PR: Consent. It is anticipated that each graduate student will present at least one seminar to the assembled faculty and graduate student body of his/her program.

PUBH 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

PUBH 798. Dissertation. 2-4 Hr. PR: Consent. Note: This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their student's reports, thesis, or dissertations. (Grading may be S/U.)
Surgery (SURG)
SURG 741. Clinical Clerkship in Surgery. (Third year.) PR: Required of third-year medical students. Clinical clerks are assigned responsibility for hospitalized surgical patients under supervision of house staff and attending surgeons. Students are an integral part of the team providing diagnostic and treatment services and are expected to take histories, perform physical examinations, and participate in ward and laboratory procedures. A course of surgical lectures, designed to outline surgical core curriculum, is given concurrently. The student is expected to attend the daily rounds and conferences arranged by the department.

SURG 791. Advanced Topics. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

SURG 797. Research. 1-15 Hr. PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.)

SURG 799. Graduate Colloquium. 1-6 Hr. PR: Consent. For graduate students not seeking coursework credit but who wish to meet residence requirements, use the University’s facilities and participate in its academic and cultural programs. Note: Graduate students not actively involved in coursework or research are entitled, through enrollment in his/her department’s graduate colloquium, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his/her program, and retain all of the rights and privileges of duly enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master’s programs.)
Health Sciences Faculty

School of Dentistry
Angel Beth Armstead, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Michael D. Bagby, D.D.S. (Loyola U.). Interim Chair, Professor, Restorative Dentistry.
Perry A. Barr, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Aaron Bloom, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Stewart Bloom, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Jerry Bondu rant, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
James G. Bryant, D.M.D. (U. Ky.). Clinical Assistant Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
Carol Buffington, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Mark A. Byron, D.D.S. (WVU). Clinical Assistant Professor, Endodontics.
Robert Campbell, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
John A. Capriolo, D.D.S. (U of Md.). Clinical Assistant Professor, Dental Practice and Rural Health.
Bruce Cassis, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Eros S. Chaves, D.M.D. (U. Pitt.). Associate Professor, Periodontics.
Tammy Chipp, D.D.S.(WVU). Clinical Assistant Professor, Periodontics.
Kevin Conde, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Catherine Connor, D.D.S. (WVU). Clinical Assistant Professor, Endodontics.
Dentistry.
Richard J. Crout, D.M.D., Ph.D. (U. Pitt.). Associate Dean of Research. Professor, Periodontics.
Christina B. DeBiase, Ed.D. (WVU). Associate Dean for Academic and Postdoctoral Affairs, Professor, Dental Hygiene.
John H. Dempsey, D.D.S. (U. of Md.). Clinical Associate Professor, Orthodontics.
Mary Kay Doersch, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Brian Dorsey, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Bryan D. Dye, D.D.S. (WVU). Interim Co-Chair, Assistant Professor, Restorative Dentistry.
Amy Everett, D.D.S. (WVU). Clinical Associate Professor, Dental Practice and Rural Health.
Sister Mary Rebecca Fidler, R.S.M., Ph.D., M.T. (ASCP), (U. of Iowa). Adjunct Professor, Orthodontics.
Leo Fleckenstein, D.D.S. (St. Louis U.). Clinical Assistant Professor, Dental Practice and Rural Health.
Cathryn Frere, M.S. (U.S.C.). Assistant Professor, Dental Hygiene.
Stephanie Frisbee, M.SC. (U. of Guelph, Ontario). Clinical Assistant Professor, Dental Practice and Rural Health.
Amy Funk, R.D.H., B.S., M.S. (WVU). Interim Director, Assistant Professor, Dental Hygiene.
M. Suann Gaydos, B.S., M.S. (WVU). Assistant Professor, Dental Hygiene.
Steven Ghareeb, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Jeffrey Gilmore, D.D.S. (Ohio St. U.). Clinical Assistant Professor, Orthodontics.
Catherine E. Graves, M.S. (WVU). Professor Emeritus, Dental Hygiene.
Joseph D. Hancock, D.D.S. (WVU). Clinical Associate Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
Robert Harris, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Steven B. Hatcher, D.D.S. (WVU). Clinical Assistant Professor, Restorative Dentistry.
Carrie E. Hazey, D.D.S. (WVU). Clinical Assistant Professor, Pediatric Dentistry.
Tara Hilleary, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
C. Russell Jackson, D.D.S. (WVU). Associate Professor and Chair, Endodontics.
Thomas Jarrett, D.D.S. (WVU). Clinical Assistant Professor, Orthodontics.
Elizabeth C. Kao, D.M.D. (U. Penn.). Professor, Restorative Dentistry.
Mark Kilcollin, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Kerry Kirsch, D.D.S. (WVU). Clinical Assistant Professor, Orthodontics.
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Thomas Leslie, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Kevin Lewis, D.D.S. (WVU). Clinical Associate Professor, Dental Practice and Rural Health.
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Scott Little, D.D.S. (Ohio St. U.). Clinical Assistant Professor, Orthodontics.
Chris Martin, D.D.S. (WVU). Assistant Professor, Orthodontics.
Frank Mastalerz, Jr., D.D.S. (WVU). Clinical Assistant Professor, Restorative Dentistry.
Peter McCutcheon, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
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Edward McFarland, D.M.D., M.S.D. (U. of Pitt.). Clinical Associate Professor, Orthodontics.
Donald McLaurin, D.D.S., M.D. (Baylor, LSU). Clinical Assistant Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.

