

West Virginia University Health Sciences Catalog 2004-2006

School of Dentistry
School of Medicine
School of Nursing
School of Pharmacy



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 2004-2006* 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, 2004.

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West Virginia University Calendar

2004-2005*

Fall Semester 2004

August 18-20	New Student Orientation
August 20	General Registration
August 20	Summer II - Degree Conferring Date (No Ceremonies)
August 23	First Day of Classes
August 23	Late Registration Fee In Effect for All Students
August 27	Last Day to Register
September 6	Labor Day - RECESS
September 16	Rosh Hashanah (Day of Special Concern)
September 25	Yom Kippur (Day of Special Concern)
October 8	Mid-Semester
October 12	Mid-Semester Reports Due
October 29	Last Day to Drop a Class
November 2	Election Day - RECESS
November 20-28	Thanksgiving RECESS
December 9	Last day to Withdraw from University
December 10	Last Day of Classes
December 12	December Convocation
December 13-18	Final Exams
December 19-January 10	Winter Break
December 29	Degree Conferring Date (No Ceremonies)

Spring Semester 2005

January 5-7	New Student Orientation
January 7	General Registration
January 10	First Day of Classes
January 10	Late Registration Fee In Effect for All Students
January 10, 2005	Last Day to Register
January 17	Martin Luther King's Birthday - RECESS
February 7	West Virginia University Day
February 25	Mid-Semester
March 1	Mid-Semester Reports Due
March 12-20	Spring RECESS
March 25	Last Day to Drop a Class
March 25	Friday Before Easter
April 24	Passover (Day of Special Concern)
April 28	Last Day to Withdraw from University
April 29	Last Day of Classes
May 2-7	Final Examination Week
May 9	Grade Reports for all Graduates Due in Dean's Office
May 11	Dean's Reports on Graduates Due in ARC
May 14	Alumni Day
May 15	Commencement

Summer Session I 2005

May 23	Summer I Registration
May 23	First Day of Classes
May 25	Late Registration Fee In Effect for First Six-Week Session
May 27	Last Day to Register for First Six-Week Session and Last Day to Add Courses or Make Section Changes in First Six-Week Session
May 30	Last Day to Drop a Class for First Six-Week Session
June 17	Last Day to Withdraw for First Six-Week Session
June 29	Last Day to Withdraw for First Six-Week Session
June 30	Last Day of Classes for First Six-Week Session
June 30	Final Exam for First Six-Weeks Session

Summer Session II 2005

July 5	Registration
July 5	First Day of Classes
July 7	Late Registration Fee In Effect for Second Six-Week Session
July 11	Last day to Register for Second Six-Week Session and Last Day to Add Courses or Make Section Changes in a Second Six-Week Session
July 29	Last Day to Drop a Class for Second Six-Week Session
August 10	Last Day to Withdraw for Second Six-Week Session
August 11	Last Day of Classes for Second Six-Week Session
August 11	Final Exam For Second Six-Week Session
August 19	Degree Conferring Date (No Ceremonies)

*See <http://calendar.wvu.edu/> for the 2005-2006 calendar.

Contents

Calendar	2
West Virginia Higher Education Governance	4
Frequently Contacted Offices	5
West Virginia University Administration	6
WVU Health Sciences Administration	7
General Information	8
Health Sciences at West Virginia University	8
The Mission of West Virginia University	8
The Range of University Activity	8
Clinical Education Facilities	8
Health Sciences Library	9
University Health Service	9
Commitment to Social Justice	10
Government and Organization of WVU	10
Academic Information	11
Health Sciences Degree Programs	11
Undergraduate and Professional Programs	11
Graduate Admission and Policies	37
Fees	44
Residency Policy	48
School of Dentistry	51
Dental Hygiene	53
Endodontics	58
Orthodontics	59
Prosthodontics	59
Doctor of Dental Surgery	60
School of Medicine	65
Biochemistry and Molecular Pharmacology	67
Community Medicine	69
Community Health Promotion	69
Public Health	70
Human Performance and Applied Exercise Science	72
Exercise Physiology	72
Occupational Therapy	86
Physical Therapy	90
Medical Technology	92
Medicine (Doctor of Medicine)	95
Microbiology, Immunology, and Cell Biology	102
Neurobiology and Anatomy	104
Pharmacology and Toxicology	106
Physiology and Pharmacology	106
School of Nursing	109
Undergraduate Program	110
Graduate Programs	115
School of Pharmacy	122
Entry-Level Doctor of Pharmacy	123
Pharmaceutical Sciences	128
Courses	130
Faculty	159
Index	181

West Virginia Higher Education Governance*

Robert E. Wise Jr., *Governor*

West Virginia Higher Education Policy Commission
J. Michael Mullen, *Chancellor*

J. Thomas Jones, *Morgantown, Chair*
Mary Clare Eros, Esq., *Shepherdstown, Vice Chair*
Elliot G. Hicks, Esq., *Charleston, Secretary*
Michael S. Garrison, *Fairmont*
Richard Ken Hall, *Charleston*
John R. Hoblitzell, Esq., *Charleston*
Terry R. Sammons, Esq., *Gilbert*
Kathleen H. Goodwin, *Charleston, Secretary of Education and the Arts*
David L. Stewart, *Charleston, Superintendent of Schools*

West Virginia University Board of Governors

Curtis H. Barnette, *Bethlehem, Pa., Chair*
Elizabeth E. Chilton, *Charleston*
Paul E. Gates, *Bronx, NY*
Stephen P. Goodwin, *Charleston*
Russell L. Isaacs, *Cottageville*
Terry T. Jones, *Morgantown*
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Douglas J. Leech, *Morgantown, Vice Chair*
T. Joseph Lopes, *Arlington, VA, Secretary*
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Michael J. Vetere Jr., *Morgantown*
Paul R. Martinelli, *Morgantown, Classified Staff Representative*
Christopher Wilkinson, *Faculty Representative*
Charles Battleson, *Student Representative*

*Current as of March, 2004.

West Virginia University is governed by the West Virginia Higher Education Policy Commission and the WVU Board of Governors.

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.

Frequently Contacted Offices

Admissions and Records

Office of Admissions and Records
West Virginia University Health Sciences Center
1170 HSCN
P.O. Box 9815
Morgantown, WV 26506-9815
Phone: (304) 293-3521
Fax: (304) 293-7968
www.arc.wvu.edu

Financial Aid

Office of Financial Aid
West Virginia University Health Sciences Center
G-111 HSCN
P.O. Box 9810
Morgantown, WV 26506-9810
Phone: (304) 293-3706
Fax: (304) 293-6861
www.hsc.wvu.edu/fin

Graduate Programs

Office of Research and Graduate Studies
West Virginia University Health Sciences Center
2271 HSCS
P.O. Box 9024
Morgantown, WV 26506-9024
Phone: (304) 293-7116
Fax: (304) 293-7038
www.hsc.wvu.edu

Housing and University Apartments

West Virginia University
P.O. Box 6430
Morgantown, WV 26506-6430
Phone: (304) 293-4491
Fax: (304) 293-4825
www.wvu.edu/prospective

West Virginia University Administration

Senior Administrators

President, David C. Hardesty Jr.

Provost and Vice President for Academic Affairs and Research, Gerald E. Lang

Chief of Staff, Margaret Phillips

Vice President, Administration, Finance, and Human Resources, Scott C. Kelley

Vice President, Institutional Advancement and Executive Officer for Communications,
Christine M. Martin

Vice President, Health Sciences, and Dean, School of Medicine, Robert M. D'Alessandri

Vice President, Student Affairs, Kenneth D. Gray

Vice President for Research and Economic Development, John D. Weete

Regional Vice President and President of WVU Potomac State College, Kerry Odell (*Interim*)

Regional Vice President and President of WVU Institute of Technology, Karen R. LaRoe

Regional Vice President and President of WVU at Parkersburg, Joseph Badgeley (*Interim*)

General Counsel, Thomas Dorer

Executive Officer for Social Justice, Jennifer A. McIntosh

Associate Provost, Russell K. Dean

Associate Provost for Extension and Public Service, Lawrence S. Cote

Associate Provost for Information Technology, Sydney Morrison (*Interim*)

Associate Vice President for Finance, Gary Rogers

Associate Vice President for Student Affairs, Finance, Amir H. Mohammadi

Sr. Associate Vice President for Health Sciences, Fred Butcher

Associate Vice President of Finance, Health Sciences, James K. Hackett

Special Assistant to the President and Provost, Virginia J. Petersen

Executive Assistant to the President, Sara A. Master

Special Assistant to the President, David Miller

Deans

College of Business and Economics, Jay Coats

College of Creative Arts, Bernard Schultz

College of Engineering and Mineral Resources, Eugene V. Cilento

College of Human Resources and Education, Anne Nardi

College of Law, John W. Fisher III

Davis College of Agriculture, Forestry, and Consumer Sciences/Agricultural and Forestry
Experiment Station, Cameron R. Hackney

Dean of Students, David Stewart

Eberly College of Arts and Sciences, M. Duane Nellis

Extended Learning, Sue Day-Perroots

Perley Isaac Reed School of Journalism, Christine Martin

School of Dentistry, James J. Koelbl

School of Medicine, Robert M. D'Alessandri

School of Nursing, E. Jane Martin

School of Pharmacy, George R. Spratto

School of Physical Education, Dana D. Brooks

University Libraries, Frances O'Brien

WVU Health Sciences Administration

Vice President for Health Sciences, Robert M. D'Alessandri, M.D.
Senior Associate Vice President, Fred R. Butcher, Ph.D.
Associate Vice President for Health Sciences, W. Robert Biddington, D.D.S.
Associate Vice President for Research and Graduate Education, Thomas M. Saba, Ph.D.
Associate Vice President for Finance and Administration, James K. Hackett, M.B.A.
Associate Vice President for Rural Health, Hilda Heady, M.S.W.
Interim Associate Vice President for Health Sciences, Charleston, Norman D. Ferrari III, M.D.
Dean, School of Dentistry, James Koelbl, D.D.S., M.S., M.J.
Dean, School of Medicine, Robert M. D'Alessandri, M.D.
Dean, School of Nursing, E. Jane Martin, Ph.D.
Dean, School of Pharmacy, George R. Spratto, Ph.D.
Vice President for Strategic Program Development, 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, Bernard G. Westfall, M.B.A.
Associate Vice President, University Health Associates, Timothy J. Palencik
Assistant Vice President, Ann Chester, Ph.D.
Director of Communications, John T. Coughlin
Director, Budget and Financial Operations–Health Sciences Center, Daniel Durbin
Special Assistant to the Vice President, Harold H. Harper, M.S.
Assistant to the Vice President, Darold E. Blehschmidt
Director, Maintenance Engineering, Gary B. Miller
Interim Director, Health Sciences Library, Terry Burton
Director, Information Systems Operations, Laura Roth
Director, Academic Technologies, Amir Ramazen

General Information

Health Sciences at West Virginia University

West Virginia University's Schools of Dentistry, Medicine, Nursing, and Pharmacy at the Health Sciences Center offer a comprehensive range of undergraduate, graduate, and professional degrees in health care and biosciences. The 28 degree programs offered by the Health Sciences Center provide West Virginia with a strong group of professionals prepared to meet the varied health care needs of the state. The thousands of alumni of WVU Health Sciences Center programs include about one-third of the state's practicing physicians, two-thirds of its dentists, three-quarters of its pharmacists, and hundreds of nurses, medical and dental technologists, physical therapists, and other health professionals.

A unique combination of state and federal support, charitable contributions from individuals and foundations, and investments by private corporations has allowed the Health Sciences Center to build an unequalled environment for health education. The Health Sciences Center includes hospitals, a cancer center, an eye institute, and medical and dental offices. All were built since 1986 and were designed to meet the needs of patient care, education, and clinical research. The WVU Health Sciences Center also includes medical divisions in Charleston and the Eastern Panhandle and relationships with hospitals and physicians in rural areas of the state. These facilities offer students the opportunity to learn their profession in a setting that realistically reflects the conditions they will encounter after graduation.

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.

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 budget in excess of \$565 million.

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, 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, over 1,400 current serial subscriptions, and health-related government documents. The library offers electronic access to biomedical literature through the Internet and a few locally mounted databases. MEDLINE (PubMed) and other National Library of Medicine databases, CINAHL (Nursing and Allied Health), Science Citation Index, International Pharmaceutical Abstracts (IPA), MD Consult, HAPI (Health and Psychosocial Instruments), Health Source: Nursing Academic Edition, Health Source Consumer Edition, Sport Discus, CancerLit, the Cochrane Library, and numerous other electronic resources are available. The Health Sciences Library now provides access to over 500 electronic journals.

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.

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

University Health Service

The Health Service Fee allows students primary medical care provided by the University Health Service. The service, located on the ground floor of Health Science South, includes general medical consultation and treatment, gynecology, STD evaluation and treatment, allergy injections, psychiatry, physical therapy evaluations, basic laboratory and x-ray tests, and drug and alcohol counseling. To use these services, students must present a current student ID and pay a co-payment. Also available with additional charges are family planning

and birth control, immunizations, and travel consultation and vaccinations. Appointments can be made by calling (304) 293-2311.

If specialized care is required, the Health Service may refer students to an outpatient clinic at the Physician Office Center. In this case, the student is responsible for registration fees, doctor's fees, x-ray or lab fees, etc. The University Health Service publishes a brochure that details the services included in the health service fee and outlines services that are not provided.

The emergency department is available to students when the University Health Service is closed. However, all costs incurred at the emergency department are the student's responsibility. Since most insurance policies cover emergency department costs only when a true emergency exists, we advise students to use this service responsibly and maturely. An insurance plan is available to cover inpatient and outpatient services beyond the primary care covered by the health fee. Students are urged to purchase this or a similar coverage as all students of the Health Sciences Center *must* have health insurance.

Commitment to Social Justice

WVU's role as the doctoral degree-granting, research, land-grant university in the state of West Virginia 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, gays, lesbians, and bisexuals, veterans, and persons of different religions, sexual orientation, ages, and international, ethnic, and economic backgrounds benefit from the many opportunities the institution provides.

In keeping with this responsibility, the 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.

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 the enhancing of its ability to accomplish the mission with which it has been entrusted by the people and the state of West Virginia.

Government and Organization of WVU

Effective July 1, 2001, the West Virginia Board of Governors was vested by law with the authority to control and manage of the University. The board includes twelve members, one faculty member, 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. Each senator represents twenty members of the University faculty. The senate is presided over by an elected chair.

Three faculty members serve on the Vice Presidents' Advisory Committee for Promotion and Tenure. The president meets regularly with the 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 that 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.

Academic Information

Health Sciences Degree Programs

Program	Bachelor's	Master's	Doctoral/ Professional
School of Dentistry			
Dental Hygiene	B.S.	M.S.	
Dentistry			D.D.S.
Dental Specialties		M.S.	
School of Medicine			
Anatomy		M.S.	Ph.D.
Biochemistry (Medical)		M.S.	Ph.D.
Community Health Promotion		M.S.	
Exercise Physiology	B.S.	M.S.	Ph.D.
Medical Technology	B.S.		
Medicine		M.D.	
Microbiology and Immunology		M.S.	Ph.D.
Occupational Therapy		M.O.T.	
Pharmacology and Toxicology		M.S.	Ph.D.
Physical Therapy		M.P.T.	
Physiology (Medical)		M.S.	Ph.D.
Public Health		M.P.H.	
School of Nursing			
Nursing	B.S.N.	M.S.N.	D.S.N.
School of Pharmacy			
Pharmaceutical Sciences		M.S.	Ph.D.
Pharmacy			Pharm.D.

Undergraduate and Professional Programs

Admission

To apply for admission to the various schools of the Health Sciences Center, write to Admissions and Records, 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, transfer, 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 the Schools of Dentistry and Medicine are \$50. The Pharm.D. application fee is \$50. Application fees for all other Health Sciences Center programs are \$25 for residents and \$40 for non-residents. Application fees must accompany application forms.

When accepted into one of our programs, students are asked to deposit \$100 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 postmarked by May 1 for fall admission and December 1 for spring admission. Deposit amount and dates for written requests for refunds 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. Furthermore, students must provide the Office of Admissions and Records written proof of approval from both colleges or schools.

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 and Records.

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.

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 director of Admissions and Records. 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 have 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 Liberal Studies Program 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 LSP requirement in each cluster area.

Liberal Studies Program (LSP)

WVU recognizes the need for students to have a wide range of knowledge and experience to complement their chosen field of study. The LSP serves this purpose and is based on the following two principles.

1. In our world of rapid economic, social, and technological change, universities recognize that a broad educational foundation is necessary for the life-long learning that makes meaningful careers and other goals attainable. WVU's approach to this foundation is its Liberal Studies Program, which provides graduates with the skills and knowledge to continue their intellectual growth as a lifelong process. These skills and knowledge include the ability to:
 - Reason clearly.
 - Communicate effectively.
 - Understand major influences in society.
2. General education helps students to become thoughtful participants in a democratic society and to achieve the intellectual integration and awareness they need to meet changes and challenges in their personal, social, political, and professional lives. General education courses introduce the great ideas and controversies in human thought and experience. These courses provide breadth, perspective, and rigor that enable WVU graduates to:
 - Understand the past and its traditions.
 - Identify and resolve issues of personal and professional ethics.
 - Contribute in meaningful ways to their local, national, and global communities.
 - Understand alternative viewpoints and cultures.
 - Accept the assumed responsibility for themselves and their world.
 - Interact constructively with people different from themselves.
 - Understand important issues confronting society.
 - Gain a critical understanding of the arts, sciences, and humanities.
 - Understand an increasingly interdependent world.
 - Use quantitative and scientific knowledge and technology accurately.

Program Components

West Virginia University Liberal Studies Program requirements for all students who receive the baccalaureate degree are divided into a skills component and a distribution component. These are described below.

Skills Requirements

Writing

- All students must successfully complete English 101 and 102. This requirement is in addition to the Cluster A requirements described below.
- All students must successfully complete at least one course that requires a substantial writing component and in which the grade is partially determined by writing skills. These courses will be identified in the LSP portion of the *Schedule of Courses* by a "W". The student must complete English 102 before fulfilling the "W" requirement.

Mathematics

- All students must successfully complete at least three hours of mathematics or statistics. This requirement is in addition to the Cluster C requirement listed on the following page. Courses approved for the mathematics skills requirement: Mathematics 121, 124, 126, 128, 129, 150, 155, 156, 180, 218, 231, Economics 225, and Statistics 111, 211, 215.

Cluster Courses

The University courses in the LSP that provide students with broad liberal knowledge and experience are grouped into three clusters:

Cluster A (Humanities and Fine Arts): The study of humanities develops knowledge of and appreciation for the accumulated wisdom and experience contained in world literature, history, fine arts, religion, and philosophy, with the objective of bringing the student to an active consciousness of the living, operating, and continuing values of human culture.

Cluster B (Social and Behavioral Sciences): The social and behavioral sciences develop in students the knowledge and appreciation of both themselves and the world in which they live. Through the study of anthropology, economics, geography, linguistics, political science, psychology, sociology, and communication studies, students are able to comprehend major concepts, evaluate movements and ideas, and anticipate future trends in societies both at home and abroad.

Cluster C (Natural Sciences and Mathematics): Courses in the natural sciences and mathematics provide information about the natural world and provide a perspective on how an understanding of the natural world is developed. Educated persons should have a knowledge of the physical, chemical, geological, and biological entities and processes that constitute the natural world. Courses in mathematics, statistics, and computer science can provide the technical tools for understanding the natural world, as well as understanding the methods and value of mathematics considered as a discipline in itself.

Distribution of Cluster Requirements

Cluster A Requirements 12 hours of Cluster A courses must be distributed according to the following provisions and successfully completed:

- Courses must be successfully completed in three disciplines.
- Two courses must be successfully completed in the same discipline.
- If foreign language courses are chosen to fulfill Cluster A requirements, no student may use more than one first-semester course of an elementary foreign language. Language courses in a student's native language may not be used to fulfill Cluster A requirements.
- No more than one multidisciplinary studies (MDS) course may be used to fulfill Cluster A requirements.

Cluster B Requirements 12 hours of Cluster B courses must be successfully completed and distributed according to the following provisions:

- Courses must be successfully completed in three disciplines.
- Two courses must be successfully completed in the same discipline.
- No more than one multidisciplinary studies (MDS) course may be used to fulfill Cluster B requirements.

Cluster C Requirements 11-12 hours of Cluster C courses must be successfully completed and distributed according to the following provisions:

- Courses must be successfully completed in two disciplines.
- At least one course must include a laboratory (identified in the *Schedule of Courses*).
- No more than one multidisciplinary studies (MDS) course may be used to fulfill Cluster C requirements.

Note: Foreign or minority culture requirement: one three-credit-hour course must focus substantially on the study of a foreign or minority culture or cultures or on women and/or issues of gender.

Inventory of LSP Courses

The courses listed below in Clusters A, B, and C do not constitute an inclusive listing. The Liberal Studies Committee changes the list of courses as evaluations are continually made. Students and advisors should consult the latest *Schedule of Courses* for the most recent inventory of courses included in the Liberal Studies Program. Any course listed at any time during the student's period of study may be counted for Liberal Studies Program credit.

Cluster A Courses

Art 101, 105, 106

Dance 101

English 131, 132, 139*, 154*, 156, 225, 226*, 231, 232, 233, 234, 235, 236, 241, 242, 251, 254*, 261, 262, 263, 272, 273, 285*

Foreign Literature in Translation 113*, 215, 261*, 262*, 266*, 271*, 273*, 274*

French 100, 101, 102, 200, 203, 204

German 100, 101, 102, 200, 203, 204

History 101, 102, 105*, 106*, 152, 153, 180*, 201, 203, 205, 207, 209, 217*, 218*, 221*, 255, 256, 257, 259, 261, 264*, 271, 272, 277, 281, 284

Humanities 101, 102, 103, 104
 Italian 101, 102, 203, 204
 Japanese 101, 102, 203, 204
 Landscape Architecture 212
 Mathematics 280 (Equivalent to Philosophy 360)
 Multidisciplinary Studies 128, 220*, 230
 Music 170, 173, 174, 175*, 176*, 270, 271
 Native American Studies 200*
 Philosophy 100, 130, 140, 170, 244, 248, 260
 Religious Studies 102, 105, 200, 201, 202, 203, 210, 220, 221, 230*, 231*, 232*, 250
 Russian 101, 102, 203, 204
 Spanish 100, 101, 102, 200, 203, 204
 Speech Pathology and Audiology 270
 Theatre 101, 102, 103, 170*
 Women's Studies 170*, 215*, 225*

Cluster B Courses

Agricultural/Environmental Education 101, 220
 Agriculture Resource Economics 150, 187, 220
 Broadcast News 215
 Child Development and Family Studies 110
 Communication Studies 100, 102, 104, 105, 112, 122, 212*
 Economics 111, 201, 202
 Forestry 140
 Geography 102*, 108, 205, 209, 210, 240, 241, 243*
 History 104*, 108*, 180*, 241*, 264, 281*
 Journalism 101
 Linguistics 101
 Military Science 101, 102, 201, 202
 Multidisciplinary Studies 120, 122*, 124, 126, 129, 212, *220
 Native American Studies 200*
 Political Science 101, 102, 103, 107, 210, 220, 250*, 260, 270, 271
 Psychology 101, 232*, 241, 251
 Social Work 105, 147*
 Sociology and Anthropology 101, 105*, 221, 222, 223, 232, 235*, 238*, 240,
 252, 255*, 256*, 257, 258
 Sport Studies 271, 272
 Women's Studies 170*

Cluster C Courses

Astronomy 106
 Biology 101, 102, 103[†], 104[†], 105
 Chemistry 111[†], 112[†], 115[†], 116[†], 117[†], 118[†]
 Computer Science 101
 Economics 225
 Environmental Protection 155
 Geography 106[†], 107, 110, 111[†], 207
 Geology 101, 102[†], 103, 104[†], 110, 111[†], 203, 230[†]
 History 272, 284
 Human Nutrition and Foods 171
 Mathematics 121, 124, 126, 128, 129, 150, 155, 156, 180, 218, 231
 Multidisciplinary Studies 120, 122*, 124, 126, 128
 Philosophy 261
 Physics 101[†], 102[†], 105[†], 107, 108, 111[†]
 Statistics 111, 211, 215
 Wildlife Management 150

*Satisfies the foreign culture, minority, or gender studies requirement.

[†]Satisfies the laboratory course requirement.

Approved 300-Level Courses

No 300-level courses are included in Clusters A, B, and C because they are deemed to be not ordinarily appropriate for the Liberal Studies Program. However, a student may petition to take one 300-level course from the list of approved courses indicated below in fulfillment of the LSP requirement for each of the three cluster areas. The student must petition through his or her advisor for approval. This can be accomplished with the use of a standard petition form filled out by the student, approved by the advisor, and placed in the student's file.

Cluster A Courses

Communication Studies 305
Multidisciplinary Studies 301
Philosophy 301, 302, 306, 308, 310, 321, 323, 325, 331, 346, 351, 355

Cluster B Courses

Communication Studies 305, 306, 308, 309, 316*, 317
Community Health Promotion 390*
Economics 301
Multidisciplinary Studies 301
Political Science 335*, 350*, 351*
Sport Studies 373*
Women's Studies 340*

Cluster C Course

Environmental Microbiology 241
*Satisfies the foreign culture, minority, or gender studies requirement.

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 may 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. If transferring credit from institutions outside the West Virginia state system of higher education, WVU will accept credit only for courses in which a grade of D or higher was earned, 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 Admissions and Records 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)

West Virginia University encourages students to work to their full capacity and to earn a degree at their own learning speed. As a high school junior or senior, students can take college-level courses at the high 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 table on page 19 shows the subject areas, the necessary test scores, and the WVU equivalent courses.

College Level Examination Program (CLEP)

If a student applies for admission to WVU and has gained a significant level of maturity through life experiences, college credit may be gained for these 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. Up to 34 hours of general education 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 table on page 20 indicates the areas in which WVU grants credit based on the minimum score required. It should be noted that no student is eligible for CLEP credits after he or she has enrolled at WVU.

A veteran may receive advanced placement for specific military experience and should contact the Transfer Unit of Admissions and Records for specific information.

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.

Advanced Placement Program (AP)

Examination	Minimum Score	Credit Hours	Course Equivalent
ART (Studio)			
Drawing Portfolio	To be determined by Division of Art		
General Portfolio	To be determined by Division of Art		
ART HISTORY	3		ART 101
BIOLOGY	3	8	BIOL 101, 102, 103, 104
	4	4	BIOL 115
CHEMISTRY	3	8	CHEM 115-116
CLASSICS			
Latin: Virgil	3	3	CLAS 293 A
Latin: Catullus-Horace	3	3	CLAS 293 B
COMPUTER SCIENCE			
Computer Science A	3	3	non-specific C S
Computer Science AB	3	6	non-specific C S
(6 units maximum for both tests)			
ECONOMICS			
Microeconomics	3	3	ECON 201
Macroeconomics	3	3	ECON 202
ENGLISH			
Engl. Lit. and Comp.	3	3	ENGL 131
Engl. Lit. and Comp.	4	6	ENGL 131-132
Engl. Lang. and Comp.	3	3	ENGL 101
Engl. Lang. and Comp.	4	6	ENGL 101-102
(9 units maximum for both tests)			
ENVIRONMENTAL SCIENCE	3	4	GEOL 110 & 111/ GEOG 110 & 111
FOREIGN LANGUAGE			
French Language	3	6	FRCH 301-302
French Literature	3	6	FRCH 293 & 493
German Language	3	6	GER 301-302
Spanish Language	3	6	SPAN 301-302
Spanish Literature	3	6	SPAN 293 & 493
GEOGRAPHY			
Geography	3	3	GEOG 102
GOVERNMENT AND POLITICS			
American	3	3	POLS 102
Comparative	3	3	POLS 101
HISTORY			
American	3	6	HIST 152-153
European	3	6	HIST 101-102
World	3	6	HIST 179-180
MATHEMATICS			
Calculus AB	3	4	MATH 129
Calculus AB	4	4	MATH 155
Calculus BC	3	4	MATH 155
Calculus BC	4	8	MATH 155-156
MUSIC			
Theory	3	3	To be determined by Division of Music
PHYSICS			
Physics B	3	4	PHYS 101*
Physics B	4	8	PHYS 101-102*
Physics C Mechanics	3	4	PHYS 111*
Phys. C Elec./Magnet.	3	4	PHYS 112*
PSYCHOLOGY			
Introductory Psych.	3	3	PSYCH 101
STATISTICS	3	3	STAT 211

*Note: Students receiving AP credit for any physics course will have to register for and complete the corresponding physics labs by special arrangement with the Department of Physics.

College Level Examination Program (CLEP)

General Examinations	WVU Equivalent	Minimum Score Required
English Composition (with essay)	ENGL 101 (3 hr.)	590
English Composition (multiple choice)	No credit	
Humanities	LSP A non-specified credit (6 hr.)	500
Mathematics	LSP C non-specified credit (4 hr.)	500
Natural Science	LSP C non-specified credit (6 hr.)	500
Social Science and History	LSP B (6 hr.)	500
Subject Tests		
American Literature	ENGL 241 (3 hr.)	59
Analysis & Interpret. of Literature	ENGL 131 (3 hr.)	59
College Composition	No credit	
English Literature	ENGL 262 (3 hr.)	60
Freshman English	No credit	
College French (levels 1 and 2)	FRCH 101 and 102 (6 hr.)	44
	FRCH 203 and 204 (6 hr.)	55
College German (levels 1 and 2)	GER 101 and 102 (6 hr.)	43
	GER 203 and 204 (6 hr.)	54
College Spanish (levels 1 and 2)	SPAN 101 and 102 (6 hr.)	45
	SPAN 203 and 204 (6 hr.)	54
American Government	POLS 102 (3 hr.)	50
American History I	HIST 152 (3 hr.)	49
American History II	HIST 153 (3 hr.)	49
Western Civilization I	HIST 101 (3 hr.)	50
Western Civilization II	HIST 102 (3 hr.)	50
General Psychology	PSYC 101 (3 hr.)	50
Human Growth and Development	CD&FS 110 (3 hr.)	51
Intro. Macroeconomics	ECON 202 (3 hr.)	50
Intro. Microeconomics	ECON 201 (3 hr.)	50
Intro. Sociology	SOCA 101 (3 hr.)	50
College Algebra	MATH 126 (3 hr.)	48
Trigonometry	MATH 128 (3 hr.)	54
College Algebra/Trig.	MATH 129 (4 hr.)	50
Calculus with Elementary Functions	MATH 155 (4 hr.)	49
General Biology	BIOL 101 and 102 (6 hr.)	49
	(no credit for the labs)	
General Chemistry	CHEM 116 (4 hr.)	70
Computers and Data Processing	To be determined by the dept.	49
Intro. to Management	BCOR 370 (3 hr.)	50
Intro. Accounting	ACCT 201 and 202 (6 hr.)	54
Intro. Business Law	BCOR 320 (3 hr.)	51

500-Level Courses

Extended Learning/Off-campus If an advanced student wishes to take an off-campus course numbered 500-599, an undergraduate application for admission must be submitted. Official transcripts must be sent to the Office of Admissions and Records from all of the colleges and universities previously attended; the transcript cannot be one sent to the student or a 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 special form granting permission to take a 500-level course may be obtained from their advisor.

On-campus An undergraduate junior or senior in any class carrying a 500-level course number, must have at least a 3.0 cumulative grade point average and have written approval on a special form from the instructor and advisor.

Graduate Credit via Senior Petition

Graduate study may be started early through the University's senior petition policy. A senior petition form may be obtained from the Office of Admissions and Records. It must be signed by the student's advisor, the dean of the college granting the 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 the information contained on the form is correct and the student has a cumulative 3.0 grade point average. The University has certain policies concerning enrollment in a graduate course for graduate credit. The policies are:

- Senior petition applies only to courses numbered 400-599. A student must be within 12 hours of receiving a bachelor's degree, and his or her grade point average must be at least 3.0 on a 4.0 scale.
- Only 12 graduate hours may be earned through the senior petition.
- The proper signatures must be on the senior petition by the time the student enrolls in the petitioned courses.

Return the approved senior petition to the Office of Admissions and Records. It is kept on file so that graduate credit for these courses will be recorded on the student's 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 a student receives graduate credit for a course, the credit for that course does not count toward an 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 Admissions and Records to remove an auditor from a class list or grade report if attendance requirements are not met.

Summer Sessions

WVU has two six-week sessions. Summer Session One begins in the middle of May and ends on June 30. Summer Session Two begins on July 1 and ends the second week of August. Requirements for admission and work performance for the summer sessions are the same as for the regular semesters.

Credit may be earned toward a baccalaureate, master's, doctoral, or professional degree in the summer sessions. Summer offerings vary from year to year. For complete information concerning course offerings during the summer sessions, consult the *Summer Session Schedule of Courses*.

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.

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

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," page 25.

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

Student 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. If all assigned work is not completed, an incomplete (I) or a failing grade (F) may be given.

The last week of each semester of the academic year is designated as finals week. Final examinations for the summer sessions are given on the last day of classes. The *Schedule of Courses* gives the dates and times for final examinations.

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. Evening classes have their final exams on the last meeting of the class preceding finals week.

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

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
- WU withdrawal from the University doing unsatisfactory work
- 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
- IF incomplete grade not removed by next regular term (computed as an F)
- UF unforgivable F (not eligible for D/F repeat policy)

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, Liberal Studies Program (LSP), 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 letter grade to the Office of Admissions and Records. This letter grade is then converted to a P on the basis of A, B, C, or D for a pass and 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.

A	B	C	D	F	I	U
4	3	2	1	0	0	0

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

- Courses with a grade of W, WU, 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. To remove the grade of I, do not register for the course again; instead, the student must arrange to submit incomplete or supplemental work to the original instructor of the course. When the grade of I 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 enrolled, the grade of I is treated as an F (failure). The Academic Standards Committee of the appropriate college or school may allow the student to postpone removal of the I grade if a delay can be justified.
- Teacher certification students are responsible for every registration in a course in which the grade of A, B, C, D, F, WU, 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:

English 101	B	Mathematics 126	A
Geology 101	C	Political Science 101	B
Spanish 101	D	Orientation 101	P

Course	Credits	Grade	Value	Credits x Value	Grade Points Earned
English 101	3	B	3	3 x 3	= 9
Geology 101	3	C	2	3 x 2	= 6
Spanish 101	3	D	1	3 x 1	= 3
Mathematics 126	3	A	4	3 x 4	= 12
Political Sci. 101	3	B	3	3 x 3	= 9
Orientation 101	1	P	0	1 x 0	= 0

1. Multiply the credit by the grade value to get the grade points earned for each course.
2. Add the total grade points, in this case, 39.

3. 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.

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:

1. The original grade is disregarded for the purpose of determining the grade point average, hours passed, and hours attempted.
2. The original grade is not deleted from the permanent record.
3. The second grade is entered on the transcript and marked as included (I) in the semester that the student repeated the course.
4. 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.

Grade Reports

During the seventh week of classes in the fall and spring semesters, instructors submit a report of all undergraduate students earning grades of D or F in undergraduate courses. These grades are used for counseling and are not recorded on the student's official transcript. These reports are sent first to the Office of Admissions and Records and then to the student, the student's advisor, and the dean of the college or school in which the student is enrolled.

Final grades are reported within 48 hours after the end of the final examination. The instructor submits the grade reports to the Office of Admissions and Records. The final grades of all seniors provisionally approved for graduation at the close of each semester or summer session are reported to the deans of their colleges or schools. Special report forms for this purpose are supplied by the student's dean.

At the end of each semester or at the close of each summer session, a report of each student's work is prepared for that period and sent to the student.

West Virginia University Policy on the Family Educational Rights and Privacy Act

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.

West Virginia University 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 of 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. All these exceptions are permitted under the act.

The act also permits disclosure of information from students' 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. West Virginia

University intends to consider all students as “dependent” for purposes of disclosure of information to parents unless the students specifically notify in writing the WVU Office of Admissions and Records that they are not a “dependent” of their parents for federal income tax purposes. Students need to give such written notification only once.

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 in the *Student Handbook* and annually in the *Daily Athenaeum*. The offices of the deans and directors can inform students as to the locations of all education records maintained on students by West Virginia University.

Official Transcripts

Each copy of an official transcript costs six dollars, payable by check or money order. An on-the-spot transcript may be requested, in person, at a cost of ten dollars. Priority transcripts are not available at all times. Because of demand, it may take two or 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 money is owed or other financial obligations are due to any unit of the University, students forfeit their right to claim a transcript of their record or diploma until these financial obligations have been met.

When applying for a transcript, the student’s last date of attendance and student number must be furnished. Be sure to indicate the full name under which the student was enrolled. Requests for transcripts must be made in writing to the Office of Admissions and Records. We cannot accept telephone requests because of the risk of the security of your record.

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.

1. 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.

2. 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.
3. The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
4. 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 accordance with the committee's decision.
5. If the instructor does not act within five days, the dean shall make any necessary grade adjustment.
6. In the case of grade appeals, the dean functions as the president's designee; therefore, implementation of this decision shall end the appeal procedure.

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*.

Withdrawal/Drop From Individual Classes

Deadlines Until the Friday of the tenth week of class (or Friday of the fourth week in a six-week summer session, or Friday of the second week of a three-week summer session), students may withdraw from individual courses. Deadlines are published in the University *Schedule of Courses* each semester. If all established University procedures are followed and the student withdraws before the published deadline, a W will be recorded on the transcript. Grade point averages are not affected in any way by this mark.

Procedures

Before withdrawing from individual classes, a student should consult with his or her advisor to determine if:

- The course load would be reduced below minimal requirements set by the college or school. If so, permission must be granted from the school's Committee on Academic Standards.
- The course load would be reduced below the minimal number of hours required to qualify for financial aid, varsity athletic competition, international full-time student status, or it would affect the student's health insurance coverage.

- The courses to be dropped are required to fulfill academic probationary conditions.
- The courses from which the student wants to withdraw might be corequisite with other courses currently enrolled in, or prerequisite to other courses required for the next term.

Withdrawal From All Classes for the Term

Deadlines Students may withdraw from the University for the term enrolled in anytime *before* the last day of classes of the term on which regular classes are scheduled to meet. The student will receive grades of W in all classes for that term.

Procedures

1. Students who decide to leave WVU during the term enrolled should withdraw from all classes through Admissions and Records in accordance with established University Policy. Students are responsible for all financial obligations and for following established procedures. This includes the completion of forms in person at the Office of Admissions and Records. The withdrawal process is explained at this time. Students not fulfilling their financial obligations may have difficulty withdrawing from the University.
2. Students who are unable to withdraw in person because of illness, accident, or other valid reasons still must send notification of their request to withdraw to the Office of Admissions and Records. The student's Mountaineer card should be enclosed with this written notification.
3. With the help of their academic advisors, students are responsible for determining how withdrawal from the University may affect their future status with the University, including such aspects as suspension for failure to make progress toward a degree or violation of established academic probation and eligibility for scholarships, fellowships, or financial aid.
4. If withdrawing from the term before certain dates and are receiving federal financial aid, students may have to repay all or a portion of the federal funds received. Withdrawing from classes can affect academic progress and future financial aid opportunities. The student should check with the Financial Aid Office for more information.

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 institutions 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 Admissions and Records can provide additional details about an academic leave and eligibility requirements.

Re-Enrollment After Withdrawal

After withdrawing 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 he or she wants to register, subject to conditions set by that dean.

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.

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 30) 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 so 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 Admissions and Records 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 Admissions and Records.

Maximum Allowable Grade Point Deficiency*

Total Hours Attempted**	Maximum Grade Point Deficiency**	Total Hours Attempted**	Maximum Grade Point Deficiency**
10-19	20	55-59	12
20-24	19	60-64	11
25-29	18	65-69	10
30-34	17	70-74	9
35-39	16	75-79	8
40-44	15	80-84	7
45-49	14	85 or more	6
50-54	13		

*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:

1. All parties involved shall receive written notice of the date, time, and place of the hearing.
2. 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 advisees or otherwise participate.
3. The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
4. Witnesses may be called by any of the parties involved.
5. 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 to the committee, 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:

1. All parties involved shall receive written notice of date, time, and place of hearing.
2. 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.
3. The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
4. Witnesses may be called by any of the parties involved.
5. 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:

1. **Plagiarism** is defined in terms of proscribed 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) another individual's academic composition, compilation, or other product, or commercially prepared paper.
2. **Cheating and dishonest practices** in connection with examinations, papers, and projects, including but not limited to:
 - a. Obtaining help from another student during examinations.
 - b. 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.
 - c. The unauthorized use of notes, books, or other sources of information during examinations.
 - d. Obtaining without authorization an examination or any part thereof.
3. **Forgery, misrepresentation, or fraud:**
 - a. Forging or altering, or causing to be altered, the record of any grade in a grade book or other educational record.
 - b. Use of University documents or instruments of identification with intent to defraud.
 - c. Presenting false data or intentionally misrepresenting one's records for admission, registration, or withdrawal from the University or from a University course.
 - d. Knowingly presenting false data or intentionally misrepresenting one's records for personal gain.
 - e. Knowingly furnishing the results of research projects or experiments for the inclusion in another's work without proper citation.
 - f. 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

1. **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.*

2. **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 judgement of the severity of the offense.
3. **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).
 - a. **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.
 - b. **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 Admissions and Records 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.

1. **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:

- a. Notify the instructor that a procedural review is being conducted at the student's request and give the instructor an opportunity to reply.
- b. Decide, after reviewing the available information, whether any procedural errors were made and whether such errors affected the outcome of the case.
- c. 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.

2. **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:

- a. 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.
 - b. Solicit from the instructor and the student evidence and arguments relevant to the issues.
 - c. Make this material available to both the student and the instructor.
 - d. 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 advise 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.
 - e. Decide, based on the available evidence, whether to uphold the decision being challenged.
 - f. 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.
 - g. See that the student's record is amended if necessary.
3. **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 understanding 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 appeal 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:
- a. Notify the student that additional penalties are being considered.
 - b. 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.
 - c. Decide, based on the available evidence, whether to impose any additional penalties.
 - d. 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.
 - e. 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.

1. **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.
 - a. 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.
 - b. 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 has 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.

- c. 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.
 - d. The dean of the college or school offering the course must see that the student's record is amended if necessary.
2. **Appeal** The student or instructor may challenge the decision(s) of Step 2. (If the dean upheld the instructor's finding or penalty, then the student is appealing the instructor's decision, not the dean's.)
- a. 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.
 - b. 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.
 - I. The administrative procedure is not adversarial; the formal rules of evidence do not apply.
 - II. Witnesses may be called by any of those involved.
 - III. 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.
 - IV. 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.
 - V. 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.
 - VI. 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.

- VII. 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 decisions of the University Committee on Student Rights and Responsibilities to the president or president's 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.

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 and Records. The completed form is to be returned to the Office of Admissions and Records, and must be accompanied by payment of a nonrefundable special service fee of \$50. Applicants must at the same time request that the registrar or records office of the college send an official transcript directly to the Office of Admissions and Records. If other institutions have been attended in the course of undergraduate or graduate study, transcripts should be requested from them as well. No one is admitted to graduate study who 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 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 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 Center Graduate Programs Office for final approval and submission to the Office of Admissions and Records. It is the student's responsibility to see that Admissions and Records 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 and Records, West Virginia University, 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 and Records.

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 or 550 on the paper-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 and Records 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. In general, students with low TOEFL/IELTS scores are almost never permitted to enroll in a full nine hours of graduate courses in their first semester, but must take sufficient ESL courses to give them some chance of succeeding in their coursework. Their subsequent performance in ESL courses will largely determine whether or not they can be accepted with regular graduate student status. 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 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, P.O. Box 6298, Morgantown, WV 26506-6298.

Classifications

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.

A 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 2.50 grade point average, but the student must obtain a 2.50 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 and Records of its decision.

Upon notification by the appropriate academic unit, the Office of Admissions and Records 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 18 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.

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. Consequently, 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.

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.

Records

The Health Sciences Center Graduate Programs Office maintains all records for monitoring student progress and for certifying students for graduation. Among these records are plans of study (subject to chairperson of Health Sciences Center Graduate Council's approval); graduate committees (subject to school dean's or designate's approval and approval of the Health Sciences Center Graduate Programs Office); grades and grade modifications.

Grading

Pass-fail grading is not applicable to the coursework for a graduate degree. A graduate student may register for any course (100–499) on a pass-fail basis only if the course involved is not included in the student's plan of study and does not count toward a graduate degree. The selection of a course for pass-fail grading must be made at registration and may not be changed after the close of the registration period. A student who, having taken a course on a pass-fail basis, later decides to include the course as part of a degree program must re-register for the course on a graded (A, B, C, D, or F) basis.

Incompletes

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. 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 removal of the incomplete sometime before program completion 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. In the case of withdrawal from the University, a student with a grade of I should discuss that grade with the appropriate instructor. An I grade may eventually convert to F. Grade changes other than I to a letter grade must be accompanied by an explanatory memo.

Dissertation Procedures

Procedural rules for dissertations and theses are found in the *WVU Graduate Catalog*.

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

1. Counseling by departmental committee or representative as soon as possible after discovery of problem.
2. Second counseling by departmental committee or representative after opportunity to improve if performance is not changed sufficiently.
3. 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.
4. 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.
5. A decision for dismissal must be reviewed by the appropriate academic vice president who may confirm or remand the recommendation with specific instructions.
6. 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.

Fees

Regulations

All West Virginia University fees are subject to change without notice. A nonrefundable special service fee of \$50 must accompany the application for admission to graduate studies. All fees are due and payable to the Office of Student Accounts on the days of 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 are expected to register on days set apart for registration at the beginning of each semester or summer session of the University. 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.

No degree is conferred upon any candidate 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.

It is the policy of WVU to place on restriction 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. Persons who are neither registered as University students nor members of its administrative or teaching staffs shall not be admitted to regular attendance in University classes.

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 www.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.

Extended Learning/Off-Campus

Tuition per credit hours for off-campus students are the same as those charged students enrolled in on-campus courses. Off-campus students do not pay the Student Activity Fee (ID). However, they must pay \$33.00 per credit hour for each off-campus course, television course, and Internet course.

Laboratory Fees

Laboratory fees will be assessed to all students, full-time or part-time, undergraduate or graduate, for each lab section enrolled. Some departments may also have additional fees or rental fees.

Special Fees

Application for Undergraduate Admission (Resident)	\$25.00
(Non-resident)	40.00
Application for Admission (Dentistry, Medicine, and Pharmacy)	50.00
Application for Admission (College of Law or Graduate Studies)	50.00
Diploma Replacement	35.00
Examination for Advanced Standing	50.00
Graduation	30.00
(Payable by all students at the beginning of the semester or session in which they expect to receive their degrees.)	
Late Registration Payment	40.00
(Not charged to students who complete registration during the regular registration days set forth in the University calendar.)	
Reinstatement of Student Dropped from the Rolls	40.00
Student Identification Card Replacement	20.00
Official Transcript	6.00
Official Letter	6.00
Statement of Degree Letter, Grade Point Average Letter	6.00
Priority Service (Transcript/Letter)	10.00

Summer Tuition and Fees

<i>Undergraduate Students</i>	<i>Resident</i>	<i>Non-resident</i>
Tuition, per semester hour	\$51.00	\$156.00
<i>Daily Athenaeum Fee*</i>	8.00	8.00
Radio Station Fee*	5.00	5.00
Health, Counseling, and Program Services Fee	131.00	131.00
Mountainlair Construction Fee, per six-week summer session or any portion thereof*	69.00	69.00
Student Affairs Fee*	41.00	41.00
Transportation Fee*	63.00	63.00
Athletic Fee*	60.00	60.00
Recreation Fee*	90.00	90.00
Technology Fee	40.00	40.00
Library Fee	30.00	30.00

*These fees are pro-rated per credit hours.

Non-Sufficient Funds Check Policy and Service Charge

Payments of tuition, fees, and other charges by check, draft, or 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 \$15 is collected on each check returned unpaid by the bank upon which it was drawn. The service charge on unpaid, returned checks is subject to change in accordance with state law.

Refund of Fees

A student who officially withdraws from the University or goes from full-time to part-time status *within the refund period* is eligible for a refund of tuition and fees. Every effort is made to process refunds within 30 days. If a graduate assistantship is canceled before the end of the term, the student may be responsible for paying all or part of the tuition and fees for that term (see below).

To withdraw from the University officially and receive a refund, a student must apply at the Office of Admissions and Records. Term fees are refundable as follows.

1. Tuition, special, and refundable miscellaneous fees. Refundable based on date of withdrawal and student status.* Refer to refund schedule.
2. Optional health service fee—Refundable based on date of withdrawal and student status.* Refer to refund schedule.

3. Lab fees. Refundable during the first week of classes only based on student status. Refer to refund schedule.
4. Nonrefundable miscellaneous fees (includes application, transcript, graduation, late registration/payment, and reinstatement fees). These fees are nonrefundable.
5. Room and board. The unused portion of room and board is refunded on a pro-rata basis, based on the date the student's belongings are removed from the room and the meal ticket/ID and room keys are surrendered.

* Higher Education Policy Commission Series No. 22: Percent = number of days in term times percent of term allocated for refund. If the percent calculation identifies a partial day, the entire day is included in the higher refund period.

Exceptions

Students called to the armed services of the United States may be granted full refund of refundable fees (but no course credit) if the call comes before the end of the first three-fourths of the semester. If the call comes thereafter that, full credit for courses may be granted if the student has passing grades at the time of departure.

Students withdrawn due to catastrophic illness or death will be provided a refund as approved by the dean of Student Life or his or her designee.

If a student drops below full-time status (12 hours for undergraduates and nine hours for graduates), semester fees are refundable as follows.

1. Tuition, special, and refundable miscellaneous fees. Refundable based on date of dropped course(s). Refer to refund schedule.
2. Lab fees. Refundable at 100 percent *during the first week of classes only* and nonrefundable thereafter.
3. Nonrefundable miscellaneous fees (includes application, transcript, graduation, late registration/payment, and reinstatement fees). These fees are nonrefundable.

Refund Schedule

Fall and Spring Semesters (16-week session)

Refund Period	Percentage
1st week	90%
2nd week	90%
3rd week	70%
4th week	70%
5th week	50%
6th week	50%
7th-16th week	0%

Summer Term (6-week session)

Refund Period	Percentage
Day 1 through 4	90%
Day 5	70%
Day 6 through 8	70%
Day 9 and 10	50%
6th week	50%
Day 13 through 30	0%

Summer Term (3-week session)

Refund Period	Percentage
Day 1 and 2	90%
Day 3 and 4	70%
Day 5 and 6	50%
Day 7 through 15	0%

Summer Term (2-week session)

Refund Period	Percentage
Day 1 and 2	90%
Day 3	70%
Day 4	50%
Day 5 through 10	0%

Summer Term (1-week session)

Refund Period	Percentage
Day 1	90%
Day 2	70%
Day 3 through 5	0%

Estimated Expenses for Graduate/Professional Health Sciences Center Programs

These *estimated* expenses are accurate as of April 1, 2004 and are subject to change. For current accurate tuition costs, call Admissions and Records at 1-800-344-WVU1. Tuition and registration fees are the same for both semesters. Tuition and registration fees are per semester; other fees are per year. Some programs require summer sessions. Additional tuition and fees apply.

School and Division	Tuition and Registration*		Instruments	Lab coats, Uniforms, etc.	Books	TOTALS	
	Resident	Non-resident				Resident	Non-resident
Dentistry*							
First Year	\$4,466.00	\$10,269.00	\$8,409.00	\$500.00	\$2,000.00	\$15,375.00	\$21,178.00
First Summer	1,072.00	1,927.50	1,174.00	—	500.00	2,746.00	3,601.00
Second Year	4,466.00	10,269.00	3,798.00	250.00	2,100.00	10,614.00	16,417.00
Second Summer	1,072.00	1,927.50	976.00	—	600.00	2,648.00	3,503.00
Third Year	3,847.00	10,007.00	1,565.00	100.00	1,600.00	7,112.00	13,272.00
Third Summer	1,072.00	1,927.50	400.00	—	400.00	1,772.00	2,627.00
Fourth Year	3,847.00	10,007.00	1,565.00	100.00	400.00	5,812.00	11,972.00
Medicine							
First Year*	6,720.00	15,590.00	1,500.00	—	1,300.00	9,520.00	18,390.00
First Year Summer	122.00	122.00	—	—	300.00	422.00	422.00
Second Year*	6,720.00	15,590.00	500.00	—	1,000.00	8,220.00	17,090.00
Third Year	6,720.00	15,590.00	25.00	100.00	725.00	7,570.00	16,440.00
Third Year Summer	122.00	122.00	—	—	300.00	422.00	422.00
Fourth Year	6,720.00	15,590.00	25.00	400.00	1,025.00	8,170.00	17,040.00
Pharmacy*							
First Year	3,668.00	9,922.00	—	400.00	650.00	4,718.00	10,972.00
Second Year	3,668.00	9,922.00	—	—	650.00	4,318.00	10,572.00
Third Year	3,668.00	9,922.00	—	250.00	650.00	4,568.00	10,822.00
Fourth Year	3,668.00	9,922.00	—	1,000.00	200.00	4,868.00	11,122.00
HSC Graduate Programs							
Master of Public Health Program	2,368.00	6,808.00	—	—	—	—	—
	2,701.00	7,533.00	—	—	—	—	—

*Note: First- and second-year medical students have an additional notebook computer lease fee of \$974.00 to \$1,380.00 per year.

Cost of an Academic Year's Work

The Student Financial Aid Office estimates that the total cost of attending WVU for a nine-month academic year is \$13,204 for single West Virginia residents living on or off campus and \$21,936 for nonresidents living on or off campus. These typical estimated student budgets include tuition and fees, books and supplies, room, board, transportation, and personal expenses that provide for a modest but adequate lifestyle.

Identification Card

An identification card is issued to each full-time student when fees are paid in full. Certain part-time students can be eligible for an identification card when the appropriate fees are paid. It admits the owner to certain University athletic events, various activities of student administration, the Health Service, the Mountainlair, and the Recreation Center. Confiscation will result from misuse. The University reserves the right to refuse reissuance of an identification card.

Residency Policy

Section 1 of this policy bulletin contains general information regarding its scope and 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 twelve months of continued presence within the state prior to the date of registration, provided that such twelve 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 twelve 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.

4.2 A non-resident student who becomes independent while a student at an institution of higher education in West Virginia does not, by reason of such independence alone, attain domicile in this state for admission or fee payment purposes.

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 and Records, 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.

School of Dentistry

James J. Koelbl, D.D.S., M.S., M.J., Dean

Thomas F. Razimus, D.D.S., M.S., Senior Associate Dean

Richard J. Crout, D.D.S., M.S., Ph.D., Associate Dean, Research

Shelia S. Price, D.D.S., Ed.D., Associate Dean, Admissions, Recruitment and Access

Christina B. DeBiase, B.S.D.H., M.A., Ed.D., Assistant Dean of Curriculum and Instruction

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

Degrees Offered

D.D.S. in Dentistry

M.S. in Dental Specialties

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 began studies 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 students were enrolled in the school's degree program in dental hygiene and were graduated in 1965.

Mission

- To provide the people of West Virginia with an oral health center for education, research, and service activities.
- To contribute to and improve the dental health of all people, especially the citizens of West Virginia.

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 one four-year residency. Three advanced education in general dentistry residencies are also offered. 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 vice president 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 100 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 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 our 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 the Handicapped. The Academy of Dentistry for the Handicapped 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 Handicapped Patients," 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.

The Student American Dental Hygienists' Association is the official organization representing the dental hygiene profession. Student dental hygienists have the opportunity of student membership in the association.

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

Undergraduate Program

Dental Hygiene

Christina DeBiase, Ed.D., Director

e-mail: cdebiase@hsc.wvu.edu

1188 Health Sciences North

<http://www.hsc.wvu.edu/sod/departments/Dental%20Hygiene/Welcome.asp>

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 the preparation of dental hygienists to:

- Possess a heightened awareness of social and cultural diversity, ethics, and professionalism.
- Apply critical thinking to integrate scientific principles/technology with the provision of evidenced-based, comprehensive health care.
- 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.
- 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.
- Coordinate and administer oral health services for a variety of populations in diverse settings (public health agencies, hospitals, school systems, etc.).
- Function collaboratively with the community leaders, health care professionals, and lay persons to manage the oral health needs of rural West Virginia.
- Provide didactic and clinical instruction in allied dental education programs.
- Pursue professional development through self-study, continuing education, research, and advanced studies at the baccalaureate and master's levels.