Daniel W. McNeil, Ph.D. (U. Ala.). Clinical Associate Professor, Dental Practice and Rural Health.
Michael Meador, D.D.S. (WVU). Assistant Professor, Restorative Dentistry.
Thomas Morgan, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
Janice Reid Morris, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
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Allen Parker, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
John W. Perrine, D.D.S. (WVU). Clinical Associate Professor, Dental Practice and Rural Health.
Health.


William F. Queen, D.D.S. (WVU). Clinical Associate Professor, Restorative Dentistry.

Thomas F. Razmus, D.D.S. (U. Mich.). Professor and Chair, Diagnostic Sciences.


Robert Richardson, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.


Michael Romeo, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.


Helen Dee Rymer, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.


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School of Medicine
Jame Abraham, M.B.B.S. (India). Associate Professor, Section Chief Department of Medicine.
Rachel Abraham, M.D. (U. of Bagalore). Assistant Professor, Community Medicine.
Yehnewen Mekonnen Agazie, Ph.D. (U. of Saskatchewan). Associate Professor, Biochemistry.
Ariel Agmon, Ph.D. (Stanford U.). Associate Professor, Anatomy.
Melissa Ahern, Ph.D. (Wash. St. U.). Research Associate Professor, Community Medicine.
Ehab Akkary, M.D. (Egypt). Assistant Professor, Surgery.
Melissa Ann Albert, M.D. (WVU). Assistant Professor, Behavioral Medicine and Psychiatry.
Dennis W. Allen, M.D. (WVU). Assistant Professor, Anesthesiology.
Gregory William Allen, M.D. (U. of Md.). Assistant Professor, Assistant Medical Director Emergency Medicine, Jefferson Memorial.
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Ramin Altaha, M.D. (U. of Hamburg). Assistant Professor, Department of Medicine.
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John Franklin Brick, M.D. (WVU). Professor, Chairperson Neurology. 
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Claudette E. Brooks, M.D. (Dominica). Assistant Professor, Neurology. 
David K. Brown, Ph.D. (WVU). Professor, Associate Director/Center on Aging Community Medicine. 
Janna Brown, M.D. (WVU). Assistant Professor, Pediatrics. 
Matthew D. Brunner, M.D. (WVU). Assistant Professor, Pediatrics. 
Nancy E. Brunner, M.D. (WVU). Assistant Professor, Pediatrics. 
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Fred R. Butcher, Ph.D. (Ohio St. U.). Professor, Vice President for Planning and Operations, HSC. 
Silvia Cardenas, M.D. (Cayetano Heredia U.). Assistant Professor, Pediatrics. 
Marissa Carey, Ph.D. (Drexel U.). Assistant Professor, Behavioral Medicine and Psychiatry. 
Jeffrey S. Carpenter, M.D. (WVU). Associate Professor, Radiology. 
William H. Carter, M.D. (U. of Va.). Professor, Department of Medicine, Charleston. 
Riaz S. Cassim, M.D. (AgaKhan U. SOM). Assistant Professor, Surgery. 
John Casuccio, M.D. (OSU). Assistant Professor, Surgery. 
Glenna Anne Cather, M.D. (WVU). Professor, Associate Dean. Student Services Family Medicine. 
Lena A. Cebone, M.S.N. (Yale). Instructor, Obstetrics Gynecology. 
William Wei-Lien Chang, M.D. (Taiwan Coll. of Med.). Adjunct Professor, Pathology. 
David Paul Chantler, Ph.D. (Liverpool U, UK). Assistant Professor Human Performance (Exercise Physiology). 
Judi Fern Charlton, M.D. (WVU). Professor, Ophthalmology. 
Nyles William Charon, Ph.D. (U. of Minn-Twin City). Professor, Microbiology. 
Allen R. Chauvenet, M.D. (U. of Fla.). Professor, Department of Medicine, Charleston. 
Patty Chaverra-Catania, Ph.D. (Weston—Sharpe State). Assistant Professor, Behavioral Medicine and Psychiatry, Weston—Sharpe State. 
Lakshmapathi Chelluri, M.B.B.S. (India). Professor, Department of Medicine, Charleston. 
Robert Chetlin, M.S. (WVU). Associate Professor, Human Performance (Occupational Therapy). 
Elliott Wolf Chideckel, M.D. (U. of Md.). Professor, Department of Medicine. 
Ann S. Chinnis, M.D. (Eastern Va.). Professor, Associate Dean—Clinical Informatics Emergency Medicine.
Lionel Chisholm, M.D. (U. of Toronto). Professor, Ophthalmology.
Robert Edward Cicchino, D.O. (WV Sch. of Osteo.). Assistant Professor, Surgery, Harpers Ferry.
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Melanie Jean Clemmer, Ph.D. (WVU). Assistant Professor, Obstetrics Gynecology.
Holly Ann Cloonan, Ph.D. (Purdue U.). Associate Professor, Behavioral Medicine and Psychiatry, Charleston.
James E. Coad, M.D. (U. of Minn.). Professor, Section Chief Pathology.
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