Admission Requirements

Applications and reference forms may be obtained from the Division of Dental Hygiene, P.O. Box 9425, West Virginia University, Morgantown, WV 26506-9425, or to the Office of Admissions, Health Sciences Center, P.O. Box 9815, West Virginia University, Morgantown, WV 26506-9815. As soon as possible in the year preceding the year the student plans to enter the program, he or she should apply and complete the aptitude tests. Forms for the following year are available in September.

If a student has no previous study in higher education, he or she must apply for admission as a freshman at WVU. A diploma from an accredited high school or preparatory school must be submitted, and we expect the student to have these courses listed on his or her high school transcript:

English—4 units
Biology—1 unit

Algebra—2 units
Chemistry—1 unit

Plane geometry—1 unit

We pay particular attention to scholastic achievement in science courses and recommend taking additional science courses beyond the requirement for entrance. We also expect applicants to rank in the upper half of their graduating class. 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.

We require that all students take the American College Testing Program examination or the Scholastic Aptitude Test. The Dental Hygiene Admissions Committee reviews all applications and may require an on-campus personal interview. If the committee requests an interview, they will send the prospective student a letter stating the date, time, and place of the interview. Competition for admission to the program is intense and preference is given to West Virginia residents.

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 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.
- Successfully complete the Dental Hygiene National Board Examination 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 the end of every semester, the Dental Hygiene Committee on Academic Standards reviews the status of every student in the program. 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.

1. Students must maintain cumulative and dental hygiene/science grade point averages of 2.25 or better. The dental hygiene/science average is based on grades earned in these courses or their equivalents:
 - Anatomy 301 and 309
 - Biology 102 and 104
 - Chemistry 111 and 112
 - Microbiology 200
 - Pathology 301 and 302
 - Pharmacology and Toxicology 260
 - Physiology 241
 - Nutrition 171
 - All Dental Hygiene courses

2. 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.
3. Students 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 dental hygiene program.
4. 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 dental hygiene program, and the student will be ineligible for readmission to the dental hygiene program.
5. A student may repeat only *two* dental hygiene/science courses throughout the dental hygiene curriculum. A third D or F will require the student to repeat the year as a full-time student. Four or more grades of D or F will result in dismissal from the dental hygiene program, and the student will be ineligible for readmission to the program.
6. Prior to entrance into clinic a student must pass all basic science courses (with exception of pathology) required in the first two years of the curriculum.
7. 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.
8. The Division of Dental Hygiene reserves the right to dismiss, require remedial work, or 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.
9. 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*.)

The dental hygiene/science average is based on grades earned in these courses or their equivalents: Anatomy 301 and 309; Biology 102 and 104; Chemistry 111 and 112; Dentistry 300; Microbiology 200; Pathology 301 and 302; Pharmacology and Toxicology 260; Physiology 241; Nutrition 171; and all Dental Hygiene courses.

The Division of Dental Hygiene reserves the right to dismiss or require remedial work of any student who does not perform at a level of satisfactory for patient care.

Dental Hygiene Suggested Curriculum

First Year

First Semester	Hrs.	Second Semester	Hrs.
ORIN 101	1	BIOL 102	3
ENGL 101	3	BIOL 104	1
Cluster B (COMM 100-102)	3	CHEM 112	4
MATH 126	3	DTHY 186 <i>Oral Anatomy</i>	2
CHEM 111	4	HN&F 171 <i>Intro. Nutrition</i>	3
DTHY 100	1	Cluster B (PSYCH 101)	3
DTHY 185	1	DTHY 101	1
Total	16	Total	17

Second Year

First Semester	Hrs.	Second Semester	Hrs.
NBAN 301	4	PSIO 241	4
Cluster B (SOC 101)	3	NBAN 309 <i>Histology</i>	2
DTHY 205		Cluster A	3
<i>Theory and Pract. of Prevent.</i>	2	DTHY 225 <i>Dent. Hy. Technics</i>	4
MICB 200	3	ENGL 102	3
Cluster A	3	DTHY 220 <i>Dent. Nrsg. Technics</i>	2
Cluster B (PSYCH 241)	3	Total	18
Total	18		

Third Year

First Semester	Hrs.
DTHY 363 <i>Periodontics 1</i>	1
PATH 301	2
DTHY 320 <i>Dental Radiology</i>	2
PCOL 260	3
DTHY 350 <i>Public Health</i>	2
DTHY 360 <i>Dental Materials</i>	3
DTHY 370 <i>Clinical Methods</i>	2
DTHY 372 <i>Clinical Dental Hygiene</i> .	2
DTHY 380 <i>Rural Health</i>	1
DTHY 366 <i>Dental Literature</i>	1
Total	19

Summer I

Rural Health 491	3
Total	3

Fourth Year

First Semester	Hrs.
DTHY 404 <i>Adv. Clin. Meth. I</i>	1
DTHY 405 <i>Adv. Clin. Dent. Hy. 1</i>	4
DTHY 402 <i>Dent. Hygiene Practice</i> .	2
DH 490, 491, 493 Electives	1
Cluster A	3
DTHY 450 <i>Dent. Health Ed. 2</i>	2
DTHY 478 <i>Clinic Teaching</i>	2
Total	15

Second Semester	Hrs.
DTHY 364 <i>Periodontics 2</i>	2
DTHY 378 <i>Teaching Methods</i>	2
PATH 351	3
DTHY 361 <i>Expanded Functions</i>	2
DENT 300 <i>Anesthesiology</i>	1
DTHY 302 <i>Dental Health Ed. (w)</i>	3
DTHY 374 <i>Clinical Dental Hygiene</i> .	2
DTHY 322 <i>Dental Radiology</i>	1
Total	16

Summer II

DTHY 493 <i>Clinic</i>	2
DTHY 367 <i>Research Methods</i>	1
Total	3

Second Semester	Hrs.
DTHY 406 <i>Adv. Clin. Dent. Hy. 2</i> ..	3-4
DTHY 407 <i>Adv. Clin. Methods 2</i>	2
DTHY 451 <i>Dent. Health Ed. 3</i>	2
DH 490, 491, 493 Electives	2
Cluster A	3
DTHY 440 <i>Seminar</i>	1
Total	13-14

Advanced Education Programs

The Divisions of Dental Hygiene and Endodontics and the Departments of 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 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 Senior Associate Dean for Educational Programs, WVU School of Dentistry, Morgantown, WV 26506.

Dental Hygiene

Christina B. DeBiase, Ed.D., Director

e-mail: cdebiase@hsc.wvu.edu

1189 Health Sciences North

<http://www.hsc.wvu.edu/sod/departments/Dental%20Hygiene/Welcome.asp>

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 36 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.

Options for concurrent master's degrees in the areas of community medicine or public health administration are also available.

Inquiries concerning this program should be directed to the Senior Associate Dean for Educational Programs, School of Dentistry. Applications should be filed by July 1 for fall admission and by October 15 for spring enrollment.

Admission Requirements

In order to be admitted to the Division of Dental Hygiene, applicants must:

- 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.
- Have 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.
- 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.
- Completion of one of these standardized tests: the Graduate Record Examination (GRE) general aptitude test with a minimum combined score of 1,100 or above (400 verbal, 350 analytical, 350 quantitative), or the Miller Analogies Test with a score of 50 or above.
- Submission of all information requested in the graduate application to the Office of the Senior Associate Dean for Educational Programs.

Degree Requirements

In order to earn a degree in dental hygiene, students must:

- Complete a minimum of 36 semester credit hours: 21 required credit hours and 15 credit hours in an elective area(s) of dental hygiene specialization. Two elective areas of specialization are offered. These areas are 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.
- Provision of clinical patient care at least one semester and student teaching in the undergraduate clinic a minimum of one semester.

GPA

In order to earn a degree in dental hygiene students must also:

- Achieve of 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.
- 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.

M.S. Curriculum

	Hrs.
EDP 610 <i>Test and Measurement</i>	3
EDP 613 <i>Statistics</i>	3
DTHY 680 <i>Critical Issues in Health Care</i>	3
DTHY 681 <i>Expanded Functions</i>	3
DENT 691B <i>Computer Applications in Dentistry</i>	2
DTHY 697 <i>Research (Thesis)</i>	6
DENT 791 <i>Research Methods</i>	1
Total	21

Elective Area(s) of Dental Hygiene Specialization	15
<i>Dental Hygiene</i> 691 and <i>Dentistry</i> 791 courses and	
Courses taught by the School/College of:	
Business and Economics	
Human Resources and Education	
Medicine	
Multidisciplinary Studies	
Total	36

Endodontics

C. Russell Jackson, D.D.S., M.S., Director
1067 Health Sciences North

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 the Senior Associate Dean for Educational Programs. Applicants 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:

- Graduation from an accredited school of dentistry.
- Evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature.

Each applicant must file with the Division of Endodontics all information requested in the departmental application form by September 15.

Degree/Program Requirements

- Fulfillment of University requirements for graduate study.
- Twenty-four months (two academic years and two summer sessions) of consecutive residency at the WVU School of Dentistry.
- An approved master's thesis based on original research completed during the period of residency in an area related to endodontics. A certificate will be awarded only upon satisfactory completion of the research and thesis.
- Satisfactory completion of a final oral examination.
- Completion of a minimum of 63 credit hours. These include 39 hours of endodontic courses, a minimum of 15 hours of selected basic sciences subjects, two hours of teaching practicum, and a thesis (seven hours).
- Demonstration of satisfactory clinical competency in the student's field.
- Achievement of 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 two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

Specialization in Orthodontics

Peter Ngan, D.M.D., Chair
1073 Health Sciences North

<http://www.hsc.wvu.edu/sod/departments/orthodontics/index.asp>

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 generally requires 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 the Office of the Senior Associate Dean for Educational Programs or on our web site at <http://www.hsc.wvu.edu/sod/departments/orthodontics/index.asp>

Admission Requirements

- Graduation from an accredited dental school.
- 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 for admission.
- Each applicant must file with the department all information requested in the department application form by September 15.

Degree Requirements

- Fulfillment of general WVU graduate study requirements.
- Thirty-four months (three academic years and two summers) of residency at the School of Dentistry.
- An approved master's thesis based on original research completed during the period of residency in an area related to orthodontics.
- Satisfactory passage of a final oral examination.
- Completion of a minimum of 77 credit hours. These include 49 hours of orthodontic courses, a minimum of 13 hours of selected basic sciences subjects, two hours of teaching practicum, and a research/thesis (13 hours).
- Demonstration of satisfactory clinical competence in the student's field.
- Achievement of 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 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, D.D.S., M.Ed., F.A.C.P., Director
1199B Health Sciences North

<http://www.hsc.wvu.edu/sod/departments/Restorative/Prosthodontics.asp>

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 33 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 the Senior Associate Dean for Educational Programs. Completed applications are due by December 1 and those applicants approved for admission to the program will be notified after January 15.

Admission Requirements

- Graduation from an accredited U.S. or Canadian dental school.
- 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 for admission.
- Each applicant must file with the department all information requested in the School of Dentistry application form by September 15.

Degree Requirements

- Fulfillment of general WVU graduate study requirements.
- Thirty-three months (three academic years and two summers) of consecutive full-time advanced prosthodontic study and clinical training at the School of Dentistry.
- An approved master's thesis based on original research completed during the period of residency in an area related to prosthodontics.
- Satisfactory passage of a final oral examination.
- Completion of 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.
- Demonstration of satisfactory clinical competence in advanced prosthodontics.
- Achievement of 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 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 and Records in accordance with Policy Bulletin No. 34. Nonresident applicants should have a grade point average of 3.25 or above and an average score on the academic and PAT sections of the Dental Admission Test of at least 17. Economically or culturally disadvantaged students (especially if they are West Virginia residents) are encouraged to apply.

Admission Requirements

Admission to the WVU School of Dentistry 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 2005 should be made promptly upon completion of the 2003-2004 school year, even if the applicant has not completed all the requirements as listed.

A candidate for the D.D.S. 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 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 (90 semester credit hours minimum) of work in liberal arts in an accredited college. The prerequisites for admission include:

Courses	Hrs.
English composition and rhetoric, or equivalent	6
Zoology or biology (with laboratory)	8
Inorganic chemistry (with laboratory)	8
Organic chemistry (with laboratory).....	8
Physics (with laboratory)	8

Courses in comparative anatomy, microbiology, embryology, and biochemistry 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 American Association of Dental Schools Application Service (AADSAS). All applications are processed by that organization. Applications may be submitted online or application request cards are available at the Office of Admissions and Records, 1170 Health Sciences North, P.O. Box 9815, Robert C. Byrd Health Sciences Center of WVU, Morgantown, WV 26506-9815. Request cards should be submitted to AADSAS as promptly as possible. The deadline for submission of a completed AADSAS application to the AADSAS office, for admission to the West Virginia University School of Dentistry, is January 15. This deadline is deliberately and explicitly discussed in the AADSAS instruction booklet; applicants should review it 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 and complete the Dental Admission Test satisfactorily. This test is given at testing centers throughout the United States 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 residents of the state of WV 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.

International Dental Graduate Guidelines

International dental graduates who wish to apply to the West Virginia University 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 American Association of Dental Schools Application Service (AADSAS) by January 15.
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), or 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 individuals familiar with the applicant, excluding family members.
5. Submit Dental Admission Test (DAT) scores showing at least average competence in the various sub-sections 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 evaluated by Educational Credential Evaluators (ECE) or the World Educational Services (WES). The applicant is responsible for payment of fees for this service.
7. And, if approved, present to the school for personal interview with the Admissions Committee. Applicants who are selected for an interview with the Admissions Committee 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 and Records 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 basic required courses in the 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 Standards Committee. Students must satisfactorily complete all courses for which they have registered. Additional requirements include participation in mock board examinations and six weeks of remote-site training by fourth-year students.

Promotion

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

School of Dentistry Course Schedule

First Year Didactic Courses	Hrs.	Sem. 1	Sem. 2	Summer
700 <i>Anesthesiology</i>	1		x	
701 <i>Art and Science of Preventive Dentistry</i>	2	x		
703 <i>Introduction to Patient Care</i>	3			x
704 <i>Operative Dentistry</i>	4		x	
705 <i>General Biochemistry</i>	5		x	
710 <i>Dental Anatomy and Occlusion</i>	4	x		
711 <i>Periodontics</i>	2		x	
712 <i>Dental Materials</i>	3	x		
715 <i>Community Dental Health</i>	2		x	
718 <i>Oral Histology and Embryology</i>	6		x	
719 <i>Pediatric Dentistry</i>	1		x	
722 <i>Operative Dentistry</i>	4	x		x
724 <i>Gross Anatomy</i>	7			
731 <i>Occlusion</i>	2		x	
734 <i>Removable Prosthodontics</i>	6		x	
743 <i>Physiology</i>	5	x		
745 <i>Principles of Orthodontics</i>	1			x
Second Year Didactic Courses				
702 <i>Microbiology</i>	5	x		
707 <i>Introduction to Clinical Dentistry</i>	2	x	x	
721 <i>Endodontics</i>	2		x	
725 <i>Practice Management</i>	1			x
726 <i>Removable Prosthodontics</i>	7		x	x
727 <i>Oral Radiology</i>	1	x		
728 <i>General Pathology</i>	5		x	
729 <i>Operative Dentistry</i>	3	x		
734 <i>Removable Prosthodontics cont.</i>	6	x		
735 <i>Pediatric Dentistry</i>	1	x		
736 <i>Fixed Prosthodontics</i>	8	x	x	
738 <i>Oral Pathology</i>	3		x	
739 <i>Oral Surgery</i>	1		x	
740 <i>Periodontics</i>	1			x
744 <i>Orthodontics</i>	1		x	
746 <i>Orthodontic Technics</i>	1			x
747 <i>Management of Med./Dent. Emergencies</i>	1			x
754 <i>Implantology</i>	2			x
760 <i>Pharmacology</i>	5	x		
766 <i>Pediatric Dentistry</i>	2		x	
Second Year Clinical Courses				
770 <i>Clinical Oral Radiology</i>	1-6			x
776 <i>Removable Prosthodontics</i>	1-6			x
777 <i>Periodontics</i>	1-6			x
780 <i>Endodontics</i>	1-6			x
783 <i>Operative Dentistry</i>	1-6			x
784 <i>Oral Surgery</i>	1-6			x
786 <i>Pediatric Dentistry</i>	1-6			x
787 <i>Clinical Oral Diagnosis</i>	1-6			x
789 <i>Fixed Prosthodontics</i>	1-6			x

	Hrs.	Sem. 1	Sem. 2	Summer
Third Year Didactic Courses				
730 <i>Community Dentistry</i>	1		x	
747 <i>Management of Medical/Dental Emergencies</i>	1		x	
751 <i>Craniomendibular Occlusion</i>	1	x		
752 <i>Community Dentistry</i>	2	x	x	
753 <i>Oral Pathology</i>	2	x		
759 <i>Oral Surgery</i>	2	x	x	
761 <i>Pediatric Dentistry</i>	1	x		
763 <i>Periodontics</i>	2	x	x	
765 <i>Orthodontics</i>	1		x	
766 <i>Pediatric Dentistry</i>	1		x	
771 <i>Practice Management</i>	2			x
772 <i>Case-Based Treatment Planning</i>	1		x	
774 <i>Principles of Medicine</i>	2	x		
778 <i>Practice Management-Law</i>	1			x
779 <i>Practice Management-Ethics</i>	1			x
Third Year Clinical Courses				
770 <i>Clinical Oral Radiology</i>	1-6	x	x	x
775 <i>Practice Management</i>	1-6	x	x	x
776 <i>Removable Prosthodontics</i>	1-6	x	x	x
777 <i>Periodontics</i>	1-6	x	x	x
780 <i>Endodontics</i>	1-6	x	x	x
783 <i>Operative Dentistry</i>	1-6	x	x	x
784 <i>Oral Surgery</i>	1-6	x	x	x
785 <i>Orthodontics</i>	1-6	x	x	x
786 <i>Pediatric Dentistry</i>	6	x	x	x
787 <i>Clinical Oral Diagnosis</i>	1-6	x	x	x
789 <i>Fixed Prosthodontics</i>	1-6	x	x	x
Fourth Year Didactic Courses				
755 <i>Oral Pathology</i>	1	x		
756 <i>Removable Prosthodontics</i>	1	x		
758 <i>Multidisciplinary Seminar</i>	2	x	x	
762 <i>Endodontics</i>	1	x		
764 <i>Pain and Anxiety Control</i>	1	x		
772 <i>Case-Based Treatment Planning</i>	1	x		
778 <i>Practice Management—Law</i>	1	x		
Fourth Year Clinical Courses				
767 <i>Community Dentistry</i>	1	x	x	x
770 <i>Clinical Oral Radiology</i>	1-6	x	x	x
773 <i>Provisional Restorations</i>				
775 <i>Practice Management</i>	1-6	x	x	x
776 <i>Removable Prosthodontics</i>	1-6	x	x	x
777 <i>Periodontics</i>	1-6	x	x	x
780 <i>Endodontics</i>	1-6	x	x	x
783 <i>Operative Dentistry</i>	1-6	x	x	x
784 <i>Oral Surgery</i>	1-3	x	x	x
785 <i>Orthodontics</i>	1-6	x	x	x
786 <i>Pediatric Dentistry</i>	1-6	x	x	
787 <i>Clinical Oral Diagnosis</i>	1-6	x	x	x
789 <i>Fixed Prosthodontics</i>	1-6	x	x	x

School of Medicine

Robert M. D'Alessandri, M.D., Vice President

John E. Prescott, M.D., Dean

Thomas M. Saba, Ph.D., Associate Vice President for Research and Graduate Studies

Kevin A. Halbritter, M.D., Associate Dean, Hospital Affairs

James P. Griffith, M.D., Assistant Dean, Student Services, Charleston Division

Norman D. Ferrari, M.D., Associate Dean, Student Services and Academic Progress

James K. Hackett, M.B.A., Associate Dean, Finance and Administration

Fred S. Minnear, Ph.D., Assistant Dean, Graduate Studies

Mary Beth Mandich, Ph.D., Associate Dean for Professional and Undergraduate Programs

James M. Shumway, Ph.D., Associate Dean, Medical Education

James Stevenson, M.D., Associate Dean, Development and
Continuing Medical Education

G. Anne Cather, M.D., Associate Dean, Student Services and
Professional Development

Michael L. Friedland, M.D., Dean, Eastern Division

Rosemarie Cannarella, M.D., Assistant Dean for Student Services, Eastern Division

Clark Hansbarger, Associate Vice President, Charleston Division

Barry Linger, Ed.D., Interim Assistant Dean for Clinical Education, Eastern Division

Konrad C. Nau, M.D., Associate Dean, Eastern Division

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

Degrees Offered

M.D., Doctor of Medicine

M.S., Ph.D. in Biochemistry (Medical)

M.S., Ph.D. in Microbiology, Immunology, and Cell Biology

M.S., Ph.D. in Neurobiology and Anatomy

M.S., Ph.D. in Pharmacology and Toxicology

M.S., Ph.D. in Physiology (Medical)

B.S., M.S., Ph.D. in Exercise Physiology

B.S., M.S. in Medical Technology

M.S. in Community Health Promotion

M.O.T., Master of Occupational Therapy

M.P.H., Master of Public Health

D.P.T., Master of Physical Therapy

Introduction

The West Virginia University School of Medicine shares outstanding facilities in the Health Sciences Center with the other health-related professional schools of the University. The Ruby Memorial Hospital offers sophisticated medical technology, including magnetic resonance imagery, lithotripsy, and laser surgery. The Ruby Memorial Hospital also houses the Jon Michael Moore Trauma Center and the WVU Children's Hospital. The Chestnut Ridge Psychiatric Hospital treats the entire spectrum of psychiatric and behavioral problems. The Mary Babb Randolph Cancer Center provides a facility totally dedicated to the diagnosis and treatment of cancer. The Mountainview Regional Rehabilitation Hospital offer students the opportunity to investigate rehabilitative and physical medicine. The Clark K. Sleeth Family Medicine Center opened new facilities in 1999. The Department of Human Performance and Applied Exercise Sciences incorporates exercise physiology, physical therapy, and occupational therapy. Additionally, the Department of Community Medicine has graduate programs in public health (M.P.H.), community health promotion, and school health. These programs complement all of the other existing programs in the other health professions schools (dentistry, nursing, and pharmacy). Laboratories allow scientists to work toward their goals. Research areas of neurobiology and anatomy, biochemistry, cellular biology, medical technology, microbiology and immunology, pathology, pharmacology and toxicology, exercise physiology, and physiology support study toward masters of science and doctor of philosophy degrees. Students enter the graduate programs undifferentiated. They take a common core the first year and self-select into their specialty areas in year two.

All basic science graduate programs require the submission of scores from the Graduate Record Examination and some may require scores from the applicable advanced test, but in no program are test scores the sole criterion for admission. Prospective graduate students are urged to initiate application for admission as early as possible. The first step is an inquiry to the department offering the program desired; the reply to such an inquiry will include instructions for applying to the particular program.

Initial application must be made for admission to graduate study on standard forms provided by the WVU Office of Admissions and Records. To transfer from one University school or department to another, students may initiate a transfer request by contacting the Health Sciences Center Graduate Programs Office or their advisors. The advisor must contact the Health Sciences Center Graduate Programs Office to complete the transfer.

The West Virginia University School of Medicine is accredited by the Liaison Committee on Medical Education of the American Medical Association and the Association of American Medical Colleges.

Additional applicant information is as follows:

1. Applicants to the Ph.D. graduate programs in the School of Medicine apply directly to the Office of Research and Graduate Education in the WVU School of Medicine (www.hsc.wvu.edu/som/resoff.students_prospective/criteria.asp). In addition official transcripts and an official application for admission must be sent to the WVU Office of Admissions and Records, 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. A completed application must include three letters of recommendation, transcripts from all previous institutions, and a personal statement. In addition, a personal interview is required for domestic students and a phone interview is required for international students. Travel costs for the interview will be paid and/or reimbursed for domestic students.

All Ph.D. applications are reviewed by a Common Graduate Admissions Committee comprised of faculty from the various graduate training programs. For maximum admissions consideration, we recommend that you apply as early as possible. Applications for the fall are reviewed beginning January 15 and are accepted until May 1. Upon enrollment, students will receive financial aid that includes a yearly stipend, full tuition coverage, and WVU student health insurance.

Applicants must have a bachelor's or an 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 1000 for verbal and quantitative with a 4.0 in analytical. International students must have a TOEFL score of at least 550 by paper exam or 260 by computer exam.

2. During year one, all new graduate students matriculate into a common, interdisciplinary core curriculum. This integrated first year allows students to build competence in key areas of contemporary science, gain exposure to the various training program options, and rotate with three potential thesis advisors. In the second semester, students customize their coursework by selecting from an array of program-specific electives. At the end of year one, students select a research advisor and a program track for advanced graduate training.

Departments

Anesthesiology
 Behavioral Medicine and Psychiatry
 Biochemistry and Molecular Pharmacology
 Community Medicine
 Emergency Medicine
 Family Medicine
 Human Performance and
 Applied Exercise Science
 Medicine
 Microbiology, Immunology, and Cell Biology
 Neurobiology and Anatomy

Chairs

Robert E. Johnstone, M.D.
 James M. Stevenson, M.D.
 Diana S. Beattie, Ph.D.
 Alan Ducatman, M.D.
 Ann S. Chinnis, M.D.
 Charles H. M. Jacques, M.D.

 Mary Beth Mandich, Ph.D.
 James E. Brick, M.D.
 John B. Barnett, Ph.D.
 Richard D. Dey, Ph.D.

Neurology
Neurosurgery
Obstetrics and Gynecology
Ophthalmology
Orthopedic Surgery
Otolaryngology
Pathology
Pediatrics
Physiology and Pharmacology
Radiology
Surgery

Committees

Academic Standards
Admissions Committee, M.D. Degree
Admissions Committee/Graduate Biomedical Sciences
Admissions Committee/Medical Technology
Admissions Committee/Occupational Therapy
Admissions Committee/Physical Therapy
Continuing Medical Education
Coordinating Counsel on Graduate Medical Education
Curriculum Committee
Distinguished Teacher Committee
Executive Faculty
Faculty Promotion and Tenure
Research Development Grant Committee
Student Leadership
Van Liere Research Convocation and Faculty Research Day
Women in Health and Science

John F. Brick, M.D.
Julian E. Bailes, M.D.
Roger C. Toffle, M.D.
John V. Linberg, M.D.
Sanford E. Emery, M.D.
Stephen J. Wetmore, M.D.
Barbara Ducatman, M.D.
Norman D. Ferrari III, M.D., (*Interim*)
Robert L. Goodman, Ph.D.
Mathias P. Frick, M.D.
David McFadden, M.D.

Chairs

Charles R. Whiteman, M.D.
David M. Morgan, M.D.

Albert Berrebi, Ph.D.
Mary Ellen Koenn, M.S.
Diana Middleton, O.T.
Trevor Swan, B.S.
James M. Stevenson, M.D.
Anthony DiBartolomeo, M.D.
C. Larry Harris, Ph.D.
Frank Reilly, Ph.D.
Robert M. D'Alessandri, M.D.
Gregory Konat, Ph.D.
William F. Wonderlin, Ph.D.
G. Anne Cather, M.D.

Peter Mathers, Ph.D.
Maria Kolar, M.D.

Biochemistry and Molecular Pharmacology

Diana S. Beattie, Ph.D., Chair
Lisa Salati, Ph.D., Graduate Coordinator
3123 Health Sciences North
<http://www.hsc.wvu.edu/som/bmp>

Degrees Offered

Master of Science
Doctor of Philosophy

Graduate study in biochemistry is designed to assist students in the development of their own capabilities for independent thought and research. All students are provided with a strong biochemistry background; however, the program has sufficient flexibility to allow individual students to select advanced specialty courses in the basic sciences which are of particular importance to their career goals. Faculty research problems are of current interest and are diverse, reflecting the broad spectrum of areas encompassing biochemistry. A complete description of the graduate program and research opportunities can be found at <http://www.hsc.wvu.edu/som/bmp>.

Admission

The graduate program in biochemistry and molecular pharmacology is able to accommodate students with diverse backgrounds and wide ranges of interest. Students with undergraduate degrees in the biological, biochemical, chemical, or physical sciences, who have a strong desire to pursue a research career in biochemistry, molecular biology, and cell biology, are encouraged to apply. Academic preparation in qualitative/quantitative chemical analysis, organic chemistry, calculus, physics, and physical chemistry is recommended. For students with demonstrated abilities, course deficiencies can be corrected after enrollment.

All students in the basic sciences apply and enter graduate study as a common class without a designated major. Students do not officially enter the departmental program until the end of the first year of graduate study. Entry is by choosing a dissertation advisor affiliated with the graduate program. Complete information about the application process can be found at web site for the Office of Research and Graduate Studies at www.hsc.wvu.edu/som/resoff. Applicants must submit the following items:

- The preliminary application form.
 - Official transcripts of all coursework.
 - Three letters of recommendation from individuals capable of evaluating the applicant's potential for graduate work.
 - Official GRE scores.
 - Official TOEFL examination scores for international applicants.
- Students are admitted for the fall semester.

Doctor of Philosophy

To assure that all students become familiar with the basic principles of biochemistry, the first year of the doctor of philosophy (Ph.D.) program is devoted primarily to coursework. In addition to formal courses during the first semester, students will undertake research in three laboratories of their choice. The laboratory experience is designed to introduce students to basic biochemistry research skills and to aid in the selection of a dissertation advisor.

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

An essential component of the Ph.D. program is participation in departmental journal clubs and seminars. Both students and faculty participate; thus, students learn to organize effectively and present research material to large groups of people.

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.

Master of Science

The Department of Biochemistry and Molecular Pharmacology offers a thesis master's degree. This program involves completion of a master's research project in addition to formal coursework. Students are generally not admitted directly into this program. Two to three years are required to complete the M.S. program.

Research

Research being conducted in the department includes: hormonal regulation of metabolism; regulation of gene expression; RNA processing; signal transduction; G-protein coupled receptors; tyrosine kinases and phosphatases; insulin signalling; airway hyperactivity; chemistry of enzymes; membrane molecular biophysics; eye development; ion channel physiology; neuropharmacology of pain; cellular growth regulation and cancer therapeutics; and auditory signal transduction.

Community Medicine

Educational Programs in Community and Public Health

Alan M. Ducatman, M.D., M.S.C., Chair, Community Medicine

Ian R. H. Rockett, Ph.D., Associate Chair, Community Medicine, and

Director of Educational Programs

Melissa R. Baker, M.P.A., Senior Program Coordinator

Community Health Promotion

Degree Offered

Master of Science

The Department of Community Medicine offers the master of science (M.S.) degree in community health promotion. The major purpose of the program is to prepare health professionals to interface between communities and health care systems. Community health professionals serve as partners in the health care team and provide leadership in planning, developing, organizing, implementing, and evaluating health promotion programs.

Health promotion graduates may be employed as community health educators, wellness center program managers, and health promotion specialists in corporations, health agencies, or state/county health departments.

Goal of the M.S. Program

To prepare leaders who can develop effective programs in the community and public health workforce to address health needs and maintain healthy lifestyles. Upon completion of the program, graduates will have the ability to:

- Identify relevant data sources and organize data for analysis and interpretation. Mobilize communities to address their health needs.
- Identify goals and priorities and use them in planning interventions appropriate for the target community.
- Assist the community in implementing health interventions designed to effect changes in knowledge, attitudes, or behavior by individuals or groups.
- Evaluate interventions to assess the degree to which communities have successfully addressed health priorities.
- Provide consultation and technical assistance to a wide array of audiences.
- Communicate effectively with target populations who need to enhance their health and with those segments of society who can influence public health.
- Manage prevention programs in a variety of settings including community, school, medical, and workplace.
- Identify health partners and develop networks to enhance the health of communities.

Admission Requirements

Admissions decisions will be based on an overall assessment of the applicants demonstrated commitment to community health and her/his educational and professional preparation for the successful completion of the master of science 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.S. program must:

- Submit an Application for Graduate Admission to West Virginia University and attach a nonrefundable check for the amount specified on the application form.
- Submit sealed transcripts of all college coursework to the Graduate Unit, West Virginia University Office of Admissions and Records.
- Hold a bachelor's degree from an accredited college or university and a minimum grade point average of 2.75 on a scale of 4.0.
- Submit scores for the general test of the Graduate Record Examination (GRE).
- Complete an official M.S. (Community Health) Program Application.

- A minimum score of 550 on the TOEFL (Test of English as a Foreign Language) exam is required for all international applicants and for all applicants whose first language is not English.
- The ability to use computers in public health applications is a requirement for graduate work. It is the responsibility of students accepted into the M.S. program to become skilled in computer applications.

Performance Standards

1. All students must maintain a 3.0 grade point average during their course of study.
2. Grades lower than C will not count toward fulfilling degree requirements.
3. A faculty review is required if two grades of C or lower are recorded. Three grades of C or lower will result in academic suspension or termination from the program.

Course of Study

Students in the M.S. program will select either a practicum track or a research track. The course of study includes a minimum 21 hours of required courses, 12 hours of electives, and either a six-hour practicum (CHPR 650) or a six-hour thesis (CHPR 697), for a minimum total of 39 credit hours.

Required Courses

Course	Hrs.
PUBH 601 <i>Introduction to Community and Public Health</i>	3
PUBH 611 <i>Applied Biostatistics for Health</i>	3
CHPR 612 <i>Social and Behavioral Theory</i>	3
CHPR 634 <i>Health Promotion Research Methods</i>	3
CHPR 635 <i>Management for Community and Public Health</i>	3
CHPR 638 <i>Community Health Assessment and Evaluation</i>	3
CHPR 648 <i>Intervention Design</i>	3

Practicum Block

CHPR 691 <i>Practicum Proposal</i>	1
CHPR 650 <i>Practicum</i>	3
CHPR 691 <i>Practicum Report</i>	2
<i>or</i>	
CHPR 697 Thesis	6

For information on a related program in the Department of Community Medicine, see the listing for the master of public health degree program. Since unforeseen circumstances might necessitate a change in our curriculum, we strongly encourage prospective students to visit the Educational Programs web site, which is located at <http://www.hsc.wvu.edu/som/cmed/> for current requirements.

Public Health

Degree Offered

Master of Public Health

The field of public health encompasses a number of specific disciplines whose mission is to improve quality of life and health outcomes among all members of a community. 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 master of public health 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 the 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 through a generalist M.P.H. degree in community health/preventive medicine offered by the Department of Community Medicine. This degree gives students a thorough understanding of public health theory and application in the core areas of biostatistics, epidemiology, environmental health science, health services administration, and social and behavioral sciences. 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. Our 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 West Virginia University School of Medicine. The School of Medicine's mission is to improve the health of West Virginians through the education of health professionals, through basic/clinical scientific research and research in rural health care delivery, through the provision of continuing professional education, and through participation in the provision of direct and supportive health care.

The specific educational mission that relates to the M.P.H. program includes the following goals:

- Educate students and residents to become competent professionals with integrity and compassion with the potential to become community leaders, innovative educators, and creative researchers.
- Promote lifelong learning skills in students and residents.
- Stimulate interest of students and residents to practice in rural areas of West Virginia.
- Emphasize the importance of prevention and healthy lifestyles for students and residents and the populations they will serve.
- Maintain the importance of teaching students and residents, and enhance the recognition and rewards for teaching performance.
- Create an environment that emphasizes a scholarly approach to curricular implementation and evaluation while fostering an atmosphere of improvement and excellence.

Admission Requirements

Admissions decisions will be based on an overall assessment of the applicants demonstrated commitment to public health and her/his educational and professional preparation for the successful completion of the master of public health 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. Submit an Application for Graduate Admission to West Virginia University and attach a nonrefundable check for the amount specified on the application form.
2. Submit sealed transcripts of all college coursework to the Graduate Unit, West Virginia University Office of Admissions and Records.
3. Hold a bachelor's degree from an accredited college or university and a minimum grade-point average of 2.75 on a scale of 4.0.
4. Submit scores for the General Test of the Graduate Record Examination (GRE).
5. Complete an official M.P.H. Program Application.
6. A minimum score of 550 on the TOEFL (Test of English as a Foreign Language) exam is required for all international applicants and for all applicants whose first language is not English.
7. The ability to use computers in public health applications is a requirement for graduate work. It is the responsibility of students accepted into the M.P.H. program to become skilled in computer applications.

Performance Standards

1. All students must maintain a 3.0 grade point average during their course of study.
2. Grades lower than C will not count toward fulfilling degree requirements.
3. A faculty review is required if two grades of C or lower are recorded. Three grades of C or lower will result in academic suspension or termination from the program.

Course of Study

The course of study includes a minimum 18 hours of required courses, 15 hours of electives, and a six-hour practicum (PUBH 689), for a minimum total of 39 credit hours.

Required Courses

Course	Hrs.
PUBH 611 <i>Applied Biostatistics for Health</i>	3
CHPR 612 <i>Social and Behavioral Theory</i>	3
PUBH 630 <i>Policy and the Health System</i>	3
CHPR 635 <i>Management for Community and Public Health</i>	3
PUBH 650 <i>Environmental Health</i>	3
PUBH 660 <i>Public Health Epidemiology</i>	3
PUBH 691 <i>Practicum Proposal</i>	1
PUBH 689 <i>Practicum</i>	3
PUBH 691 <i>Practicum Report</i>	2

For information on a related program in the Department of Community Medicine, see the listing for the master of science (Community Health Promotion) degree program. Since unforeseen circumstances might necessitate a change in our curriculum, we strongly encourage all prospective students to visit the Educational Programs web site, which is located at www.hsc.wvu.edu/som/cmcd/ for current requirements.

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 master's program.

Division of Exercise Physiology

Rachel A. Yeater, Ph.D., Professor and Chair

Stephen E. Alway, Ph.D., Director of Graduate Studies

8707D HSC

<http://www.hsc.wvu.edu/som/ep>

Degrees Offered

Bachelor of Science

Master of Science

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. 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, 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.

The Profession

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, or 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

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 liberal studies program (including 12 hours of Cluster A and 12 hours of Cluster B). Students must complete the following courses or course equivalents in theory and foundation to meet the exercise physiology program requirements.

Course	Hrs.
CHPR 172 <i>First Aid and Emergency Care</i>	3
PSYC 241 <i>Developmental Psychology</i>	3
ATTR 121 <i>Sport Injury Control and Management</i>	3
ATTR 219 <i>Gross Anatomy</i>	3
EXPH 240 <i>Medical Terminology</i>	1
EXPH 293A <i>Introduction to Exercise Physiology I</i>	1
EXPH 293B <i>Introduction to Exercise Physiology II</i>	1
EXPH 364 <i>Kinesiology</i>	3
EXPH 365 <i>Exercise Physiology I</i>	3
EXPH 368 <i>Laboratory Techniques and Methods I</i>	3
EXPH 491 <i>Professional Field Experience</i>	6
EXPH 493D <i>Strength and Conditioning Methods</i>	3
EXPH 493E <i>The Business of Exercise Physiology</i>	3
EXPH 496 <i>Senior Thesis</i>	3
MATH 126 <i>College Algebra*</i>	3
MATH 128 <i>Plane Trigonometry*</i>	3
PHYS 101 <i>Introductory Physics</i>	4
PHYS 102 <i>Introductory Physics</i>	4
CHEM 115 <i>Fundamentals of Chemistry</i>	4
CHEM 116 <i>Fundamentals of Chemistry</i>	4
CHEM 231 <i>Organic Brief Course</i> (or both of the following)	4
CHEM 233 and 235 <i>Organic Chemistry I</i>	4
CHEM 234 and 236 <i>Organic Chemistry II</i>	4
BIOL 101 and 103 <i>General Biology and Lab**</i>	4
BIOL 102 and 104 <i>General Biology and Lab**</i>	4
PSIO 241 <i>Elementary Physiology</i>	4
HN&F 171 <i>Introduction to Human Nutrition</i>	3
STAT 211 <i>Elementary Statistical Inference</i>	3
Suggested Electives: BIOL 219 <i>The Living Cell</i> (4 hrs.) and BIOC 339 (3 hrs.)	

*MATH 129, 155, or 150 may be substituted for MATH 126 and 128.

**BIOL 115 and 117 may be substituted for of BIOL 101–104.

Students must have a grade of C or better in all required courses. Science courses must be taken at WVU. 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 one of the professional programs after graduation (e.g. medicine, pharmacy, physical therapy, occupational therapy) or graduate school should take the health professionals tract.

Exercise Physiology Curriculum Plan

Freshman Year

First Semester	Hrs.	Second Semester	Hrs.
ENGL 101	3	MATH 128 <i>Trig.</i>	3
Cluster A	3	BIOL 102 and 104	4
MATH 126 <i>Algebra</i>	3	Cluster A and B	6
BIOL 101 and 103	4	ATTR 121 <i>Athletic Training</i>	3
EXPH 293 <i>Intro. to EXPH I</i>	1	EXPH 293A <i>Intro. to EXPH II</i>	1
PSYC 101 <i>Intro. to Psychology</i>	3	Total	17
Total	17		

Sophomore Year

First Semester	Hrs.	Second Semester	Hrs.
CHEM 115	4	CHEM 116	4
PHYS 101	4	PHYS 102	4
Cluster	3	PSIO 241 <i>Human Physiology</i>	4
ENGL 102	3	CHPR 172 <i>First Aid & Emer. Care</i> ..	2
EXPH 364 <i>Kinesiology</i>	3	EXPH 240 <i>Medical Terminology</i>	1
Total	17	Total	15

Junior Year

First Semester	Hrs.	Second Semester	Hrs.
EXPH 365 <i>Exercise Physiology I</i>	3	CHEM 231 <i>Org. Chem. Brf. Cor.</i>	4
EXPH 368 <i>Lab Tech. & Meth. I</i>	3	EXPH 493D <i>Strength & Cond. Mth.</i> ..	3
ATTR 219 <i>Anatomy</i>	3	HN&F 171 <i>Nutrition</i>	3
PSYC 141 <i>Human Grwth & Dev.</i>	3	ENGL 305	3
Cluster	3	Elective (s)	3
Total	15	Total	16

Senior Year

First semester	Hrs.	Second semester	Hrs.
EXPH 491 <i>Professional Field Exp.</i> .	3	EXPH 470 <i>Research Methods</i>	3
EXPH 496 <i>Senior Thesis</i>	3	EXPH 493E <i>The Bus. of Exercise</i> ...	3
STAT 211	3	Cluster	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 <i>Trig.</i>	3
CHEM 115	4	BIOL 117	4
MATH 126 <i>Algebra</i>	3	Cluster A and B	6
BIOL 115	4	CHEM 116	4
EXPH 293 <i>Intro. to EXPH I</i>	1	EXPH 293A <i>Intro. to EXPH II</i>	1
PSYC 101 <i>Intro. to Psychology</i>	3	Total	18
Total	18		

Sophomore Year

	Hrs.
FIRST SEMESTER	
CHEM 233 & 235 <i>Organic</i>	4
PHYS 241 <i>Human Growth & Dev.</i>	3
ATTR 121 <i>Athletic Training</i>	3
ENGL 102	3
EXPH 364 <i>Kinesiology</i>	3
PHYS 101	4
Total	20

	Hrs.
SECOND SEMESTER	
CHEM 234 & 236 <i>Organic</i>	4
PHYS 102	4
PSIO 241 <i>Human Physiology</i>	4
CHPR 172 <i>First Aid & Emer. Care</i> ..	2
EXPH 293D <i>Medical Terminology</i> ..	1
Cluster	3
Total	18

Junior Year

	Hrs.
FIRST SEMESTER	
EXPH 365 <i>Exercise Physiology I</i>	3
EXPH 368 <i>Lab Tech. & Meth. I</i>	3
ATTR 219 <i>Anatomy</i>	3
BIOC 339	4
Elective Science (e.g. BIOL 219)	4
Total	17

	Hrs.
SECOND SEMESTER	
EXPH 460 <i>Pathophysiology</i>	3
EXPH 493D <i>Strength & Cond. Mth.</i> 3	
HN&F 171 <i>Nutrition</i>	3
ENGL 305	3
STAT 211	3
Cluster	3
Total	18

Senior Year

	Hrs.
FIRST SEMESTER	
EXPH 491 <i>Professional Field Exp.</i> . 3	
EXPH 496 <i>Senior Thesis</i>	3
Elective Science (e.g. BIOL 310)	4
MBIM 200	4
Cluster	3
Elective	3
Total	20

	Hrs.
SECOND SEMESTER	
EXPH 470 <i>Research Methods</i>	3
EXPH 491 <i>Professional Field Exp.</i> . 3	
EXPH 493 <i>Exercise Mgmt.</i>	3
Elective Science (BIOL 410)	4
Cluster	3
Total	16

Courses for Special Emphasis

Pathophysiology	3
Research Methods	3
Clinical Exercise Physiology	6
Medical Terminology	1
Biochemistry	3
Total	16

Strongly Suggested Electives for Medical School

BIOL 219 <i>The Living Cell</i>	4
BIOL 310 <i>Ad Cellular/Moleclr. Bio</i> ..	4
BIOL 410 <i>Cell & Molclr. Bio. Mthd.</i> .	4
MBIM 200 <i>Medical Microbiology</i>	3
MATH 155 <i>Calculus</i>	4
Total	19

Master of Science

The master of science program in exercise physiology prepares students for careers in adult fitness, hospital or corporate-based wellness programs, or cardiac rehabilitation. Students specialize by completing a 200-hour clinical internship. A thesis option also is available.

Admission

Fifteen students are accepted once a year (by May 30) 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 2.75 (based on A=4.0 grade points). Three letters of reference 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, and college transcripts must be submitted by March 15.

Program Requirements

A minimum of 36 semester hours of credit is required for graduation. The following courses or course equivalents are required.

Course	Hrs.
ATTR 419 <i>Gross Anatomy</i>	3
SS 615 <i>Research Methodology in Physical Education</i>	3

PSIO 441 <i>Mechanisms of Body Function</i>	4
PHAR 449 <i>Drugs and Medicines</i>	3
HN&F 691A <i>ADTP: Nutrition and Fitness</i>	3
EXPH 470 <i>Research Methods</i>	3
EXPH 567 <i>Exercise Physiology 2</i>	3
EXPH 668 <i>Diabetes and Exercise</i>	3
EXPH 670 <i>Laboratory Techniques And Methods 2</i>	3
EXPH 671 <i>Stress Testing</i>	3
EXPH 672 <i>Professional Field Placement 2</i>	6
EXPH 691 <i>Exercise Prescription</i>	3
or if the student chooses the thesis option, the following courses are required:	
EXPH 797 <i>Research</i>	3
EXPH 798 <i>Dissertation/Thesis</i>	3

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. 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 and schools of West Virginia University.

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 system, heart disease, neuromuscular system, aging, immunology, cancer, and diabetes) and accommodate 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

1. 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 School of Medicine as stated on page 66. Students applying to the Ph.D. program normally have completed a master's degree with 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 1100 for the verbal and quantitative scores combined. However, students will not be accepted nor denied acceptance based solely on test scores. An interview with the program faculty is required. Students will be selected by the School of Medicine Admissions Committee. Students who have not completed a master's degree but wish to be considered for the Ph.D. program should contact the director of graduate studies (salway@hsc.wvu.edu). Typically students who are admitted to the Ph.D. program without a master's degree will take several clinically focused courses in exercise physiology in their second year of enrollment.

Normally, students are enrolled for three 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 major in exercise physiology include the following.

- a. Minimum GPA of 3.0.
- b. No grade less than B will be accepted for any exercise physiology course.
- c. No grade less than C will be allowed in any of the courses on the plan of study.
- d. Students may be required to obtain a B 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 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 a doctoral 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.

2. 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 and student 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 whom 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

	Hrs.
Biology	4-8
General Chemistry or Organic Chemistry	4-8
Physics is recommended but not required	4

Required Doctoral Coursework (or equivalent)

	Hrs.
CCMD 793 <i>Cellular Structure and Metabolism</i>	5
CCMD 712 <i>Biostatistics for the Basic Sciences</i>	1
CCMD 789 <i>Scientific Ethics and Certification</i>	1
CCMD 799 <i>Graduate Colloquium</i>	1
CCMD 797 <i>Laboratory Rotations</i>	3
CCMD 793 A <i>Fundamentals of Integrated Systems</i>	4
CCMD 793 H <i>Molecular Genetics and Development</i>	4
CCMD 793 I <i>Microbial Pathogenesis</i>	1
CCMD 793 J <i>Introduction to Biomedical Research</i>	1
CCMD 793 G <i>Cardiovascular and Renal Biology</i>	2
CCMD 793 E <i>Muscle Structure and Function</i>	2
EXPH 791 A <i>Advanced Study Exercise Physiology I</i>	3
EXPH 791 B <i>Advanced Study Exercise Physiology II</i>	3

EXPH 791 C <i>Advanced Study of Exercise Physiology III:</i> Neural regulation of muscle structure and function	3
EXPH 791 D <i>Introduction to research methods in Exercise Physiology</i>	3
EXPH 797 (Must be completed prior to dissertation.)	12-24
EXPH 796 <i>Graduate Seminar</i>	3
EXPH 799 <i>Graduate Colloquium</i>	1
*Statistics	9
Introduction to Research/Research Rotations (minimum of three research rotations) ..	9

*Specific courses to be determined by doctoral committee.

Recommended—One of the Following Courses	Hrs.
CCMD 793 F <i>Immunology II</i>	2
CCMD 793 D <i>Neuroscience II</i>	2
CCMD 793 C <i>Respiratory System Biology</i>	2
CCMD 793 C <i>Proteins/Proteomics: The New Frontier of Biomedical Science</i>	2

Minor Area of Specialization

Students designate a minor area of specialization such as cardiac rehabilitation, reproductive physiology, molecular biochemistry, aging, nutrition, etc. A minimum of 12 hours of coursework must be taken in the minor area of specialization. Doctoral committees may require additional coursework or research credits, depending on a student's research or professional goals. This will be clearly identified by the Graduate Advisory Committee in the student's program of study.

Additional Academic Responsibilities

All doctoral students will be required to present a minimum of three one-hour graduate seminars to faculty and students before graduating. Doctoral students are also required to teach as part of their training. Students are expected to present their research data at national meetings and publish their data in appropriate peer-reviewed journals prior to graduation. However, the student's faculty advisor must give approval before any research or scholarly material is submitted for presentation or publication and the material must recognize all appropriate co-authors and grant sources.

Required Research Participation

Because the doctorate is a research degree, students will be expected to be involved in research from the beginning of their programs. Doctoral students will participate in three research rotations with faculty in exercise physiology during the first two semesters of enrollment. Students are expected to choose a dissertation chair and a Dissertation Committee by the end of the first year of enrollment. Students should work with their dissertation advisor to design appropriate pilot studies and with that data identify a dissertation project and appropriate research questions/hypothesis to be tested by the proposed research. All approved research projects must be hypothesis based, and whenever possible, the research questions should address mechanistic questions that explain biological phenomenon relevant to exercise physiology.

Research is conducted throughout the doctoral program with a goal of having at least one to three manuscripts published or in preparation before graduation. Students should strive to present their research findings at a minimum of one national/international meeting annually 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. Advancement to candidacy means that in the judgment of the faculty, the doctoral student has an adequate knowledge of exercise physiology, has an in-depth knowledge of a specialized area in exercise physiology, has acquired adequate research skills to conduct research experiments, 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 and conduct independent research.

Requirements of the Qualifying/Candidacy Examination

The Qualifying Examination should typically be taken before the beginning of the third academic year, preferably in the summer semester of the second year. Some students may require additional didactic coursework if his/her research/science preparation during his/her master's degree was considered to be insufficient to prepare the student for work at the doctoral level. When a student has passed the Qualifying Examination, he/she will be admitted to candidacy for the Ph.D.

Prerequisites for the Candidacy Examination

The following are prerequisites for advancement to the qualifying examination:

1. The student must have an approved dissertation advisor and a Dissertation Committee.
2. The student must be in good academic standing (GPA of B or better) as defined in the doctoral program and this catalog, and have satisfactorily completed the first two years of course requirements (including those specified by the student's dissertation committee in the program of study). A *minimum* of 12 credit hours (or equivalent) of research experience is expected, but more is desirable.
3. Two-thirds of the exercise physiology graduate faculty must approve each student for consideration of candidacy before the student is permitted to take Part I. The graduate faculty in conjunction with the Dissertation Committee will evaluate Part I of the qualifying/candidacy examination. The student must receive an overall B (80 percent) grade to pass Part I and a minimum grade of B (80 percent) on each component of the exam. Part II (oral and written components) are evaluated exclusively by the Dissertation Committee, and there can be no more than one dissenting vote from this committee for a student to pass Part II.

Type of Examination

The candidacy examination has two parts and students should aim to successfully complete both parts within a single month.

Part I: Comprehensive Integrative Written Examination

This is taken over major areas of exercise physiology, the minor area of concentration and research design. Students typically will write the responses to Part I over four days (e.g., Monday, Tuesday, Thursday, Friday). The examination will be available for the student to begin at 8:00 a.m. each of the scheduled days and normally the exam will be conducted from 8:00 a.m. to 5:00 p.m. on each of the four days. The exam will begin at 8:00 a.m.; however, students may choose to start at another time after 8:00 a.m. if this is arranged in advance. Nevertheless, no student will be permitted to continue the exam beyond 5:00 p.m. even if the student opted to begin writing the exam at some time other than the scheduled time. Thus, it is the student's responsibility to ensure that he/she has adequately and appropriately scheduled the block of time between 8:00 a.m. to 5:00 p.m. each day to respond to all questions that were submitted to the student that day.

Part II: Written Research Proposal

Normally, Part II will be scheduled within two to four weeks of successful completion of Part I. In Part II graduate students will be required to write and submit a NIH/AHA-fellowship type grant proposal to his/her Advisory Committee as part of the divisional requirements for the qualifying examination. This grant proposal should detail the intended research dissertation project, hypothesis, specific aims, review or literature, methods, literature citations, etc. The Advisory Committee may add other elements to the qualifying examination evaluation. Students should work on Part II throughout the second year of graduate enrollment.

- Part II of the comprehensive/qualifying examination is submission of a NIH style grant proposal that depicts exactly the dissertation project that the graduate student proposes to complete.
- Rather than waiting until Part I is completed, the graduate student should begin preparing for Part II (i.e., writing the grant proposal) concurrent with reviewing material for Part I of the examination. This should be an ongoing process occurring throughout year two.
- It is expected that the student will develop the contents of this proposal by consulting individually with the members of his/her Dissertation Committee throughout year two. Furthermore, the student should meet at least once with his/her Dissertation Committee prior to the comprehensive examination to establish a dialogue with his/her committee members and to address concerns regarding the general research directions. The student should consult regularly with his/her major (dissertation) advisor throughout year two as they develop and mold his/her proposal for the written component of Part II.
- The Part II written examination (research proposal) can be submitted any time after completing the written examination from Part I. However, the dissertation chair will not distribute the written component of Part II until the Examination Committee for Part I has determined that the student has responded acceptably to the questions posed to him/her during the Part I examination. Normally the student should be prepared to submit the written component for Part II to his/her Dissertation Committee chair no more than seven days after completing the written component of Part I. The student should also submit sufficient copies of Part II for each of the members of the Dissertation Committee. If the student is judged to have passed Part I, the written component of Part II will be graded by the Dissertation Committee. If the student is unsuccessful in passing Part I, Part II and its copies will be returned to the student by his/her dissertation chair.
- The written research proposal will become part of the evaluative tools for the Dissertation Committee's assessment of the student's preparation to candidacy. It will also be the means by which the Dissertation Committee evaluates the merit of the proposed research dissertation project.

Part II of the exam will be submission of an NIH style, modified PHS 398 research plan containing the following sections:

I. Specific Aims

- A concise description of what the proposed research project will accomplish, including the hypothesis.

II. Background and Significance

- A discussion of the scientific literature relevant to the proposed project that illustrates the current level of understanding in this area and identifies specific gaps in knowledge that the proposed project is intended to fill.

III. Preliminary Data and Pilot Studies

- The figures, charts, photographs, gels, raw data signals, etc. will provide evidence of the student having acquired the needed research skills, the accuracy to which the research methods have been used and interpreted, and this should be the basis for proceeding with the larger study (i.e., the pilot data demonstrates the likelihood for success).

IV. Research Design and Methods

- This section requires a thorough description of the research design and experimental procedures that will be used to accomplish the specific aims of the project. This section should clearly present the rationale for the chosen experimental design and procedures, and it should include information on how the experimental data will be analyzed. Anticipated results and his/her interpretation should also be discussed relative to the proposed hypothesis. One or more figures showing a flow chart of the research design and the time line of experiments for the study are helpful and encouraged.

V. References

- The references do not have to be exhaustive but they should be thorough and include the most recent manuscripts as well as the classical manuscripts from which the more recent data are based. The length of the written proposal should not exceed 20 single-spaced pages (excluding budget, references, and pages prior to "Specific Aims"), with a minimum font size of 11 points.

VI. Budget

- A sample budget should also be constructed according to the PHS guidelines for an RO1 proposal (not the modular budget form). This will help the dissertation committee evaluate the student's grasp of the resources necessary to complete a dissertation research project.

Appropriate (recommended) lengths for each section (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)

Part II: Oral Examination of Research Proposal

Normally the oral examination is set within two to four weeks following the submission of the Part II written examination. However, the oral exam component of Part II can *only* be scheduled if the members of the Dissertation Committee judge the written submission for Part II to be acceptable (or acceptable pending minor revisions). If Part II is deemed 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.

Organizational Structure for the Oral Examination (Parts II)

- The Examination Committee will consist of all members of the Dissertation Committee. The dissertation chair will provide each committee member copies of the student's responses for Part I and Part II. The dissertation chair will certify the original submission by signing or initialing each page before making copies for the faculty. Other graduate faculty may request that the dissertation chair provide a copy of the student's responses (students should not be asked for a copy of his/her response from a non-Dissertation Committee member), but no copies will be provided to any graduate student and/or non-graduate faculty.
- The dissertation chair will contact each member of the Dissertation Committee to determine his or her level of satisfaction of Part II, and to obtain the member's vote (pass/no pass). If all committee members are satisfied with written component of Part II, pending non-fatal revisions, the oral examination will be scheduled.
- The dissertation chair will notify the student whether the oral defense of Part II can be scheduled. If Part II (NIH grant) is adequate (pending revisions/suggestions made by the Dissertation Committee etc.) that student will be instructed to secure an adequate room for the oral defense, and to arrange for notification/advertisement of this oral examination. Notification and scheduling of the oral examination (Part II) will be made by the student after consulting with the dissertation chair no less than seven days before the examination. The student should arrange for the

announcement to be posted in the division/department and sent to other departments, the Health Sciences Graduate Office and/or distributed by e-mail. The announcement should contain:

- The date, location, and time of the oral presentation and defense.
- The name of the student and each of the members of the student's Dissertation Committee (identify the committee chair in the advertisement).
- The title of the student's research proposal that will be presented and defended during Part II.
- All graduate faculty and graduate students will be invited to participate in the student's oral examination, (oral defense for Part II) although faculty and students from other departments may also attend. (See Appendix 6 of the *Graduate Handbook for Exercise Physiology* for an example of this notification).

In the oral examination for Part II, the *student will make a professional formal presentation* (using slides or Power Point computer slides or similar media, but not overhead acetates) 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 ten 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.

Grading of Part II

- To pass, students must receive not more than one "no" (fail) vote by a member of the Examination Committee on Part II (written grant/dissertation proposal or the oral exam).
- Grading of Part II will be in two phases. Examination Committee members (Dissertation Committee) will grade the student's written NIH grant proposal/dissertation proposal of Part II as pass; pass with revisions; fail; or suspended without a grade due to inadequate pilot data or evidence of providing a feasible project.
- If the written component of Part II is satisfactory or satisfactory pending revisions, the student will proceed to the oral presentation and defense of the dissertation proposal. The Dissertation Committee will grade the oral presentation of Part II as satisfactory (pass) or unsatisfactory (fail).
- The Dissertation Committee will grade the student's performance on the combined written and oral defense components of Part II as a satisfactory (pass), satisfactory pending satisfactory revisions (conditional pass), or unsatisfactory (no-pass). Outstanding efforts may obtain a "pass with distinction" notation from the Dissertation Committee; however, this requires a unanimous vote of all committee members.
- It is anticipated that most students will require revisions to his/her written document before his/her Examination/Dissertation Committee will signify a final "pass" grade to the completed comprehensive examination (i.e., one grade will be submitted for Part I plus Part II). The student should discuss the recommended changes with the members of the Dissertation Committee members who have recommended the changes. It is the student's responsibility to make the recommended changes. The faculty should review the revised document to ensure that the proper changes have been made to the document prior to accepting the document as satisfactory.
- A final grade of "pass" for the entire comprehensive examination process (Part I plus Part II) will not be assigned until the student has satisfied his/her committee in all aspects of the comprehensive examination including revisions required to Part II.
- A final grade of "conditional pass" will not be submitted for the student's combined efforts for Part I plus Part II. The Dissertation Committee will provide only a grade of a satisfactory (pass), or unsatisfactory (no-pass) for the completed efforts of Part I plus Part II.

Exceptional students may be awarded a "pass with distinction" notation from the Dissertation Committee if all parts (Part I, Part II written component, and Part II oral component) are deemed by the Dissertation Committee to represent outstanding and exceptional work. However, this is rare and requires a unanimous vote of all committee members.

The Examination/Dissertation Committee Will Evaluate the Following Criterion in Part II.

Although the following is not intended to be exhaustive, nor will the evaluation be solely on the following criterion, these provide the significant backbone of faculty assessment of student performance in Part I and Part II.

- The student must be able to discuss the proposed research project in depth and to effectively respond to questions concerning the proposal. In answering these questions, the student must demonstrate a good working knowledge of physiology in general as well as an understanding of other disciplines (biochemistry, molecular biology, pharmacology, etc.) as they directly relate to the proposal.
- In addition to asking questions from Part II, the Dissertation Committee will usually ask questions pertaining to any perceived deficits in the student's responses to Part I or clarifications in which they wish the student to respond. The student must also be able to clearly articulate this knowledge and to synthesize or integrate known information in new ways.
- The student should provide evidence of having obtained research skills needed to obtain data in his/her research. This evidence is usually demonstrated via pilot data. (Usually if the only major weakness in Part II is the lack of pilot data, the Examination Committee (i.e. the Dissertation Committee) will normally suspend Part II without making a decision on pass/fail and provide the student additional time for acquiring the skills/data needed. Typically decisions to suspend Part II will occur prior to scheduling the oral defense for Part II, by committee members signifying an unsatisfactory vote due to insufficient pilot data or technical experience to evaluate the likelihood/feasibility of completing the study as proposed.
- To successfully pass Part II the student must have adequate pilot data and have demonstrated evidence of acquiring the necessary research skills, and have responded to the satisfaction of the faculty who have asked the student questions from Part I or Part II

Stopping the Oral Component of Part II

- If it becomes apparent that the student is incapable of answering the questions in a satisfactory manner (e.g., unfamiliarity with specific research methods, insufficient pilot data to provide a sound rationale for the proposal, etc.) the committee may stop the exam without failing the student; however, stopping the examination for reasons other than insufficient pilot data is rare.
- If the Dissertation Committee determines that all areas of the students' performance are adequate other than providing sufficient evidence of acquiring research skills and pilot data, the oral component of the Part II exam may be terminated (but not graded as a failure) until the student is able to obtain additional/sufficient pilot data. At the point of termination of Part II, the Dissertation Committee will establish a new time line and set a new oral Part II defense date, and this new time line will be given to the student. The Dissertation Committee will be assembled at the newly established date and Part II will begin as if for the first time (including advertisement/notification) once the student had obtained these skills or new data.
- If the student fails to obtain the research skills/data, etc. within the time determined by the Dissertation Committee, the student may be given an overall failing grade for Part II. If the student fails to adequately respond to questions from faculty during the Part II exam (including questions taken from either Part I or the written component of Part II), the committee will give the student a failing grade for Part II. The committee will then relay its expectations to the student, and the exam will be rescheduled in short order to allow the student to adequately prepare. The Dissertation Committee will establish the time line for re-examination of the student. Normally the meeting will be rescheduled within six weeks of an unsuccessful attempt during Part II.

Course of Action for Students Who Fail the Qualifying Examination

Students who do not achieve an 80 percent (B) as an overall grade in Part I will not be permitted to proceed to Part II of the examination. If the overall Part I examination average is less than 80 percent, the entire exam must be repeated. If the overall Part I examination average is greater than 80 percent, but the score(s) in one or two areas is (are) below 80 percent only the question(s) in that (those) area(s) must be repeated. If the overall examination average in Part I is greater than 80 percent, but the scores in three or more areas are below 80 percent, the entire examination must be repeated. If a portion of the Part I examination or the entire examination must be retaken, the student must do this within a period of two months after failure of the original examination. The examination or a portion of the examination may be retaken only once. The above-mentioned criteria will apply to this examination. If the written proposal (Part II) is judged to be acceptable but the student fails the oral exam (Part II) the second oral exam must be taken within four weeks after the failed exam.

Failure of either portion of Part II (the written research proposal or the oral examination) for a second time is ground for dismissal from the program. 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 1.

Course of Action in the Event of Failure of Part II

- If Part II (the oral exam) is judged by the committee to be acceptable (i.e., passed), the committee will ask the student to revise the Part II written proposal after providing the student with constructive criticism during the oral examination.
- Usually a verbal “conditional” approval will be granted to the student on the day of completion of the oral defense for Part II, contingent upon submission of a revised Part II proposal that carries the approval of all members of the Dissertation Committee (including editorial and scientific changes). The Examining Committee members will not sign the “approval” sections of the graduate school documents until the student has satisfactorily implemented all corrections. A “satisfactory” grade of pass will not be submitted for the student’s performance on the comprehensive examination (a single grade for Part I plus Part II) until the student has satisfactorily met all of the requirements of the Dissertation Committee concerning this examination and revisions as needed.
- The student will have two weeks (14 days) after his/her “pass” or “conditional pass” of the oral defense of Part II to complete the revisions required in the written component of Part II and submit it to his/her Dissertation Committee for final approval. If the revisions to the proposal are extensive and/or the student has failed the oral exam on the original proposal, the proposal will be revised (resubmit the written component to Part II) then a second oral exam (Part II) will be held on the revised proposal.
- If the written proposal (Part II) is judged acceptable but the student fails the oral exam (Part II) the second oral exam must be taken within four weeks after the failed exam.

Failure of either portion of Part II (the written research proposal or the oral examination) for a second time is ground for dismissal from the program. 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 1.

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 for.

Qualifications For Advancement to Ph.D. Candidacy

The student must demonstrate:

- A wide base of knowledge in exercise physiology (evaluated in Part I)
- An ability to think independently (evaluated in Part I and Part II)
- Integration of existing knowledge into a practical research question, by identifying what is known, what is not known, etc. (evaluated in Part I and Part II)
- Critical evaluation of literature (evaluated in Part II)
- Problem-solving skills (evaluated in Part II and Part II)
- Acceptable written and oral communication skills (evaluated in Part I and Part II) including the ability to "think on one's feet."

Submission of Part II—Written Research Proposal to a Funding Agency

Part II 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. Part II of 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 the ideas for the dissertation project.

The student should wait until successfully negotiating Part II of 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 his/her dissertation committee chair, and Dissertation Committee. It is acceptable and appropriate for the student to obtain feedback from all members of the Dissertation Committee or other faculty following successful completion of Part II and revise his/her grant (Part II) appropriately before submitting it to a funding agency.

The submission of the grant proposal (Part II) 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 chapters as if they were to be 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 co-authors 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 before 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 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, clinical field experiences, 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.

Division of Occupational Therapy

Randy P. McCombie, Ph.D., OTR/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 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, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. 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. 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.

Prerequisite Courses

	Hrs.
ENGL 101	3
ENGL 102	3
PSYC 101	3
PSYC 241	3
PSYC 281	3
SOCA 101 <i>or</i> SOCA 105	3
BIOL 101 and BIOL 103	4
BIOL 102 and BIOL 104	4
PHYS 101*	4
STAT 211	3
COMM 100	1
COMM 102	2
Fulfillment of WVU's foreign or minority cultures requirement (see <i>WVU Undergraduate Catalog</i>)	3
Completion of WVU's LSP requirements—Cluster A courses (see <i>WVU Undergraduate Catalog</i>)	12
Recommended Courses (not required at this time)	
CHEM 115	4

*Note: Check for prerequisite for PHYS 101.

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. Equivalence may be determined by contacting the transfer desk, Admissions and Records, 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 above. 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 prerequisites is normally required (a higher GPA may be necessary given the competitive nature of the program).
- Minimum of 60 hours of volunteer or work experience with people with disabilities is required. A minimum of 45 of those hours must be with a licensed occupational therapist or a certified occupational therapy assistant (COTA). Students should contact the Division of Occupational Therapy to determine the type of experience required.

- Two recommendations are also required, one from an occupational therapist or COTA who supervised the volunteer/work experience and the other from a 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.

Distance Learning

The division of occupational therapy also offers an extended (distance) learning track for Occupational Therapy Assistants (COTAs) who wish to become occupational therapists. The requirements for this track are similar to those of the traditional track, with the exception that rather than volunteer work, applicants need to have completed the equivalent of one year's professional employment as an occupational therapy assistant. Occupational therapy assistants (COTAs) interested in this track should contact the Division of Occupational Therapy at (304) 293-8828 for general information.

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.

Occupational Therapy Curriculum Plan

Junior Year

Summer Session II	Hrs.
OTH 300	4
OTH 480	1
Total	5

First Semester	Hrs.	Second Semester	Hrs.
PSIO 441	4	OTH 307	4
OTH 301	3	OTH 308	3
OTH 302	2	OTH 321	3
OTH 303	2	OTH 360	3
OTH 304	4	OTH 406	3
OTH 306	4	OTH 480	1
Total	19	Total	17

Senior Year

First Semester	Hrs.	Second Semester	Hrs.
OTH 384	2	OTH 385	2
OTH 401	4	OTH 408	3
OTH 417	3	OTH 416	2
OTH 430	3	OTH 419	3
OTH 435	3	OTH 432	4
OTH 480	1	OTH 480	1
OTH 493	2	OTH 493 A	2
OTH 497	1	OTH 497	1
Total	19	Total	18

Graduate Year

Summer I and II	Hrs.
OTH 540	6
Total	6

First Semester	Hrs.	Second Semester	Hrs.
OTH 500	3	<i>Weeks 1-4</i>	
OTH 503	3	OTH 501	4
OTH 505	3	OTH 550	3
OTH 520	3	OTH 480	1
OTH 551	3	OTH 697	2
OTH 480	1	<i>Weeks 5-16</i>	
OTH 697	2	OTH 640	6
Total	18	Total	16

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

- PSIO 441 *Mechanisms of Body Function*
 OTH 301 *Professional Foundations*
 OTH 302 *Survey of Clinical Problem Solving*
 OTH 303 *Functional Movement Across the Lifespan*
 OTH 304 *Occupational Sciences 1*
 OTH 306 *Kinesiological Foundations for Intervention*

Spring Semester—First Year

- OTH 307 *Neurobiologic Foundations*
 OTH 308 *Evaluation Procedures*
 OTH 321 *Developmental Life Tasks*
 OTH 360 *Research Methods in OT*
 OTH 406 *Cardio-pulmonary Evaluation and Intervention*
 OTH 480 *Current Topics in Occupational Therapy*

Fall Semester—Second Year

- OTH 384 *Level I Fieldwork 1*
 OTH 401 *Occupational Sciences 2*
 OTH 417 *Occupational Therapy in Geriatrics*
 OTH 430 *OT in Mental Health*
 OTH 435 *Therapeutic Activity*
 OTH 480 *Current Topics in Occupational Therapy*
 OTH 493 *Developmental Disabilities*
 OTH 497 *Senior Research*

Spring Semester—Second Year

- OTH 386 *Level I Fieldwork 3*
 OTH 408 *Tests and Measures in Occupational Therapy*
 OTH 416 *Professional Decision Making*
 OTH 419 *Professional Values*
 OTH 432 *OT Interventions—Mental Health*
 OTH 480 *Current Topics in Occupational Therapy*
 OTH 493 A *Cognition and Vision in OT*
 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 505 *Prosthetics and Orthotics*
- OTH 520 *OT in the Work Environment*
- OTH 551 *OT in Prevention and Wellness*
- 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, PT, Ph.D., Chair
<http://www.hsc.wvu.edu.edu/som/pt>

Degree Offered

Doctor of Physical Therapy (DPT)

Nature of Program

The WVU Physical Therapy Program 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 (DPT) 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. Indeed, 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 physical therapy program:

1. Applicant must have a minimum cumulative grade point average (GPA) and a minimum pre-requisite science GPA of 3.0.
2. Applicant must have a minimum of 60 hours of clinical volunteering or work experience in at least two different settings.
3. Applicant must take the Graduate Record Examination (GRE) including the writing assessment.
4. Applicant must have two recommendations from physical therapists (not relatives) with whom the applicant has volunteered/worked. The recommendation forms will be provided in the admissions packet.
5. Applicant must have a minimum grade of C in each pre-requisite course.
6. Applicant must have completed or be enrolled in the required courses listed below:

Pre-requisite Courses	WVU Course Number
8 hrs. General biology with lab	BIOL 101, 102, 103, 104
8 hrs. Physics with lab	PHYS 101, 102
8 hrs. Chemistry with lab	CHEM 115, 116
3 hrs. General psychology	PSYC 101
3 hrs. Developmental psychology (lifespan)	PSYC 241
3 hrs. Introductory statistics (inferential/descriptive)	STAT 211
3 hrs. Human anatomy	NBAN 205*
3-4 hrs. Human physiology	PSIO 241/441
1 hr. Medical terminology (any 10-15 contact hour course acceptable)	

*This course available on the web; must take the WVU course

Students who wish to substitute a course for one of those listed above should write for permission to the chairperson of the Admission Committee, Division of Physical Therapy. A photocopy of the course description from the school catalog or class syllabus of the proposed substitute must be enclosed. Applicants who complete any of their pre-requisite courses at a college or university outside West Virginia University must submit a catalog or photocopy of a catalog description for those courses.

Students who meet all of the above application requirements can obtain an application packet beginning December 1 from the Office of Admissions and Records, WVU Health Sciences Center, P.O. Box 9815, Morgantown, WV 26506-9815; telephone (304) 293-3521. All application materials must be received on or before January 31 for admission consideration into the next accepted class. Applicants who have met all the program requirements will then be interviewed by the Physical Therapy Admissions Committee. Those considered to demonstrate the greatest potential for success are recommended for admission into the program.

Baccalaureate Preparation

Students may apply with a number of different baccalaureate degrees; however, they must meet the pre-requisites for the physical therapy program as described.

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 preparation 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.

Medical Technology

Martha J. Lake, Ed.D., CLS (NCA), MT (ASCP) Professor and Program Director
Patricia Miller-Canfield, M.D., Assistant Professor and Medical Director

Degree Offered

Bachelor of Science in Medical Technology

The Profession

Medical technologists are clinical laboratory professionals educated in all aspects of clinical laboratory analysis including test development, performance, and evaluation. Medical technologists may work in many areas, including clinical chemistry, hematology, immunohematology, immunology, clinical microbiology, and molecular diagnostics. Practice settings 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

The undergraduate program in medical technology began in 1945 and is administered by the School of Medicine. Students are admitted into the bachelor of science program after completing two years of pre-requisite courses in an accredited college or university. Students may be admitted directly into the program as freshmen with a high school grade point average of 3.75 or higher. The undergraduate curriculum includes 60 semester hours of pre-requisite courses (pre-medical technology curriculum), and 76 semester hours in the medical technology professional program in the School of Medicine. Students may complete the pre-requisite courses at any regionally accredited institution of higher education.

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 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. Ruby Memorial Hospital (WVU Hospitals, Inc.) is the primary teaching hospital for the medical technology program. Ruby Memorial Hospital is part of the Robert C. Byrd Health Sciences Center of West Virginia University. The hospital is a 376-bed tertiary care teaching hospital and referral center. The clinical laboratories, occupying approximately one-fourth of the third floor, include hematology, clinical chemistry, special chemistry, blood bank, clinical microbiology, mycology, virology, and clinical immunology areas. Students may be required to complete part of their clinical rotations at an extramural site in West Virginia.

The WVU Medical Technology 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 Registry of the American Society for Clinical Pathology (ASCP) and the National Credentialing Agency for Laboratory Personnel (NCA).

Other Programs

An articulation program is available for certified medical laboratory technicians (clinical laboratory technicians) who want to complete the requirements for a bachelor of science degree. Further information may be obtained by contacting the Medical Technology Program 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 Technology Program Office.

Admission to the Pre-Medical Technology Program

Students in the pre-medical technology program and direct admit students must meet the admission criteria of WVU. Pre-medical technology students are advised by the Undergraduate Academic Services Center. Medical technology faculty advises direct admit students. Prospective students should take mathematics, chemistry, and biology in high school.

Qualified applicants may enter the pre-medical technology program at the beginning of any semester, but the professional curriculum begins the fall semester after the student is admitted to the professional program. Admission to the pre-medical technology program does not assure admission to the professional program. Foreign language is recommended for students who plan to do graduate work.

Admission to the Professional Program

Direct Admit

Students may be admitted directly into the medical technology program as freshman with a minimum high school grade point average of 3.75. They are advised by the medical technology program 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 technology students apply for admission into the junior year (first year in the medical technology program) before the second semester of the sophomore year in college. Fulfillment of the pre-medical technology curriculum does not assure admittance into the professional program (medical technology curriculum). Students are selectively admitted to the final two years of the professional program. Requirements for admission to the professional program include course requirements, grade point average, a personal interview, and letters of recommendation.

The course requirements (pre-requisites) are:

- English: six hours of composition and rhetoric (ENGL 101 and 102).
- Biology: eight hours of general biology (BIOL 101, 102, 103, and 104).
- Chemistry: eight hours of inorganic (CHEM 115 and 116), and four hours of organic (CHEM 231)*
- Mathematics: three hours of college algebra (MATH 126).
- Statistics: three hours of introductory statistics (STAT 211).
- LSP: 24 hours of electives: (12 hours of Cluster A and 12 hours of Cluster B).

*Transfer students must complete an organic chemistry course(s) (eight hours) that includes aliphatic and aromatic compounds. The course taken must include a laboratory.

Although not required for admission to the medical technology professional program, eight hours of organic chemistry and eight hours of physics are suggested electives for those students interested in applying to medical school.

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). A grade point average of 2.5 or above does not necessarily assure admission. Applicants may be admitted on probation if their grade point average (cumulative or science) is less than 2.5. Applicants with less than a 2.0 GPA, either cumulative or science, will not be admitted. Two letters of recommendation are required; at least one must be from a college science professor. A personal interview with the Medical Technology Admissions Committee may be required.

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

Application Procedure

Each year the Medical Technology Program selects a limited number of students from the applications received for admission to the program. Application forms for admission to the professional program are available after December 1 from the Office of the Assistant Director of Admissions and Records, WVU Health Sciences Center, P.O. Box 9815, Morgantown, WV 26506-9815. The application fee is \$25 for residents and \$40 for non-residents. The priority date for returning the application form is February 15. The deadline date is March 1 if the student expects to enter the program the following fall semester. In the event the class is not filled by those applications, the deadline may be extended until as late as the first business day in July.

Curriculum Plan

Pre-Medical Technology

First Year

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

Second Year

First Semester	Hrs.	Second Semester	Hrs.
Electives*	9	CHEM 231 <i>Organic Chemistry</i>	4
ENGL 102 <i>Comp. & Rhetoric</i>	3	Electives*	9
MTEC 200 <i>Med. Tec. Termi.</i> ***	1	MTEC 201 <i>Basic Med. Tech.</i> **	1
STAT 211	3	Total	14
Total	16		

*Electives from Cluster A and Cluster B are to be selected to meet the Liberal Studies Program requirements.

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

***MTEC 200/201 are required courses for direct admit students and optional for pre-medical technology students.

Medical Technology

Third Year (Medical Technology 1)

First Semester	Hrs.	Second Semester	Hrs.
MTEC 300 <i>Medical Techniques 1</i> ...	4	MICB 327 <i>Microb. Parasitology</i>	2
MTEC 302 <i>Lab Math, Q.C., Cmptrs.</i>	2	MICB 323 <i>Microbiology</i>	5
BIOC 339 <i>Intro. to Biochemistry</i>	4	MTEC 301 <i>Medical Techniques 2</i> ...	4
PSIO 441 <i>Mech. Body Function</i>	4	MTEC 310 <i>Clin. Lab. Mycology</i>	1
MTEC 309 <i>Molecular Diagnostics</i> ...	1	MTEC 381 <i>Research, Ed. Meth.</i> *	2
Total	15	MTEC 329 <i>Basic Clin. Chemistry</i>	1
		MTEC 465 <i>Clin. Lab. Mgmt.</i>	2
		Total	17

*Writing course

Fourth Year (Medical Technology 2)

Students receive didactic and clinical instruction during the fourth (senior) year. The senior year includes summer I, summer II, 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.

Students register for the following courses during the fourth year.

Required Courses	Hrs.
MTEC 400 <i>Orientation</i>	No Credit
MTEC 401 <i>Phlebotomy</i>	1
MTEC 402 <i>Rural Health Practicum</i>	1
MTEC 403 <i>Community Service Practicum</i>	1
MTEC 420 <i>Immunohematology and Blood Banking</i>	2
MTEC 421 <i>Immunohematology and Blood Banking Laboratory</i>	5
MTEC 430 <i>Clinical Chemistry</i>	2
MTEC 431 <i>Clinical Chemistry Laboratory</i>	5
MTEC 440 <i>Clinical Hematology</i>	2
MTEC 441 <i>Clinical Hematology Laboratory</i>	5
MTEC 450 <i>Clinical Microbiology</i>	2
MTEC 451 <i>Clinical Microbiology Laboratory</i>	5
MTEC 460 <i>Instrumentation</i>	2
MTEC 465 <i>Laboratory Management</i>	2
MTEC 466 <i>Lab Management Practicum</i>	1
MTEC 470 <i>Clinical Microscopy</i>	1
MTEC 471 <i>Clinical Microscopy Laboratory</i>	1
MTEC 475 <i>Medical Relevance of Laboratory Analyses</i>	2
MTEC 480 <i>Clinical Immunology</i>	2
MTEC 481 <i>Clinical Immunology Laboratory</i>	1
Total	43

Graduation Requirements

Junior Year

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

Senior Year

A student must maintain a 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.

Medicine

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

Degree Offered

Doctor of Medicine

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 those students who show exceptional interest and scholarly promise. All admission requirements of the School of Medicine and the specific graduate program apply. Students apply for the combined degree program after acceptance into medical school. An M.D./M.P.H. program is available for those interested in public health issues.

It is to be understood that 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 the *WVU Health Sciences 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 or equiv.
Biological sciences (with lab)	8 semester hours or equiv.
Inorganic chemistry (with lab)	8 semester hours or equiv.
Organic chemistry (with lab)	8 semester hours or equiv.
Physics (with lab)	8 semester hours or equiv.
Social or behavioral sciences	6 semester hours or equiv.

Biochemistry and cell 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 C or better.

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. The practice of repeating courses to raise the grade is discouraged. Applicants who have been subject to suspension from West Virginia University 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. The MCAT must be taken within two years of applying to medical school. It is recommended that students take the MCAT during the spring of their junior year in college. This allows for a repeat examination in the fall if necessary. Waiting until fall to take the test could jeopardize an applicant's opportunity since no application for admission is given final consideration until MCAT scores are received by the Admissions Committee. The MCAT score must be recorded prior to closing of admissions. The dates for beginning and closure of application acceptances are available through AMCAS and on our web site.

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

Application Procedure

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

Application for admission in August 2004 should be made at the end of the 2003-2004 school year. The last date for filing an application is December 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.

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 recommendation 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.

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 in the Office of Student Services in the School of Medicine, and on the student services web site.

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 three 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, and 3) 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 West Virginia University School of Medicine on the student services web site. 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 on 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.

Medicine I

	Fall (16 wks.)	Winter (15 wks.)	Spring (7 wks.)	
Hrs. -wk.				Hrs. -wk.
1	CCMD 730	NBAN 703	CCMD 775	1
2	Human Function	Human Structure	Neurobiology	2
3				3
4	Integrated:	Integrated:	Integrated:	4
5	Biochemistry,	Gross Anatomy,	Neuro-	5
6	Physiology,	Histology,	-Anatomy,	6
7	Genetics	Embryology	-Physiology	7
8				8
9				9
10	(18 hrs./wk.)	(18 hrs./wk.)	(18 hrs./wk.)	10
11				11
12				12
13				13
14	Problem-Based Learning			14
15	(1.5 hrs./wk.)			15
16				16
17				17
18	CCMD 740	CCMD 741		18
19	Introduction to Behavioral Science	Introduction to Behavioral Science		19
20	(1 hrs./wk.)	(1hrs./wk.)		20
21				21
22	CCMD 745	CCMD 746		22
23	Physical Diagnosis and Clinical Integration 1	Physical Diagnosis and Clinical Integration 1		23
24		(2 hrs./wk.)		24

Medicine II

	Fall (10 wks.)	Winter (16 wks.)	Spring (8 wks.)	
Hrs. -wk.				Hrs. -wk.
1	MBIM 701	PATH 751	PCOL 761	1
2	Immunity, Infection, and Disease	Mechanisms of Disease	Medical Pharmacology	2
3				3
4				4
5	Integrated:	Pathology	Pharmacology and	5
6	Microbiology,	(18 hrs./wk.)	Toxicology	6
7	Immunology,			7
8				8
9				9
10	(18 hrs./wk.)		(18 hrs./wk.)	10
11				11
12				12
13				13
14				14
15				15
16				16
17				17
18	CCMD 712	CCMD 725	CCMD 713	18
19	Epidemiology and Biostatistics	Ethics	Health of the Public	19
20				20
21				21
22	CCMD 721	CCMD 722		22
23	Physical Diagnosis and Clinical Integration 2	Physical Diagnosis and Clinical Integration 2		23
24				24
25				25

Medicine III Clerkships

Weeks

8	Medicine
8	Surgery
8	Behavioral Medicine and Psychiatry with two weeks of Neurology
8	Obstetrics and Gynecology
8	Pediatrics
8	Family Medicine including one month Rural Rotation
48	Total

Medicine IV Rotations

8	Two-Month Rural
4	Subinternship
4	Critical Care/Anesthesia
4	Surgery/Subspecialties
14	Electives
34	Total

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 and all University regulations regarding a failed course shall apply.

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. School of Medicine policy limits a student 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 nondisciplinary matters are governed by the concept of academic due process.

Upon concurrent recommendation of the Admissions Committee, the Committee on Academic and Professional Standards, and the departments concerned, a limited number of students may be admitted to the School of Medicine to follow a special schedule reflecting the student's individual needs to complete requirements for the M.D. degree.

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. In all other matters, due process principles shall apply. 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 web site.

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.

A Changed Medical Education Program of Study

The medical education curriculum was restructured in 1998. The most significant changes include: 1) students will begin clinical experiences early in their first year of medical school; 2) the basic science disciplines have been integrated; 3) incoming medical students will be required to lease a windows-based laptop to use in the new curriculum that will incorporate information and academic technologies in the delivery of instruction.

With these principles in mind, the old semester (college-like) schedule of the first year, for example, physiology, gross anatomy, biochemistry, neurobiology, microanatomy, epidemiology, and psychiatry have been replaced. Now there are three blocks of basic science (human function, human structure, and neuroscience) along with two other courses—*Introduction to Behavioral Science*, and *Physical Diagnosis and Clinical Integration 1*, running concurrently for the entire first year.

First Year

Medical students' first year: thirty-eight week academic year divided into three blocks (16 weeks, 15 weeks, and seven weeks). Approximately 24 scheduled hours per week. Each block contains three courses: a basic science multidisciplinary course, *Introduction to Behavioral Science*, and *Physical Diagnosis and Clinical Integration* (large group alternating every other week with small groups). While *Introduction to Behavioral Science* and *Physical Diagnosis and Clinical Integration* run 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 (10 hours large group, laboratory and small group). A weekly problem-based learning group (PBL) is maintained throughout the first year.

Second Year

Medical students' second year: thirty-four week academic year divided into three blocks (ten weeks, 16 weeks, eight weeks). Approximately 26 scheduled hours per week. Each block contains three courses: a basic science multidisciplinary course, physical diagnosis and clinical integration (four hours per week), and epidemiology and biostatistics, ethics and public health (2.5 hours per week). Physical diagnosis and clinical integration runs throughout the year; the basic science component changes each block. The first block (ten weeks) is a single course integrating microbiology and immunology (18 hours per week). The second block (16 weeks) consists of mechanisms of disease (pathology: 18 hours per week), and the third block (eight weeks) consists of medical pharmacology (18 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.

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 Panhandle 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. The courses selected are subject to the approval of an associate dean in the Office of Student Services.

Five months of the senior year are committed to required clerkships at the home campus which include one month in internal medicine, family medicine, or pediatric sub-internship; one month in critical care/anesthesia; one month of surgery or surgical sub-specialties; and two months of rural primary care. The remaining 3.5 months of the senior year are elective at approved teaching sites.

A catalog is available on the web 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.

Microbiology, Immunology, and Cell Biology

John B. Barnett, Ph.D., Chair

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Jia Luo, Ph.D., Graduate Coordinator

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<http://www.hsc.wvu.edu/micro>

Degrees Offered

Master of Science

Doctor of Philosophy

The Department of Microbiology, Immunology, and Cell Biology offers programs of study leading to the degrees of master of science and doctor of philosophy in microbiology, immunology, and cell biology. The department also offers a master of science degree. Students with an undergraduate degree from an accredited institution can apply to either the M.S. or Ph.D. program. The major purpose of graduate education in the department is research training. The basic philosophy of the department is that the students acquire a strong foundation in the basic concepts of microbiology, immunology, and cell biology, and have flexibility in choosing advanced coursework in their specific areas of interest. A major

emphasis of the graduate program is extensive laboratory research in microbiology, immunology, and cell biology. Each student will complete an original, in-depth research investigation. The overall aim of the program is to produce students capable of designing and doing independent research and teaching.

Admission Requirements

Applicants interested in the Ph.D. or M.S. graduate programs in microbiology, immunology, and cell biology should apply directly to the Office of Research and Graduate Education in the WVU School of Medicine. The application process and guide for admission are stated on page 66.

Program Requirements

Every student must take the following courses or demonstrate proficiency by examination in each of the following areas: MICB 784 A, 784 B, and 784 C *Graduate Microbiology, Immunology, Virology*; BIOC 693 D, *Cellular and Molecular Biochemistry I and II* (offered by the Department of Biochemistry); and MICB 691 *Advanced Topics* (laboratory rotations). The remainder of the coursework is selected by the student and the Advisory Committee from the microbiology and immunology advanced study courses (MICB 791). Enrollment in MICB 796 *Seminar* and MICB 793 *Special Topics* (Journal Club) is required each semester that the student is in residence. All full-time students in the Department of Microbiology, Immunology, and Cell Biology are required to participate in teaching at least one semester a year for two years (MICB 790 *Teaching Practicum*).

Master of Science

The master of science program requires 30 hours of coursework, of which at least 20 hours must be in microbiology and immunology. Six hours must be in research (MICB 697). A grade point average of at least 3.0 must be maintained. A thesis representing original research and a final oral examination are required.

Doctor of Philosophy

Students with either a bachelor's or master's degree can apply to the Ph.D. program. Those with a bachelor's degree must complete the basic course requirements expected of an M.S. candidate. The doctoral candidate with an M.S. degree from another department must have had coursework or demonstrate knowledge in microbiology, immunology, and biochemistry equivalent to that of a master's student in the department. In addition, the doctoral student will take additional coursework as determined by the student's Graduate Research Advisory Committee. A minimum of nine hours in MICB 791 courses or selected advanced courses from other departments is required. Where appropriate, coursework in related subjects such as computer science, cell biology, biochemistry, physical chemistry, and statistics will be required. MICB 796 *Seminar* is a required course each semester that the student is in residence. The student will maintain a grade point average of 3.0. The doctor of philosophy program requires a dissertation representing the results of an original research investigation and the passing of a written qualifying and final oral examination. The qualifying examination is given at the end of the first year of study. The final oral examination is given after completion of research and an acceptable dissertation. All full-time students are required to participate in teaching at least one semester a year for two years.

The Department of Microbiology, Immunology, and Cell Biology has informal journal clubs in immunology and microbiology. These are designed to help the students develop skills in reading, interpreting, and discussing current research articles. All students are expected to participate in one or more.

For a description of faculty research interests, guidelines for graduate study in the Department of Microbiology and Immunology, or additional information, write to the Chairperson, Admissions and Scholarship Committee, Department of Microbiology and Immunology, P.O. Box 9177, West Virginia University, Morgantown, WV 26506-9177, or visit our web site at <http://www.hsc.wvu.edu/micro/>.

Research

Cell Biology: oncogenes and cell signalling.

Genetics: basic studies in the mechanisms of genetics including transfer of genetic information; recombinant DNA studies.

Immunology: immunopathology of pulmonary disease and microbial inhalants; developmental immunology; mechanisms of T cell function; immunogenetics; immunotoxicology; mucosal immunology; immunology of infectious microbes.

Pathogenic Bacteriology: mode of action of microbial products in pathogenicity; ecology of clinical microbiology; antibiotic mode of action.

Physiology: nutrition and metabolism of a variety of pathogenic micro-organisms; growth and protein synthesis of intracellular bacteria.

Virology: muscle immunity to virus.

Neurobiology and Anatomy

Richard D. Dey, Chair

e-mail: rdey@hsc.wvu.edu

Albert Berrebi, Graduate Program Coordinator

e-mail: aberrebi@hsc.wvu.edu

4052 Health Sciences North

<http://anatomy.hsc.wvu.edu/gradprograms>

Degrees Offered

Master of Science

Doctor of Philosophy

General Description

The Department of Neurobiology and Anatomy graduate program is committed to training competent researchers and teachers. 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 in biomedical sciences, 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 emphasizes various aspects of biomedical sciences, including structural, cellular, molecular, and developmental biology. A course of study focused on neuroscience is also now available. After completion of core courses, students conduct an original research project culminating in a dissertation (Ph.D.) or a thesis (M.S.).

Admission

In addition to the admission procedure of the University, the Department of Neurobiology and Anatomy requires that each applicant complete the application form available on the Internet at http://www.hsc.wvu.edu/som/resoff/students_prospective/criteria.asp. Admission to all of the Ph.D. graduate programs in the School of Medicine are processed by the Office of Research and Graduate Education. Requirements and guidelines for admission are stated on page 66.

Prerequisites

Candidates must hold a bachelor or master's degree. A strong background in biological sciences, inorganic and organic chemistry, physics, and mathematics is required. Under special circumstances, some course requirements may be fulfilled after admission to the program. A grade point average above 3.0 is recommended. The general aptitude portion and advanced section of the graduate record examination are required.

Research

Interdisciplinary research projects in the department 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 behavioral rodent mutants; neural basis of pulmonary diseases, especially asthma and occupational/environmental diseases; mechanisms regulating microcirculation under pathophysiological conditions; orthopedic research on ligament healing and mathematically modeled joint motion; history of anatomy; postnatal craniofacial development; functional imaging of the human visual cortex in health and disease.

Seminars and Journal Clubs

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

Course Requirements for the Ph.D. Degree

The first two years of study consists of coursework and introduction to research in two departmental laboratories. Completion of the two semester interdepartmental course in molecular and cellular biochemistry and one course in two of the following areas are required: gross anatomy, neurobiology, or microscopic anatomy. An approved course in biostatistics is also required. The selection of ten credits in other courses in basic biomedical sciences (such as advanced molecular biology, advanced biochemistry, anatomy, neurobiology, pathology, immunology, virology, physiology, pharmacology, biostatistics, etc.) is required and allows substantial flexibility to tailor the program to the individual student's interests and research needs. Students concentrating in neuroscience may substitute neuroscience electives for gross anatomy and histology. The student, in consultation with a major advisor and an advisory committee, selects additional electives. Students must maintain a minimum 3.0 overall grade point average.

Ph.D. Candidacy

To be admitted to candidacy for the Ph.D. degree, the student must pass a departmental preliminary examination and present 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.

Master of Science

The master's program in anatomy is offered primarily for students in certain specialized fields, such as physical therapy or in a conjoint program in dentistry or medicine. Its purpose is to arouse curiosity in and provide direct experience of scientific investigation in anatomy. It is not necessary for the student to complete the M.S. degree in order to qualify for admission into the Ph.D. program, although the student may elect to complete the requirements for this degree in progress toward the Ph.D.

An applicant who shows a special need for the M.S. degree must generally be as well qualified as applicants to the doctoral program. The M.S. student must complete two courses in either gross anatomy, microanatomy, or neuroanatomy, and six to nine hours of elective courses. A 2.75 grade point average must be maintained. In addition to coursework, the student must complete a thesis based on original research and defend the thesis at an oral comprehensive examination.

Pharmacology and Toxicology

Bernard Schreurs, Ph.D., Graduate Coordinator, Dept. of Physiology and Pharmacology
Lisa Salati, Ph.D., Graduate Coordinator, Dept. of Biochemistry and Molecular Pharmacology

Degree Offered

Doctor of Philosophy

General Description and Admissions Process

This interdepartmental program combines broad exposure to the disciplines of pharmacology and toxicology while allowing the student to specialize in either the integrative or molecular sub-disciplines. Based on his or her interests and goals, a student pursuing a graduate degree in pharmacology and toxicology will apply to either the Department of Physiology and Pharmacology or the Department of Biochemistry and Molecular Pharmacology. Students specifically interested in toxicology should apply to the Department of Physiology and Pharmacology. Each department will define its specific requirements for admission, such as minimum grade point average, GRE scores, and prerequisite coursework. Undecided students may apply to both departments, and during the interview process faculty will work with those students to ascertain which department would best meet the each student's needs.

Course Requirements

Students will fill the general course requirements of their home department. In addition, all students in the pharmacology and toxicology graduate program, regardless of the home department, will take two common courses during the first year: *Cellular and Molecular Biochemistry* and *Graduate Physiology and Pharmacology*.

In the second and subsequent years, students will fulfill the requirements for advanced coursework in their home department by selecting from a menu of courses, including *Molecular Pharmacology*, *Advanced Principles in Pharmacology*, *Occupational Toxicology* and *Advanced Toxicology*.

Throughout the training period, students enrolled in this graduate program are required to participate in various inter-departmental activities to broaden their understanding of pharmacology and toxicology as disciplines. These activities may include pharmacology and toxicology journal clubs, pharmacology and toxicology seminars, and research talks.

Research

Pharmacology and toxicology students will participate in a series of laboratory rotations designed to help each student learn more about faculty research interests and decide on a faculty advisor. A student may do a rotation in any funded laboratory within either the physiology and pharmacology department or the biochemistry and molecular pharmacology department. If a student selects a laboratory for his or her dissertation research that is outside of that student's home department, then he or she will be transferred into the other department and become subject to the requirements of that department.

Physiology and Pharmacology

Robert L. Goodman, Chair
Bernard Schreurs, Graduate Coordinator
3051 Health Sciences North
<http://www.hsc.wvu.edu/som/physio/>

Degrees Offered

Master of Science

Doctor of Philosophy in Physiology

Doctor of Philosophy in Pharmacology and Toxicology

The doctor of philosophy programs are designed to produce scientists of high quality, capable of conducting independent research, and being effective teachers. Students are exposed to all aspects of physiology and pharmacology and to a variety of related sciences.

Our graduates, as a result of this rigorous training, may pursue careers in any area of physiology and can interact creatively with scientists in related fields. The master's program in physiology is an introduction to research for students interested in, but not yet committed to, a research career. Students in this program receive training in the fundamentals of physiology and experience in a research laboratory.

Admission Requirements

Applicants interested in a career in physiology and pharmacology should apply for admission to West Virginia University School of Medicine graduate training program in the biomedical sciences. Successful students in the physiology and pharmacology graduate program typically have a strong background in biology and/or chemistry. In addition to a basic biology course, applicants have usually taken cellular or molecular biology and an introductory physiology course; a course on comparative anatomy also provides particularly useful background information. Inorganic and organic chemistry are considered essential while physical chemistry is recommended, but not required. As several areas of physiology require an understanding of the fundamentals of calculus and physics, introductory courses in these subjects area also considered extremely useful.

The West Virginia University School of Medicine graduate training program in the biomedical sciences requires the following materials for consideration for the M.S. or Ph.D. program: three letters of recommendation; transcripts of all undergraduate and graduate grades; a completed application form; and Graduate Record Examination scores. A bachelor's degree or equivalent is required for admission. An M.S. degree is not a prerequisite for the Ph.D. program. Admission usually requires a combined GRE score of 1000 or greater on the quantitative and verbal sections. However, our applicant pool typically falls well above this minimum score. We strongly encourage a personal interview. Travel costs for the interview will be paid and/or reimbursed for domestic students.

International applicants should take an English-language proficiency examination. WVU will accept scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The minimum TOEFL score is 550 for the paper-based exam or 260 for the computer-based exam. The minimum IELTS score is 6.5 Applicants are urged to arrange for one of these exams well in advance of the desired enrollment period.

Detailed application information including online and printable application forms can be found at www.hsc.wvu.edu/som/resoff/students_prospective/prospective_main.asp. Admission requirements and guidelines are also stated on page 66.

Master of Science in Physiology

The first two semesters are devoted largely to coursework in graduate physiology and pharmacology, and a two-semester course in cellular and molecular biochemistry. Students are also introduced to the research interests of the faculty through rotations in two or more faculty member laboratories. At the end of the second semester, students pick a thesis advisor and begin work in that laboratory during the summer. The second year is spent primarily on research for and writing of the master's thesis. Students are required to present a research seminar during the second year.

Doctor of Philosophy in Physiology or Pharmacology and Toxicology

During year one, all new graduate students in the biomedical sciences graduate programs matriculate in a common interdisciplinary core curriculum. This integrated first year allows students to build competence in key areas of contemporary science, gain exposure to the various training program options, meet potential thesis advisors, and form social connections with each other before having to select an advisor, training program, or research specialization.

Thus, the first year of the Ph.D. program is both undifferentiated and integrated to provide maximum flexibility. This enables students to select a training program that fits their goals. For students who had pre-selected a specific department upon application, this integrated first year gives them the opportunity to change programs at the end of year one if they decide to without disrupting their academic progress or their stipend support.

In the second semester of year one, students who already have clear research or program interests may customize their coursework by selecting from an array of program-specific electives. At the end of year one, students can select one of the program tracks for their advanced graduate research training.

Ph.D. training typically takes four to five years to complete. Stipend support and tuition waivers are provided for the duration of this training.

Faculty Research In addition to the above coursework, students are introduced to the research interests of the faculty in the first year through the graduate colloquium and laboratory rotations. The latter are designed to help students choose a dissertation advisor by exposing them to the experimental approaches and techniques used in different laboratories.

During the first summer, students are expected to begin research projects in a laboratory of their choice. This allows a student to explore an area of research interest without a firm commitment to pursue a dissertation project in that laboratory.

During the second year, the student combines coursework with the continuing development of research interests. A graduate advisor is selected during this year. Courses include: advanced coursework in physiology, pharmacology or toxicology, graduate colloquium, graduate seminar, and a teaching practicum. Through the teaching practicum, the student begins to develop his or her teaching skills. The purposes of the graduate colloquium and seminar are twofold. First, they give students an opportunity to become informed of the latest scientific advances. Second, students have an opportunity to develop and practice presentation of research seminars. In addition to presentations by faculty and students from the Department of Physiology and Pharmacology, faculty members from other departments at WVU and from other institutions are invited to present seminars in the program.

Qualifying Examination After successful completion of the second academic year, the students take a two-part qualifying examination. The exam consists of a comprehensive oral examination covering all of the major areas of physiology, pharmacology, and or toxicology, followed by a written and oral research design examination. Upon successful completion of the qualifying examination, the student is admitted to candidacy for the degree of doctor of philosophy.

Teaching During the third and fourth years the student may enroll in elective courses. Yearly participation in the teaching practicum provides additional experience in delivering lectures to undergraduate and professional students. However, the student's major effort is directed toward dissertation research. Results of this effort are presented annually in the graduate colloquium. During these years the student will attend and present papers at national meetings of scientific societies (e.g., American Physiological Society, Biophysical Society, Endocrine Society, Experimental Biology, Society for Neurosciences). The Ph.D. degree generally can be completed in four to five years.

Faculty laboratories offer opportunities for research in cardiovascular, cell, endocrine, gastrointestinal, muscle, neural, renal, and respiratory systems.

School of Nursing

E. Jane Martin, Ph.D., R.N., F.A.A.N., Dean
Mary Jane Smith, Ph.D., R.N., Associate Dean for Graduate Academic Affairs
Nancy Alfred, D.S.N., R.N., Associate Dean for Undergraduate Academic Affairs
Cynthia Armstrong Persily, Ph.D., R.N., Associate Dean for Academic Affairs,
Southern Region; Chair, Charleston Division
June Lunney, Ph.D., R.N., Associate Dean for Research
Suzanne W. Gross, Ph.D., R.N., Assistant Dean for Student Services
Dottie Oakes, M.S.N., R.N., C.N.A.A., Director, Clinical Nursing Services

<http://www.hsc.wvu.edu/son>

Degrees Offered

Bachelor of Science in Nursing
Master of Science in Nursing
Doctor of Science 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 health care delivery. The faculty's educational effort is directed at providing high quality programs of instruction which prepare professional nurses to promote, restore, and maintain health for people of all age groups in diverse settings.

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. A B.S./B.A. to B.S.N. program is available for the college graduate seeking the B.S.N. The basic B.S.N. program can be completed in four years at WVU's Morgantown campus or at WVU Institute of Technology in Montgomery. Consortium 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 B.S./B.A. to B.S.N. program is available in Morgantown. Selected courses of these programs are offered via advanced telecommunications systems and the Internet.

The master of science in nursing, offered at the WVU Health Sciences Center in Morgantown and at the Charleston Division, prepares graduates for advanced practice roles in rural primary health care. These roles include family nurse practitioner and pediatric nurse practitioner. Additional advanced practice programs are under development.

Post-graduate nurse practitioner certification programs in these specialties is available for those who already have an M.S.N. The R.N. to M.S.N. program, offered in Morgantown and Charleston, also has these specialties available.

The doctor of science in nursing prepares nurse scholars/educators for roles in teaching, service, and research in nursing. The program prepares graduates who will advance the development of nursing knowledge in significant life transitions, empowerment, or health system outcomes that will improve health for diverse populations. The nursing component of the D.S.N. program is offered in Morgantown during six-week summer sessions. Students attend class two days a week, taking six credits of nursing courses for four summers. Up to 18 credits of cognates/electives can be taken in the fall and spring semesters at a school near the student's home.

Accreditation

The baccalaureate program received initial accreditation with graduation of the first class in 1964. The master's program was initially accredited in 1981. Currently, all 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

Students enrolling at the Morgantown campus pay the fees shown in the *WVU Health Sciences Catalog* charts, plus special fees and deposits as required. Students enrolling at other sites pay the fees shown in the catalog for that site. Fees are subject to change without notice. Students' expenses vary according to the course of study and individual tastes. Information concerning financial assistance, application forms, and the Free Application for Federal Student Aid (FAFSA) form may be obtained from the financial aid web site: <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 in E. Moore Hall, telephone (304) 293-5611, provides information concerning 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.

Scholarships

The School of Nursing offers several scholarships. These scholarships are 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

For additional information visit the School of Nursing web site 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. These courses are taken in conjunction with nursing clinical courses that enable 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 as well.

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 (RNs) 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 now 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 Glensville State College and WVU Potomac State College allow students to complete the first two years at those schools. Glensville students complete the program at WVU Tech; WVU Potomac State students complete the program in Morgantown.

Registered nurses can complete the B.S.N. requirements at WVU in Morgantown, at WVU Tech, WVU Potomac State, or at WVU Parkersburg. Nursing courses for R.N. students are offered each semester and 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.

The B.S./B.A. to B.S.N. program is a continuous enrollment 18 month accelerated program offering in Morgantown for the college graduate seeking the B.S.N. Upon completion, graduates are eligible to take the licensing examination for registered professional nursing. Exceptional students who wish to pursue the M.S.N while completing senior-level B.S.N. courses are considered on an individual basis.

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 of at least three months duration as part of degree requirements. Nursing students complete the rural clinical practice requirement during their senior year.

Direct Admission to Basic Program

High school students desiring admission to nursing apply to the University. Admission directly to the nursing major from high school is based on a combination of high school grade point average (unweighted 4.0 scale) and composite ACT or total SAT scores. While preference is given to West Virginia residents, qualified students from other states are encouraged to apply. Direct admission space is limited. Direct admission criteria are:

GPA	Composite ACT	Total SAT
3.2 or higher	23 or higher	1070 or higher

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)

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.

First Year

First Semester	Hrs.	Second Semester	Hrs.
CHEM 111 ⁺	4	CHEM 112 ⁺	4
PSYC 101 ⁺	3	ENGL 101 ^{**}	3
SOCA 101 or 105	3	BIOL 102 and 104 ^{**}	4
HN&F 171 ⁺	3	PSYC 241 ⁺	3
MATH 124 or MATH 126		NSG 110 ^{**}	3
or Cluster A/B	3	Total	17
Orientation 101 ⁺	1		
Total	17		

⁺Required with grade of C or higher before enrollment in sophomore nursing courses.

^{**}Can be taken in either Fall or Spring semester

Prenursing Admission to Basic Program

High school students not eligible for direct admission and college students from other majors may apply for admission after one semester or more of college coursework. Admission consideration in this case is dependent upon a minimum GPA of 2.5 on all college work attempted, completion of required prerequisite courses from an accredited college or university with a grade of C or better (see "First Year Basic Student Curriculum"), and space available in the class. Complete applications including transcripts must be received by February 1 of the year the candidate wishes to be admitted. Application forms can be obtained after December 1 from Health Sciences Center Office of Admissions and Records by calling (304) 293-3521.

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

A new cohort of students begins this program in May on the first day of Summer Session I. To be considered for admission, applicants must have a baccalaureate degree from an accredited college or university with a cumulative grade point average of 2.5 or better on a 4.0 scale. Completion of prerequisite courses with a grade of C or better, prior to enrollment, is also required. Contact the School of Nursing at (304) 293-1386 for application dates and other information about this program.

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. Application forms for the Morgantown campus may be obtained from the Nursing Secretary, HSC Office of Admissions and Records, 1170 WVU Health Sciences Center North, P.O. Box 9815, Morgantown, WV 26506-9815. Application forms for the WVU Tech, WVU Potomac State, and WVU Parkersburg sites may be obtained from the WVU Health Sciences Center Office of Admissions and Records or from admission offices at those sites.

Academic Standards and Graduation Requirements

To be in good academic standing, students must:

1. Maintain a cumulative grade point average of 2.5 or better in all college work attempted.
2. Pass all 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 may repeat that nursing course once. A student may repeat only one nursing course. Students must complete with a grade of C or better, any nursing course in which a grade of D, F, WU, or W has been received. Students who do not maintain a cumulative GPA of 2.5 or better will be placed on probation for one semester. Students on probation who do not raise their cumulative GPA to 2.5 or better after one semester will be dismissed from the School of Nursing. Nursing courses and pre and co-requisite courses in which students earn a grade of D, F, WU, or W must be repeated prior to the students progression to the next course(s) in the nursing sequence. Students who repeat a nursing course and earn a grade of D, F, WU, or W will be dismissed from the school. 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.

Curriculum for the Basic Student
B.S.N. Suggested Plan of Progression (Morgantown)

First Year

See first year basic student curriculum on pg. 110

Second Year

First Semester	Hrs.	Second Semester	Hrs.
NSG 221	3	NSG 241	3
NSG 225	3	NSG 245	3
NSG 361	3	PSIO 241	4
NBAN 301	4	ENGL 102	3
MICB 200	3	Cluster A/B	3
Total	16	Total	16

Third Year

First Semester	Hrs.	Second Semester	Hrs.
NSG 325	2	NSG 333W	3
NSG 332	5	NSG 345	2
NSG 335	2	NSG 351	2
NSG 376	3	NSG 355	2
STAT 211	3	NSG 356	3
Total	15	Cluster A/B	3
		Total	15

Fourth Year

First Semester	Hrs.	Second Semester	Hrs.
NSG 421	3	NSG 441	3
NSG 423	2	NSG 442	2
NSG 425	6	NSG 445	6
NSG 476	3	NSG 486	1
Cluster A/B	3	Cluster A/B	3
Total	17	Total	15

The sequence of courses may vary from campus to campus. Certification in school health nursing and holistic nursing certification are available to all students who meet additional course and experiential requirements.

Curriculum for the Registered Nurse Student

The associate degree graduate will transfer in 50 hours of lower division undifferentiated nursing credit. Diploma school graduates may earn up to 50 hours of credit by successfully passing selected examinations with a grade of C or better. If a grade of C is not achieved, a specific individual remediation plan will be developed. Any remediation plan must be satisfactorily completed prior to enrollment in upper division nursing courses.

A minimum of 30 hours of general education courses that meet the University Liberal Studies Program and School of Nursing requirements should be completed before enrolling in the first nursing courses. All registered nurse students must establish credit by enrollment or challenge in:

Curriculum Requirements	Hrs.
ENGL 101 and 102	6
Statistics	3
Cluster A	12
Cluster B	12
Cluster C	12

Cluster B must include psychology, growth and development, and a sociology course. Cluster C may be selected from chemistry, biology, nutrition, anatomy, physiology, microbiology, pharmacology, and computer science. At least one course must include a laboratory.

Completion of additional general education courses beyond the 30 hours is recommended prior to beginning nursing courses if the R.N. student wishes to carry a part-time course load.

The purpose of the first nursing course, NSG 340, is to facilitate transition into professional nursing. Special emphasis is placed on socialization into this role and the expectations of the role. All R.N. students are required to enroll in the following nursing courses:

NSG 333W <i>Ethics in Nursing</i>	NSG 433 <i>Professional Role Synthesis-R.N.</i>
NSG 340 <i>Professional Role Transition</i>	NSG 476 <i>Introduction to Nursing Rsch.</i>

R.N. students may establish credit by enrollment, challenge examination, or portfolio for:

NSG 361 <i>Health Assessment</i>	NSG 441 <i>Community Response to Health Promotion</i>
NSG 421 <i>System Responses to Physiological Dysfunction</i>	NSG 445 <i>Nursing Interventions 6</i>
NSG 425 <i>Nursing Interventions 5</i>	

If enrolling in a clinical practice course and the site of practice is in West Virginia, an unrestricted West Virginia R.N. license is required.

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.

<i>Fall</i>		<i>Spring</i>	
First Semester	Hrs.	Second Semester	Hrs.
NSG 333W	3	NSG 421*	3
NSG 340	3	NSG 425	6
NSG 361*	3	NSG 433	3
NSG 476	3	Total	12
Total	12		

<i>Summer I (12 wks.)</i>	
Third Semester	Hrs.
NSG 441*	3
NSG 445*	6
Total	9

*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 421 and 441. A portfolio is used to establish credit for Nursing 425 and 445. Nursing 361 may also be challenged if an RN has adequate prior experience in the content area. Only those students who have adequate prior experience in the content areas covered by these 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 web page at <http://www.hsc.wvu.edu/son>.

Graduate Programs

Master of Science in Nursing

The functional areas of study available in advanced practice nursing are family nurse practitioner and pediatric nurse practitioner. Additional advanced practice programs are under development. The school also offers post-graduate family nurse practitioner and pediatric nurse practitioner certification programs for those who already have an M.S.N. The programs are offered at the West Virginia University Health Sciences Center main campus in Morgantown and at the Health Sciences Center Division in Charleston. Courses are offered using web-based modalities and face-to-face meetings. Real time web cast 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 two or three times each semester.

The master's program offers a curriculum that allows students to enroll on a part-time or full-time basis. 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 and participation in a guided research experience.

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 four semesters, including a summer session, of full-time study. The average full-time load is nine to 12 credit hours per semester. Completion of the program in part-time study includes six semesters and two summer sessions. The average part-time load is three to six credits.

The master's education program in nursing prepares clinicians and educators capable of leadership in developing and expanding nursing knowledge, skills, and practice competencies. Preparation at the master's level provides the opportunity for students to demonstrate self-direction and effective interactions with other health professionals in promoting and restoring health.

Graduates meet all requirements to sit for the national certification examination in their specialty area of family nurse practitioner or pediatric nurse practitioner. 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.

Graduates of the nursing education track are prepared to plan and direct the learning activities of individuals and groups in classroom and clinical settings. They have appropriate advanced practice skills as well as beginning instruction expertise.

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 builds and maintains 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 July 1. The beginning sequence of courses in the M.S.N. program starts in the fall semester only. Class size may be limited based on available faculty resources and space. Applicants for graduate study 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 from Admissions and Records). To be returned with a non-refundable service fee to: Office of Admissions and Records, West Virginia University, P.O. Box 6009, Morgantown, WV 26506-6009.
 - b. Application for Admission to Graduate Study in the School of Nursing (available from Student Services Office in the School of Nursing or School of Nursing Charleston Division offices). Students should be certain that all materials are sent to the appropriate office. WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600 or WVU Charleston Division, Office of Student Affairs, 3110 MacCorkle Ave. SE, Charleston, WV 25304-1129.
2. Request an official transcript of records from each college or university attended. Transcripts and records should be sent directly to: WVU Office of Admissions and Records, P.O. Box 6009, Morgantown, WV 26506-6009 or WVU Charleston Division, Office of Student Affairs, 3110 MacCorkle Ave. SE, Charleston, WV 25304-1129.
3. Send three letters of recommendation directly to the WVU School of Nursing, Student Services Office, P.O. Box 9600, Morgantown, WV 26506-9600 or WVU Charleston Division, Office of Student Affairs, 3110 MacCorkle Ave. SE, Charleston, WV 25301-1129.

The parameters used for review of applicants include: academic achievement, GRE 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

The following criteria must be met for regular admission to graduate study in the School of Nursing.

1. Satisfy WVU requirements for admission to graduate study.
2. Have a cumulative grade point average of 3.0 or higher on a 4.0 scale on all college work attempted.
3. Have an acceptable score on the Graduate Record Exam.
4. Have a current, unrestricted R.N. license in at least one state.
5. Hold the degree of bachelor of science in nursing from a nationally accredited school.
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 and acceptable for transfer.
8. Submit three letters of reference.
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 admission letter.

Once admitted, the student is assigned to a faculty advisor who provides guidance in curriculum and other academic matters. Enrollment in nursing courses is based upon readiness, availability of space, and other essential resources.

Nursing Core Courses for all Master's Degree Nursing Students

	Hrs.
NSG 622 <i>Theory and Critical Analysis</i>	3
NSG 623 <i>Concepts of Advanced Nursing</i>	2
NSG 624 <i>Advanced Pathophysiology</i>	4
NSG 626 <i>Health Promotion for all Ages</i>	2
NSG 627 <i>Research, Evaluation, and Analysis</i>	5
NSG 630 <i>Family, Community, and Rural Health Systems</i>	2
NSG 680 <i>Health Policy, Issues, and Ethics</i>	3
NSG 697 <i>Guided Research Experience</i>	3

FNP Courses

NSG 625 <i>Primary Care: Rural Families 1</i>	3
NSG 631 <i>Advanced Pharmacology</i>	3
NSG 635 <i>Primary Care: Rural Families 2</i>	4
NSG 661 <i>Rural Family Health Practicum 1</i>	5
NSG 662 <i>Rural Family Health Practicum 2</i>	5

Pediatric NP Courses

NSG 631 <i>Advanced Pharmacology</i>	3
NSG 640 <i>Pediatric Primary Care 1</i>	3
NSG 650 <i>Pediatric Primary Care 2</i>	4
NSG 651 <i>Pediatric Practicum 1</i>	5
NSG 652 <i>Pediatric Practicum 2</i>	5

Education Elective Courses

NSG 672 <i>Education Practicum</i>	5
NSG 674 <i>Teaching in Nursing</i>	3

Full-Time and Part-Time Progression Plans for Family Track

First Year (full-time)

Fall Semester	Hrs.	Spring Semester	Hrs.
NSG 622 <i>Theory</i> *	3	NSG 625 <i>Primary Care 1</i> *	3
NSG 623 <i>Concepts</i> *	2	NSG 626 <i>Promotion</i> **	2
NSG 624 <i>Adv. Pathophysiology</i> **	4	NSG 627 <i>Research</i> *	5
Total	9	Total	10

Summer I

NSG 630 <i>Rural Fam.</i> *	2
NSG 631 <i>Adv. Pharm.</i> *	3
Total	5

Second Year (full-time)

Fall Semester	Hrs.	Spring Semester	Hrs.
NSG 635 <i>Primary Care 2</i> *	4	NSG 662 <i>Practicum 2</i>	5
NSG 661 <i>Practicum 1</i>	5	NSG 680 <i>Policy</i> *	3
NSG 697 <i>Guided Research</i>	1	NSG 697 <i>Guided Research</i>	2
Total	10	Total	10

First Year (part-time)

Fall Semester	Hrs.	Spring Semester	Hrs.
NSG 622 <i>Theory</i> *	3	NSG 626 <i>Promotion</i> **	2
NSG 623 <i>Concepts</i> *	2	NSG 626 <i>Research</i> *	5
Total	5	Total	7

Summer I

NSG 630 <i>Rural Fam.</i> *	2
Total	2

Second Year (part-time)

	Hrs.
Fall Semester	
NSG 624 <i>Adv. Pathophysiology</i> **.....	4
NSG 697 <i>Guided Research</i>	3
Total	7

	Hrs.
Spring Semester	
NSG 625 <i>Primary Care 1*</i>	3
NSG 680 <i>Policy*</i>	3
Total	6

Summer I

NSG 631 <i>Adv. Pharmacology*</i>	3
Total	3

Third Year (part-time)

	Hrs.
Fall Semester	
NSG 635 <i>Primary Care 2*</i>	4
NSG 661 <i>Practicum 1</i>	5
Total	9

	Hrs.
Spring Semester	
NSG 662 <i>Practicum 2</i>	5
Total	5

*Interactive television

** Web-based

Post-Graduate Certificate Program

The post-graduate nurse practitioner certificate program requires a minimum of 17 credit hours. The program prepares master's level nurses to sit for the national certification examination as a family nurse practitioner or oncology practitioner.

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 four required clinical courses in the program are evidence of competence in the following three areas: advanced pathophysiology, advanced pharmacology, and physical examination skills.

The four required courses for post-master's certification as a family nurse practitioner are:

Required Courses	Hrs.
NSG 625 <i>Primary Care: Rural Families 1</i>	3
(Competency exam for exemption)	
NSG 635 <i>Primary Care: Rural Families 2</i>	4
NSG 661 <i>Rural Family Health Practicum 1</i>	5
NSG 662 <i>Rural Family Health Practicum 2</i>	5
Total	17

All students in this program will complete a minimum of 600 supervised clinical hours.

Doctor of Science in Nursing Summer Program

The nursing component of the D.S.N. program is offered in Morgantown during six-week summer sessions. Students attend class two days a week, taking six credits of nursing courses for four summers. Up to 18 credits of cognate/electives can be taken in the fall and spring semesters at a school near the student's home.

The purpose of the D.S.N. program is to prepare nurse scholars/educators for roles in teaching, service, and research in nursing. The program will prepare graduates who will advance the development of knowledge in significant life transitions, empowerment, and health system outcomes that will improve health for diverse populations. The goals of the program are to prepare graduates who:

1. Provide leadership to impact health care delivery and nursing education systems.
2. Design and implement nursing research that advances evidence-based practice.
3. Advance the quality of nursing through assuming the full academic role in nursing education.
4. Collaborate across professional, disciplinary, and institutional boundaries to promote, protect, and improve health.

Degree Requirements

Three curricular components comprise the 54 credits of post-master's coursework. These are core, cognate/electives, and dissertation.

Core

NSG 726 <i>Research Methods 1</i>	3
NSG 727 <i>Contemporary Nursing Science</i>	3
NSG 728 <i>Theoretical Basis of Nursing</i>	3
NSG 729 <i>Research Methods 2</i>	3
NSG 734 <i>Use of Data</i>	3
NSG 735 <i>Principles: Nursing Education</i>	3
NSG 737 <i>Leadership</i>	3
Total	21

Cognate/Electives

Advanced Statistics Cognate	3
Multi-Variate Statistics Cognate	3
Education Cognate	3
Additional Cognates	9
Total	18

Dissertation

NSG 781 <i>Research Mentorship 1</i>	1
NSG 782 <i>Research Mentorship 2</i>	1
NSG 783 <i>Dissertation Seminar 1</i>	2
NSG 784 <i>Dissertation Seminar 2</i>	2
NSG 797 <i>Dissertation</i>	9
Total	15

Additional requirements include a qualifying examination after completion of all core and cognate/elective coursework, and dissertation oral examination at the time of the dissertation defense.

Application Process and Requirements

The application should be completed by April 1. Two application forms are required. The WVU Application for Admission to Graduate Studies can be completed on the web at <http://www.as.wvu.edu/graduate/grforms.html> or it can be obtained by calling WVU Admissions and Records at 1-800-344-WVU1. The Application for Admission to Graduate Study in the School of Nursing is available from Student Services in Morgantown; telephone 1-866-988-6877.

The following information is required for a complete application record:

1. A current curriculum vita.
2. Transcripts of B.S.N. and M.S.N. degrees from nationally accredited nursing programs.
3. Report of the Graduate Record Examination.
4. Evidence of current registered nurse license.
5. Evidence demonstrating expertise in the advanced practice of nursing.
6. Three letters of reference that address the applicant's: a) expertise in the advanced practice of nursing, b) skill in research and scholarly writing, and c) likelihood for success in doctoral work. One letter should be from a former professor of the applicant.
7. Two two-page scholarly essays, one describing the applicant's research interests and one describing the applicant's career goals.
8. An example of scholarly work, which may be a research paper, master's thesis, or a publication.
9. Evidence of basic computer literacy.

Admission Criteria

The following criteria will be used in determining admission to the program:

1. Cumulative grade point average of 3.0 of four points in master's degree work.
2. Satisfactory achievement on the Graduate Record Examination.
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.

Summer Curriculum: D.S.N. Program

First Year

Summer I	Hrs.
NSG 726 <i>Research Methods 1</i>	3
NSG 728 <i>Theoretical Basis</i>	3
Total	6

Fall Semester	Hrs.
Statistics Cognate	3
Total	3

Spring Semester	Hrs.
Statistics Cognate	3
Total	3

Second Year

Summer II	Hrs.
NSG 727 <i>Contemporary Nsg. Science ...</i>	3
NSG 729 <i>Research Methods 2</i>	3
Total	6

Second Year

Fall Semester	Hrs.
Cognate	3
Total	3

Spring Semester	Hrs.
Educational Cognate	3
Total	3

Third Year

Summer III	Hrs.
NSG 735 <i>Principles</i>	3
NSG 737 <i>Leadership</i>	3
Total	6

Fall Semester	Hrs.
Cognate	3
Total	3

Spring Semester	Hrs.
Cognate	3
Total	3

Fourth Year

Summer IV	Hrs.
NSG 734 <i>Uses of Data</i>	3
NSG 781 <i>Research Mentorship 1</i>	1
NSG 783 <i>Dissertation Seminar 1</i>	2
Total	6

Fall Semester	Hrs.
NSG 782 <i>Research Mentorship 2</i>	1
NSG 784 <i>Dissertation Seminar 2</i>	2
Total	3

Spring Semester	Hrs.
NSG 797 <i>Dissertation</i>	3-6
Total	3-6

Fifth Year

Summer V	Hrs.
NSG 797 <i>Dissertation</i>	3-6
Total	3-6

Fall Semester	Hrs.
NSG 797 <i>Dissertation</i>	3-6
Total	3-6

School of Pharmacy

George R. Spratto, Ph.D., Dean

Mary K. Stamatakis, Pharm.D., Assistant Dean for Academic Programs

W. Clarke Ridgway, B.S., Assistant Dean for Student Services

Patrick S. Callery, Ph.D., Assistant Dean for Research and Graduate Programs

<http://www.hsc.wvu.edu/sop>

Degrees Offered

Doctor of Pharmacy

M.S., Ph.D. in Pharmaceutical Sciences

Introduction

Pharmacy was first offered at West Virginia University as a department in the School of Medicine in 1914. It became the College of Pharmacy in 1936 and 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 entry-level 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.

A primary objective of the School of Pharmacy is to educate practitioners for current and future roles in the profession of pharmacy. To meet this objective, the curriculum provides the student with scientific and technical knowledge and communication skills required to practice the profession and imbues in the student a concept of the pharmacist's professional responsibilities as a provider of pharmaceutical care and as a guardian of the public health.

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, 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 sciences. Students may specialize in pharmacy, pharmaceuticals, medicinal chemistry, drug metabolism, biopharmaceutics/pharmacokinetics, pharmacology, and health outcomes and policy research and pharmaceutical marketing.

Accreditation

The School of Pharmacy is accredited by the American Council on Pharmaceutical Education. The council is composed of members from the American Pharmaceutical 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 the dean.

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 forty-nine other states, the District of Columbia, and Puerto Rico provided they meet the licensure requirements of these states.

Entry-Level 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 entry-level Pharm.D. program by successfully completing the following course selections or their equivalents:

Pre-Pharmacy Requirements Meeting Requirements	WVU Courses	Sem. Hr. Credit
English Composition	ENGL 101 and 102	6
Introduction to Calculus	MATH 150 (MATH 155)	3 (4)
Principles of Microeconomics	ECON 201	3
General Biology	BIOL 115 and 117	8
General Chemistry	CHEM 115 and 116	8
Organic Chemistry	CHEM 233/235 and 234/236	8
Physics	PHYS 101 and 102	8
Introduction to Statistics	STAT 211 or ECON 225	3
Microbiology	MICB 200 (ENVM 241)	3 (4)
General Communications	COMM 100 and 102	3
Electives*		18
Total		71-73

*Electives must be designed to satisfy the University Liberal Studies Program requirements. (See "Liberal Studies Program" for a listing of specific courses.) Cluster A—12 hrs.; Cluster B—six hrs.; in addition to Economics 54 and Communications 11 and 12. One three-credit-hour elective from either Cluster A or B must focus on a foreign or minority culture or gender studies.

Because limited openings are available in the school's professional degree program, preference in admissions is given to qualified West Virginians, although nonresident applicants are considered. 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.

Admissions are competitive. Criteria used to evaluate candidates include academic performance, as measured by the grade point average 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, a personal interview, an on-site composed written essay and recommendations from college faculty. PCAT tests must have been taken within five years of the date of application. All pre-requisite courses must be 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 pre-requisite coursework in a WV college or university.

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 web site, www.pharmacas.org. Supplemental applications specific to the West Virginia University School of Pharmacy will then be sent to candidates deemed qualified by the Committee on Admissions. Application deadlines are subject to change; please check the School of Pharmacy web page at 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 expected to deposit \$100 before his or her name is entered upon 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 immunizations and diagnostic procedures required by the WVU Board of Governors, West Virginia University, the West Virginia University 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 and Records, 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. It is recommended that the student take this test in the 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: The Psychological Corporation, PSE Customer Relations-PCAT, 555 Academic Court, San Antonio, TX 78204-2498; Fax (210) 921-8861.

Personal Interview

The Committee on Admissions requires a personal interview with all candidates seeking admission 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 or Charleston. It should be noted that in recent years applicants with GPA's below 3.0 have rarely been admitted.

Recommendations on Academic Performance

Three academic recommendations are required, although more may be submitted. At least two of these recommendations 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.

Admission to Advanced Standing

If space is available, students from other accredited schools of pharmacy may be admitted, provided they meet the course requirements of the WVU School of Pharmacy, have at least a 2.5 grade-point average, and are eligible for continuation toward a degree in pharmacy at the school initially attended. Grades of D in professional courses can not 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 complete all prepharmacy/pharmacy school work in progress prior to matriculation. 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 pre-requisite 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 application 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 Student 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 the School of Pharmacy web site.

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 12 credit hours nor 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 information which follows is only a brief outline of the School of Pharmacy 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 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 through the Office of Student Services. 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 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 grade-point average 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 the 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.

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 faculty. 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 web site; (2) satisfactorily complete all 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) complete satisfactorily the required number of experiential rotations and demonstrate the attainment of minimum competencies; and (7) complete 100 hours of volunteer community service.

Special Requirements

Fifteen-hundred clock hours of internship experience are required by the Board of Pharmacy 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 year 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 Board of Pharmacy may be obtained via the fourth professional year of the Pharm.D. program.

Students in the Pharm.D. program will perform eleven four-week blocks of experiential rotations during the final year of the program. Three of the eleven blocks must be performed in designated rural sites. Site placement and sequencing will occur in the semester prior to the experiential year. Students may incur additional housing and/or travel costs during the experiential year. 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 required didactic coursework must be successfully completed prior to beginning the 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 Standards.

Entry-Level Pharm.D. Professional Curriculum

First Year

Fall Semester	Hrs.	Spring Semester	Hrs.
NBAN 301	3	BIOC 531	3
PSIO 441	4	PHAR 708	3
PHAR 702	3	PHAR 709	2
PHAR 700	2	PHAR 710	3
PHAR 701	2	PHAR 711	1
Elective *	2-3	PHAR 712	1
Total	16-17	Elective	2-3
		Total	15-16

*Students must complete a minimum of ten credit hours of electives in the first three years of the professional program. Of these ten, a minimum of six must be professionally related and selected from an approved list.

Second Year

Fall Semester	Hrs.	Spring Semester	Hrs.
PHAR 715	4	PHAR 724	1
PHAR 716	3	PHAR 725	4
PCOL 743	3	PCOL 744	3
PHAR 720	2	PHAR 726	2
PHAR 723	2	PHAR 727	2
Elective	2-3	PHAR 728	2
Total	16-17	Elective	2-3
		Total	16-17

Third Year

Fall Semester	Hrs.	Spring Semester	Hrs.
PHAR 730	5	PHAR 736	1
PHAR 731	3	PHAR 737	2
PHAR 732	3	PHAR 738	2
PHAR 733	2	PHAR 739	3
PHAR 734	3	PHAR 740	3
PHAR 735	1	PHAR 741	2-3
Total	17	Elective	2-3
		Total	16-17

Fourth Year

Experiential Components (Students rotate through)

Community and Institutional

Pharmacy Components * 3 x 4 weeks	=	12 weeks
Acute Care 2 x 4 weeks	=	8 weeks
Ambulatory Care 1 x 4 weeks	=	4 weeks
Selectives/Electives** 5 x 4 weeks	=	20 weeks
Total experiential ***		44 weeks

*Students will choose which component will be four weeks and which component eight weeks for a total of 12 weeks community and institutional.

**Three of the five four-week blocks will be taken from a special listing of selected rotations.

***Fourth-year students will be required to attend both Summer I and II semesters.

At the time this catalog was printed, some courses had not yet been submitted to the Faculty Senate for approval. Consult the department for updates.

Prior to graduation, each student enrolled in the School of Pharmacy professional program must complete a minimum of ten credit hours of electives as part of the pharmacy curriculum. Electives must be completed during the first three years of the four-year professional program. At least six of the ten required elective hours must be professionally related and chosen from a list of approved courses. 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.

The University pass-fail policy will be followed. Only *Pharmaceutical Investigations* (first offering up to three hours), or additional free electives (in excess of the ten hours of required electives) may be taken on a pass-fail (or satisfactory/unsatisfactory) basis. No more than three credit hours of *Pharmaceutical Investigations* will be permitted to count toward fulfillment of the pharmacy elective requirements.

Graduate Programs Pharmaceutical Sciences

The School of Pharmacy offers graduate programs in the pharmaceutical sciences aimed at educating competent researchers and teachers. 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 general requirements for admission as graduate students. The applicant must possess a baccalaureate degree with a background in a suitable area of study, an overall grade-point average of at least 2.75, and the aptitude and interest for graduate work in the pharmaceutical sciences in order to be admitted with regular student status. Applicants not meeting criteria for admission with regular student status will 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 portions are required from all students except for applicants in the area of health outcomes and policy research and pharmaceutical marketing where test scores on the Graduate Management Admissions Test (GMAT) are acceptable. TOEFL, or similar scores, are required of international students.

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 for all graduate courses to qualify for the degrees.

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 sciences. Specialty areas of study include medicinal chemistry, pharmaceuticals, drug metabolism, health outcomes, and policy research and pharmaceutical marketing.

Requirements for Ph.D. Degree

The student's first semester is usually occupied with coursework while he or she is under the guidance of an interim faculty advisor or committee. During this time, each student will confer with faculty members in the department concerning the research project. A major professor should be chosen by the end of the first semester of graduate study. The student's research committee should be chosen by the end of the first year of study (18-20 hours of graduate coursework). The interest to pursue the M.S. en route to the Ph.D. degree should also be stated at this time. It is not necessary for all students to complete all requirements for the M.S. degree in order to qualify for admission into the Ph.D. program, although the student, with committee advice, may elect to complete the requirements for this degree in progress toward the Ph.D. Students bypassing the M.S. must meet all requirements for the M.S., except for preparing and defending a thesis.

Each student must submit a formal plan of study and research plan to the Health Sciences Center graduate council.

Progress will continue with guidance from the research committee, and by the end of the second year the student should have completed the language/research tool requirements.

To be admitted to candidacy for the Ph.D. degree, the student must satisfy the above requirements and pass oral and written qualifying examinations.

After 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 the pharmaceutical sciences. Students may specialize in health outcomes and policy research and pharmaceutical marketing, pharmacology and toxicology, pharmaceutical chemistry, industrial pharmacy, medicinal chemistry, pharmaceuticals, biopharmaceuticals, 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 Assistant 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's 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.*

Courses

Schedule of Courses

Before the opening of each term and the summer terms, a *Schedule of Courses* is printed, 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 they may be taken by upper-division students 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 advance 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. Seniors may enter via petition/special permission. Undergraduates in any class carrying a 500-level course number must have a 3.0 cumulative grade-point average and written approval on special forms from the course instructor and the student's advisor(s).

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, but the 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
Conc	concurrent registration required
PR	prerequisite
Coreq	corequisite
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.

Undergraduate 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*. I, II, S. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

490. *Teaching Practicum*. I, II, S. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.

491. *Professional Field Experience*. I, II, S. 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*. I, II, S. 1-3 Hr. Directed study, reading, and or research.

493. *Special Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

494. *Seminar*. I, II, S. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

495. *Independent Study*. I, II, S. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

496. *Senior Thesis*. I, II, S. 1-3 Hr. PR: Consent.

497. *Research*. I, II, S. 1-6 Hr. Independent research projects.

498. *Honors*. I, II, S. 1-3 Hr. PR: Students in honors program and consent by the honors director. Independent reading, study, or research.

Graduate-Level Common Course Numbers and Descriptions

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 which 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. It is anticipated that 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 residence 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 his or her department's 699/799 *Graduate Colloquium*, to consult with graduate faculty, participate in both formal and informal academic activities sponsored by his or 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 masters' programs. Registration for one credit of 699/799 *Graduate Colloquium* satisfies the University requirement of registration in the semester in which graduation occurs.

General Comment

Graduate Council policy requires that any student in a master's 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.*

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*.

Dental Hygiene (DTHY)

101. *Orientation to Dental Hygiene*. 2 Hr. PR: Enrollment in dental hygiene. Historical development of dental hygiene with emphasis on the philosophy, responsibilities, and current role of the dental hygienist as a member of the dental health team.

185. *Head and Neck Anatomy*. 1 Hr. PR: Acceptance into dental hygiene. The human neck bones, muscles, nerves, blood supply, lymphatics, glandular tissue, fascial/spaces, TMJ, and spread of dental infection are the focus of this course.

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.

205. *The Theory and Practice of Prevention*. 2 Hr. PR: Enrollment in dental hygiene. Philosophy and techniques of preventive dentistry.

220. *Dental Nursing Techniques*. 2 Hr. PR: Enrollment in dental hygiene. Emergency first aid and principles of nursing applicable to the dental office.

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.

293. *Special Topics*. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

300. *Anesthesia for Dental Hygiene*. I. 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.

301. *Public Health*. 2 Hr. PR: Enrollment in dental hygiene. Theory and practice of preventive dentistry and community.

302. *Dental Health Education*. 3 Hr. PR: Enrollment in dental hygiene. Methods, materials, and resources used in teaching dental health to various population groups.

320. *Dental Radiology*. 2 Hr. PR: Enrollment in dental hygiene. Basic principles and procedures in oral radiology technics and interpretation.

322. *Dental Radiology*. 1 Hr. PR: DTHY 320. The application of radiology principles and techniques. Clinical integration and case presentations will be emphasized.

360. *Dental Materials*. 3 Hr. PR: Enrollment in dental hygiene. Lecture and laboratory covering the science and manipulation of dental materials.

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.)

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.

364. *Periodontics 2*. 2 Hr. PR: DTHY 363. A sequential course to DTHY 363.

366. *Technical Expression and Dental Literature*. 1 Hr. PR: Dental hygiene major. Preparation and analysis of professional communications.

370. *Dental Hygiene Clinical Methods*. 2 Hr. PR: DTHY 225. Principles of oral debridement, instruction in the care of special patients, use of diagnostic aids, and nutritional counseling.

372. *Clinical Dental Hygiene 1*. 2 Hr. PR: DTHY 225. Clinical application of dental hygiene principles and techniques.

374. *Clinical Dental Hygiene 2*. 2 Hr. PR: DTHY 370, Coreq: DTHY 372. Clinical application of dental hygiene principles and techniques.

378. *Dental Hygiene Teaching Methods*. 2 Hr. PR: Enrollment in dental hygiene. Concepts and principles of administration, curriculum, and clinical teaching unique to dental auxiliary education. Emphasis on overall role of the dental hygiene educator.
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.
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.
404. *Advanced Dental Hygiene Methods 1*. 1 Hr. PR: Fourth year in dental hygiene. Principles of advanced clinical dental hygiene and practice in non-traditional settings.
405. *Advanced Clinical Dental Hygiene 1*. 4 Hr. PR: Fourth year in dental hygiene. Clinical experience in traditional and expanded duties; pre- and post-operative care of surgical patients, and radiology.
406. *Advanced Clinical Dental Hygiene 2*. 3-4 Hr. PR: Fourth year in dental hygiene. Continuation of clinical practice experience in dental hygiene procedures.
407. *Advanced Dental Hygiene Methods 2*. 2 Hr. PR: Fourth year in dental hygiene. Principles of advanced clinical dental hygiene and practice in non-traditional settings.
450. *Dental Health Education 2*. 2 Hr. PR: DTHY 302. Advanced dental health education with a research component. A problem-based learning experience.
451. *Dental Health Education 3*. 2 Hr. PR: DTHY 450. Advanced dental health education with field experiences in three settings. Case histories developed and research study completed.
478. *Clinical Evaluation*. I. 2 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.
490. *Teaching Practicum*. 1-3 Hr. 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.
- 493 A-Z. *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*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
496. *Senior Thesis*. 1-3 Hr. PR: Consent.
498. *Honors*. 1-3 Hr. PR: Students in honors program and consent by the honors director. Independent reading, study, or research.
678. *Dental Hygiene Teaching Methods*. II. 2 Hr. PR: Consent. Concepts and principles of administration, curriculum, and classroom teaching unique to dental auxiliary education. Emphasis on overall role of the dental hygiene educator.
679. *Clinical Evaluation*. I. 2 Hr. PR: DTHY 678. Preparation for clinical instruction and evaluation. Emphasis is placed in clinical evaluation procedures, proper instrumentation, and the skills/strategies utilized to promote affective and psychomotor skill development in students.
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.
681. *Dental Hygiene Seminar and Practice 2*. 3 Hr. Expanded services for the dental hygienist with emphasis on restorative and periodontal functions.
682. *Enhancing Class Administration*. 2 Hr. The use of "office productivity" software to enhance classroom and clinic administration. Course targeted toward students destined for careers in dental hygiene or dental education.
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.
690. *Teaching Practicum*. I, II, S. 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.)
- 691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

695. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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.)
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.)

Dentistry (DENT)

600. *Advanced Oral Surgery*. I, II, S. 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.)
690. *Teaching Practicum*. I, II, S. 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.)
697. *Master's Degree Research or Thesis*. I, II, S. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.
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.
701. *Arts & Sciences of Preventive Dentistry*. 1 Hr. Lectures dealing with the philosophy and techniques of preventive dentistry.
703. *Introduction to Patient Care*. 3 Hr. Lectures, laboratory, and clinical experiences designed to develop skill in performing through clinical assessments, defining ethical/legal issues in patient care, and performing procedures to prevent and control disease.
704. *Operative Dentistry*. II. 4 Hr. Preclinical course in principles of cavity preparation, manipulation of plastic restorative materials, and related instrumentation. Characteristics and treatment of caries emphasized.
710. *Dental Anatomy and Occlusion*. 4 Hr. Anatomy of individual teeth, both permanent and primary, in regard to form and function.
711. *Periodontics*. S. 2 Hr. Introduction to periodontal diseases, their diagnosis, and treatment. Laboratory instruction is included.
712. *Dental Materials*. 2 Hr. Composition, physical, chemical, mechanical, and manipulative properties, and technical uses of dental restorative materials as related to dentistry.
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.
719. *Pedodontics*. 1 Hr. PR: Consent. Normal growth and development presented from physical, intellectual, psychological, and oral perspectives. Behavior of children in dental environment reviewed and strategies for management examined.
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.
722. *Operative Dentistry*. 4 Hr. Preclinical course to include a variety of cavity forms and their restoration with compacted golds. Certain fundamentals of pedodontics introduced.
725. *Practice Management*. II. 1 Hr. A lecture course designed to prepare dental students in the concepts of four-handed dentistry.
726. *Removable Prosthodontics*. 7 Hr. This is a seminar course which identifies the knowledge and develops the psychomotor skills necessary for the student to perform a prosthodontic review for the removable partial denture.
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.
729. *Operative Dentistry*. 2 Hr. Lectures relate to standard clinical procedures and to laboratory instruction in direct and indirect cast gold restorations.
730. *Community Dentistry*. II. 1 Hr. Lectures provide the student with a basic knowledge of the principles of dental public health practice. Emphasis on dental epidemiology and preventive dentistry at the community level.
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.
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.
735. *Pediatric Dentistry*. 2 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.

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.
737. *Treatment Planning*. 1 Hr. Introduction to the universal principles of professional treatment planning for adult patients.
739. *Oral Surgery*. 1 Hr. Didactic instruction in basic surgical principles as applied to the extraction of teeth dento-alveolar surgery.
740. *Periodontics*. 1 Hr. Intermediate didactic instruction in periodontal therapy including basic surgery and post-operative care.
744. *Diagnosis and Treatment Planning*. 1 Hr. Analysis of orthodontic diagnostic records, diagnostic skills for various malocclusions, and formulation of a treatment plan to orthodontic cases.
745. *Principles of Orthodontics*. 1 Hr. Facial growth and development, the development of occlusion, and etiology and classification of malocclusions.
746. *Orthodontic Techniques*. 2 Hr. Technical instruction in taking diagnostic records and constructing basic orthodontic appliances.
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.
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.
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.
754. *Introduction to Dental Implantology*. 1 Hr. PR: Consent. Biological and scientific bases for implant dentistry; diagnosis, treatment planning, selection, placement, restoration, and maintenance of dental implants.
758. *Operative Dentistry*. 2 Hr. More complex and advanced techniques for clinical practice with emphasis on new developments throughout the scope of operative dentistry.
759. *Oral Surgery*. 2 Hr. PR: Consent. Didactic instruction in patient evaluation, complicated exodontia, preprosthetic surgery, diagnosis, surgical and adjunctive treatment of disease, injuries, and defects of human jaws and associated structures.
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, and special patient care.
762. *Endodontics*. 1 Hr. Lectures on rationale, diagnosis, prevention, and nonsurgical and surgical treatment of diseases of the dental pulp and their sequelae.
763. *Periodontics*. 2 Hr. Advanced didactic instruction in periodontal therapy including special surgical procedures.
764. *Pain and Anxiety Control*. 1 Hr. PR: Consent. Instruction in the psychology, physiology, and clinical techniques of controlling pain and anxiety in the dental patient.
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.
767. *Community Dentistry*. 1-15 Hr. Field experience in various aspects of community health.
768. *Hospital Dentistry Practicum*. 1-15 Hr. Hospital experience (remote site) in the various aspects of care of the hospitalized dental patient.
769. *Practice Management (Ethics and Law in Dentistry)*. 1 Hr. PR: Junior standing in dentistry. Core knowledge of the ethical and legal issues in dentistry; ethical and legal decision making process.
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.
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.
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.
773. *Provisional Restorations*. 1 Hr. This course will provide instruction and theory in the fabrication of optimal provisional restorations that satisfy biologic, mechanical and esthetic requirements. Using a seminar format, the properties of materials used, protection of the dental pulp, maintaining periodontal health and providing occlusal compatibility will be discussed.

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.

775. *Practice Management.* 0-6 Hr. PR: Consent. Clinical practice using auxiliaries, including those trained in expanded functions.

776. *Removable Prosthodontics.* 0-6 Hr. Continued application of the theory and practice of removable prosthodontics.

777. *Periodontics.* 0-6 Hr. Clinical experience in the diagnosis and treatment of periodontal diseases.

778. *Practice Management-Law.* 1 Hr. Select legal concepts and their relation to the practice of dentistry.

779. *Practice Management-Ethics.* 1 Hr. Core knowledge of ethical issues in dentistry; the process of ethical decision making.

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.

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.

784. *Oral Surgery.* 0-6 Hr. Clinical instruction in outpatient and inpatient oral surgery necessary to provide comprehensive care for the dental patient.

785. *Orthodontics.* 0-6 Hr. Clinical management of selected malocclusion problems.

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.

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.

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.)

789. *Fixed Prosthodontics.* 0-6 Hr. PR: Consent. Clinical application of the theory and practice of crown and bridge dentistry.

791 A-Z. *Advanced Topics.* 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study.* 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics.* 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Special Seminars.* 1-6 Hr. Seminars arranged for advanced graduate students.

795. *Independent Study.* I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

Endodontics (ENDO)

688. *Clinical Endodontics.* I, II, S. 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.

689. *Endodontic Theory.* I, II, S. 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.

690. *Teaching Practicum.* I, II. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry.

691. *Advanced Topics.* I, II. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

697. *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.)

Orthodontics (ORTH)

616. *Biomechanics.* I, II, S. 2 Hr. PR: Consent. Design and function of the teeth and their surrounding structures, and response of these tissues to orthodontic procedures.

617. *Orthodontic Technique.* I, II, S. 2 Hr. PR: Consent. Laboratory course in techniques related to fabrication and manipulation of orthodontic appliances.

618. *Orthodontic Materials.* I, II, S. 1 Hr. PR: Consent. Physical properties of materials used in orthodontic appliances.

619. *Orthodontic Diagnosis.* I, II, S. 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.

620. *Cephalometrics*. S. 1-3 Hr. PR: Consent. Use of radiographic cephalometry in studying growth of the human face, analysis of dentofacial malformations, and evaluation of orthodontic treatment.
621. *Orthodontic Mechanics*. I, II, S. 1-4 Hr. Seminar and laboratory course on basic orthodontic mechanical properties.
622. *Advanced Orthodontic Mechanics*. I, II, S. 1 Hr. Continuation of ORTH 621 involving more difficult type cases and introducing more sophisticated appliance therapy.
623. *Growth and Development*. I, II, S. 1-5 Hr. PR: Consent. Seminar-type course on normal and abnormal growth of the human head and its application to orthodontics.
- 625 A-Z. *Orthodontic Seminar*. I, II, S. 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.
626. *Orthodontic Clinic*. I, II, S. 1-12 Hr. PR: ORTH 616 and ORTH 617. Clinical treatment of selected patients.
690. *Teaching Practicum*. I, II, S. 1-3 Hr. PR: Consent. Supervised practice in college teaching of dentistry.
691. *Advanced Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
692. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.
693. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
694. *Seminar*. I, II, S. 1-6 Hr. Seminars arranged for advanced graduate students.
695. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
696. *Graduate Seminar*. I, II, S. 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.
697. *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.)

Prosthodontics (PROS)

688. *Advanced Clinical Prosthodontics*. I, II, S. 1-6 Hr. Advanced prosthodontic practice in the areas of fixed and removable partial dentures, complete dentures, temporomandibular dysfunction, maxillofacial prosthetics, and implant prosthodontics.
689. *Advanced Prosthodontic Theory*. I, II, S. 1-6 Hr. Advanced theories and techniques in fixed and removable partial dentures, complete dentures, maxillofacial prosthetics, implantology, and geriatric prosthodontics to include case presentations, literature surveys, and articulator analysis seminars.

School of Medicine

Professional, Graduate, and Undergraduate courses

Anesthesiology (ANES)

701. *Basic Sciences Applied to Anesthesiology*. I, II. 1-6 Hr. PR: Consent. (Not offered during summer.) Examination and evaluation of date, decision-making, discussion of special procedures. (Max. enrollment: 10.)
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.)
780. *Surgical Critical Care Medicine*. 0 Hr. Clinical rotation course. (See conjoined courses.)

Behavioral Medicine and Psychiatry (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.
799. *Graduate Colloquium*. I, II, S. 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 fully enrolled students. (Grading is S/U; colloquium credit may not be counted against credit requirements for master's programs.)
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.

Biochemistry (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.

595. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

690. *Teaching Practicum*. I, II. 1-3 Hr. Consent of chairperson. Supervised practice in college teaching of biochemistry. (Graded as S/U.)

693 A-Z. *Special Topics*. I, II. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

697. *Research*. I, II, S. 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.)

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.)

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.

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.)

791 A-Z. *Advanced Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses through specially scheduled lectures.

792. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

792 A. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

792 B. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. I, II, S. 1-6 Hr. Seminars arranged for advanced graduate students.

796. *Graduate Seminar*. I, II, S. 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.

797. *Research*. I, II, S. 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.)

798. *Dissertation*. I, II, S. 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.)

799. *Graduate Colloquium*. I, II, S. 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 programs.)

Community Health Promotion (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.

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.

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.

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 overrepresented within the injury problem.

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.

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.
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.
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.
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.
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.
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.)
690. *Teaching Practicum*. I, II, S. 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.)
- 691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
693. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
695. *Independent Study*: I, II, S. 1-6 Hr. Faculty supervised topics not available through regular course offerings.
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.)
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.
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.
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.)
- 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.
792. *Directed Study*: 1-6 Hr. Directed study, reading, and/or research.
793. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
794. *Seminars*. 1-6 Hr. Seminars arranged for advanced graduate students.
795. Independent Study. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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.
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.)
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.)
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.)
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.

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)

612. *Community Medicine*. 3 Hr. PR: Consent. Medical students only. The role of the physician in the prevention of disease and in the examination of health status in a community, with reference to demographic, economic, sociologic, environmental, and occupational factors. The organization of public health and medical care.

691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

695. *Independent Study*. 1-6 Hr. PR: Consent. Faculty supervised study of topics not available through regular course offerings.

697. *Research*. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.

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.)

701. *Law and the Workplace*. 1 Hr. PR: MD degree, graduate standing, or consent. Philosophy, content, and procedures of current judicial bodies relevant to the practice of medicine in the industrial society, developed through a series of lectures followed by extensive discussion involving students from different curricular backgrounds. (1 hr. sem.)

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.)

722. *Epidemiology and Biostatistics*. 2 Hr. PR: Consent; medical students only. Epidemiological and statistical analysis of biologic phenomena as related to medicine. Emphasis on descriptive statistics, analytical epidemiology, statistical inference, measures of association, and evaluation of medical literature.

788. *Critical Review of Literature*. 1 Hr. PR: MD or consent. A review of current literature in occupational and environmental medicine, focused on analysis of validity and procedures followed; scrutiny of research reports, their design, methodology, data handling, documentation, and discussion of the data base.

790. *Teaching Practicum*. 1-3 Hr. PR: Consent. Supervised practice in college teaching of anatomy. (Grading may be S/U.)

791 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study*. 1-6 Hr. PR: Consent. Directed study, reading, and/or research.

793. *Special Topics*. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.

795. *Independent Study*. 1-6 Hr. PR: Consent. Faculty supervised study of topics not available through regular course offerings.

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.

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.)

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.)

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.)

Conjoined Basic Sciences (CCMD)

712. *Evidence Based Medicine*. 4 Hr. PR: Medical students only. The first semester will introduce students to biostatistics, clinical epidemiology, and their application to the evidence-based practice of medicine. The second semester will apply these principles to health maintenance and public health.

721. *Physical Diagnosis and Clinical Integration*. 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.)

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.)

740. *Patient-Centered Health Care*. 5 Hr. This course will introduce students to the biological, psychological, social, and spiritual dimensions of health care. Normal and abnormal human development, psychopathology, ethical, legal, and spiritual aspects of health care will be explored in the context of health care decision making.

745. *Introduction to the Patient*. 7 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.)

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.

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.)

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.

789. *Introduction to Biomedical Research*. 1 Hr. PR: Consent. This course covers topics (such as ethics, social justice, information retrieval, and laboratory safety procedures and regulations) that are essential for all graduate students in the biomedical sciences.

790. *Teaching Practicum*. I, II, S. 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.)

791 A-Z. *Advanced Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. I, II, S. 1-6 Hr. Seminars arranged for advanced graduate students.

795. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

796. *Graduate Seminar*. I, II, S. 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.

797. *Research*. I, II, S. 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.)

798. *Thesis or Dissertation*. I, II, S. 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.)

799. *Graduate Colloquium*. I, II, S. 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.)

Exercise Physiology (EXPH)

293 A-Z. *Special Topics*. I, II, S. 1-6 Hr. Investigation of topics not covered in regularly scheduled courses.

364. *Kinesiology*. I, II, S. 3 Hr. PR: Junior standing; consent. Anatomical, mechanical, and musculoskeletal study of the human body as the instrument for efficient performance of motor activities. (Laboratory work included.)

365. *Exercise Physiology 1*. I, II, S. 3 Hr. PR: Junior standing; consent. The study of the functioning of body systems during exercise and the acute and chronic adaptations that occur from exercise stress.

368. *Lab Techniques and Methods*. I, II, S. 3 Hr. PR: Junior standing; EXPH 364 and EXPH 365; consent. Techniques and methods for designing and conducting exercise programs for asymptomatic, healthy individuals.

450. *Theory of Aquatic Therapy*. 3 Hr. PR: Junior standing or consent. An introduction to aquatic therapy. It covers the historical perspective, biophysiological response to water immersion, and application of aquatic therapy to specific physical diagnoses.

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.
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.
490. *Teaching Practicum*. 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.
491. *Professional Field Experience*. I, II, S. Variable credit 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. (Internship.)
- 493 A-Z. *Special Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.
494. *Seminar*. I, II, S. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.
496. *Senior Thesis*. I, II, S. 1-3 Hr. PR: Consent.
497. *Research*. I, II, S. 1-6 Hr. Independent research projects.
498. *Honors*. I, II, S. 1-3 Hr. PR: Students in honors program and consent by the honors director. Independent reading, study, or research.
567. *Exercise Physiology 2*. I. 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.
660. *Biomechanical Analysis of Sport and Physical Activity*. 3 Hr. PR: EXPH 364 and EXPH 365 or equivalent; and 615. Advanced principles of body mechanics and analysis of muscle and joint actions in coordinated movement and neuromuscular physiology.
668. *Diabetes and Exercise*. II. 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.
670. *Lab Techniques and Methods 2*. I, S. 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.
671. *Stress Testing*. II. 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.
672. *Professional Field Placement*. I, II, S. 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.)
- 691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
693. *Special Topics*. I, II, S. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.
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.)
790. *Teaching Practicum*. I, II, S. 1-3 Hr. PR: Consent. Supervised practice in teaching exercise physiology.
- 791 A-Z. *Advanced Topics*. I, II, S. 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.
- 792 A-Z. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.
794. *Seminar*. I, II, S. 1-6 Hr. Special seminars arranged for advanced graduate students.
795. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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. (Graded S/U).
797. *Research*. I, II, S. 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.)
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 their student's report, thesis, or dissertations. (Grading may be S/U.)

799. *Graduate Colloquium*. I, II, S. 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.)

Family Medicine (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.

Gerontology (GERO)

293 A-Z. *Special Topics*. I, II. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

310. *The Aging Women*. 3 Hr. Does gender make a difference in the aging process? This course examines the female experience of growing older. Lecture, discussion, review of literature, with focus on selected works of literature and the creative arts.

410. *The Rural Elderly*. 3 Hr. Overview of health, social, and policy issues that impact the quality of life of older adults living in rural environments, contrasted with those in urban areas. (Equivalent to GERO 681.)

412. *Public Policy of Aging*. 3 Hr. Policy analysis of major public programs for senior citizens—Older American Act, Medicare-Medicaid, and Social Security. Discussion of future of these programs and societal response. Emphasis on senior programs in West Virginia. (Equivalent to GERO 512.)

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.

491 A-Z. *Advanced Study*. I, II, S. 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.

493 A-Z. *Special Topics*. I, II. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

495. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

Medical Technology (METC)

100. *Orientation to Medical Technology*. 2 Hr. Introduction to the profession of medical technology and the clinical laboratory specialties. (Pass/fail grading only.)

300. *Medical Techniques 1*. 4 Hr. PR: Acceptance into the medical technology program as a first-year student or consent by director. Clinical laboratory procedures employed in patient diagnosis in the areas of blood coagulation, blood banking, hematology, and clinical microscopy.

301. *Medical Technology 2*. 4 Hr. Continuation of MTEC 100.

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.

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.

329. *Basic Clinical Chemistry*. 1 Hr. PR: Students in medical technology program. Basic clinical chemistry procedures and theory. (1 hr. lec.)

391. *Research, Educational Methodology*. 2 Hr. Lectures in ethics, techniques of research, and techniques of educational methodology for medical technology students.

400. *Orientation*. No credit. (For senior students). Principles and practices of medical technology in relation to the hospital and clinics. (Pass-fail grading only.)

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.

402. *Rural Health Practicum*. 1 Hr. PR: Senior year MT program. Enrichment rotations in rural settings in West Virginia. (Grading will be pass/fail.)

403. *Community Service Practicum*. 1 Hr. PR: Senior year MT program. Students will spend time performing community service projects. (Grading will be pass/fail.)

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.

420. *Immunohematology and Blood Banking*. 2 Hr. Lectures on immunohematology and blood banking theory and practice.

421. *Immunohematology and Blood Banking Laboratory*. Arranged. 5 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.
430. *Clinical Chemistry*. 2 Hr. Lectures on principles of clinical chemistry procedures, clinical significance, and implication in diagnosis.
431. *Clinical Chemistry Laboratory*. Arranged. 5 Hr. Practice in the clinical chemistry laboratory.
440. *Clinical Hematology and Coagulation*. 2 Hr. Lectures in hematologic theory, coagulation, and practice.
441. *Clinical Hematology and Coagulation Laboratory*. 5 Hr. Application of hematological principles and coagulation to laboratory medicine. Emphasis on routine and specialized procedures, evaluation, and problem solving.
450. *Clinical Microbiology*. 2 Hr. Presentation and discussion of current methodology employed in the processing of clinical microbiology specimens, isolation, and identification of pathogenic microorganisms, and determination of antimicrobial sensitivities.
451. *Clinical Microbiology Laboratory*. Arranged. 5 Hr. Practice in the clinical microbiology laboratory to include isolation and identification of microorganisms; processing of specimens and antibiograms. Includes experiences in pathogenic mycology, virology, and parasitology.
460. *Clinical Laboratory Instrumentation*. 2 Hr. Principles of clinical laboratory instrumentation for medical technologists including principles of operation, maintenance, and troubleshooting.
465. *Clinical Laboratory Management*. 2 Hr. Laboratory organization and principles of laboratory management.
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.)
470. *Clinical Microscopy*. 1 Hr. PR: Senior standing in medical technology or consent. The analysis of body fluids (urine, fluids, etc.) for abnormalities.
471. *Clinical Microscopy Laboratory*. 1 Hr. PR: Senior standing in medical technology, or consent. Laboratory practicum in urinalysis, and other procedures.
475. *Medical Relevance*. 2 Hr. Case studies of pathologic entities encountered in the clinical laboratory. Students will complete and give an oral presentation of the capstone experience. (Pass/fail grading.)
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.
481. *Clinical Immunology Laboratory*. 1 Hr. PR: Senior year MT program. Clinical laboratory practice in immunological procedures. Emphasis on basic serological techniques, protein analysis, molecular methods, and tissue typing.
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.
- 493 A-Z. *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.
496. *Senior Thesis*. 1-3 Hr. PR: Consent.
498. *Honors*. 1-3 Hr. PR: Students in honors program and consent by the honors director. Independent reading, study, or research.
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.
691. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation in advanced subjects which are not covered in regularly scheduled courses.
697. *Research*. 1-15 Hr. PR: Consent. Research activities leading to a thesis, problem report, research paper, or equivalent scholarly project.

Medicine (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.)

Microbiology, Immunology, and Cell Biology (MICB)

200. *Medical Microbiology*. 3 Hr. PR: CHEM 111 and CHEM 112.

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.

327. *Parasitology*. 4 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.

511. *Pathogenic Microbiology*. 4 Hr. PR or CONC: Biochemistry. Pathogenic microorganisms, including immunology and antimicrobial agents.

592. *Directed Study*. 1-6 Hr. Directed study, reading, and/or research.

593. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

697. *Research*. I, II, S. 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.)

698. *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 their student's reports, thesis, or dissertations. (Grading will be S/U.)

701. *Immunity, Infection and Disease*. 12 Hr. PR: For second-year medical students. An integrated approach to the study of infectious disease in humans, with focus on innate and acquired immunity, mechanisms of pathogenesis of infectious microorganisms, transmission, and treatment.

702. *Microbiology*. I. 5 Hr. (For dental students only.) PR: Organic chemistry. Detailed study of pathogenic microorganisms. Emphasis on oral flora.

711. *Principles of Pathogenic Bacteriology*. 1-5 Hr.

714. *Structure and Activities of Selected Microorganisms*. 2-7 Hr. PR or CONC: Biochemistry and consent. Molecular biology of E-coli and other selected organisms.

784 A-Z. *Special Problems in Microbiology*. 1-6 Hr. PR: Consent.

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.)

791 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.

795. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

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.

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.)

798. *Thesis and 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 will be S/U.)

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)

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.

302. *Gross Anatomy*. 3 Hr. PR: NBAN 301 and consent. Functional gross anatomy of the back, extremities, head, and neck. (For physical therapy students.)

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)

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.

702. *Advanced Developmental Anatomy*. 2-6 Hr. PR: NBAN 703 or NBAN 724 and consent. Detailed developmental anatomy of the fetal period and infancy. With dissection and analysis of variations and malformations.

703. *Human Structure*. 1-17 Hr. PR: Admission to School of Medicine 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.

704. *Experimental Embryology*. 3 Hr. PR: Embryology and cellular physiology and biochemistry and consent. Development, differentiation, and regeneration.

705. *Microanatomy*. 5 Hr. PR: Admission to medical basic science graduate program or consent. Study of cells, tissues, and organs.

706. *Advanced Neuroanatomy*. 2-4 Hr. PR: CCMD 775 and consent. (Course may be repeated.) Detailed study of selected areas of the nervous system.

707. *Histochemistry*. 3 Hr. PR: Histology, biochemistry, and consent. Histochemical theory and techniques.

708. *Neuroanatomy*. 2 Hr. PR: Admission to physical therapy or other health sciences graduate programs or consent. Gross and microscopic structure of the central nervous system.

709. *Microanatomy and Organology*. 5 Hr. PR: Admission to School of Dentistry or medical basic science graduate program or consent. Study of cells, tissues, and organs.

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.

714. *Applied Anatomy*. 2-6 Hr. PR: Consent. Detailed study of anatomy adapted to the needs of the individual student.

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.

718. *Oral Histology and Embryology*. 2 Hr. PR: Admission to School of Dentistry or medical basic science graduate program or consent. Structure, function, and development of oral tissues.

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.

720. *Electron Microscopy*. 4 Hr. PR: Consent. (For graduate students and medical students.) Interdisciplinary. Introduction to cell fine structure and function. Preparation of biological specimens for electron microscopy.

724. *Human Gross Anatomy*. 7 Hr. PR: Admission to School of Dentistry or medical basic science graduate program, or consent. Human anatomy including cadaver dissection for dental students. (4 hr. lec., 3 hr. lab.)

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.

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.)

791. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study*. 1-6 Hr. PR: Consent. Directed study, readings, and/or research.

793. *Special Topics*. 1-6 Hr. PR: Consent. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. 1-6 Hr. PR: Consent. Seminars arranged for advanced graduate students.

795. *Independent Study*. 1-6 Hr. PR: Consent. Faculty supervised study of topics not available through regular course offerings.

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.)

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.)

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 their students reports, thesis, or dissertations. (Grading may be S/U.)

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)

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.

791. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

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.)

Obstetrics and Gynecology (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.

791. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

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)

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.

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.

302. *Survey of Clinical Problem-Solving and Scientific Inquiry*. 2 Hr. PR: OTH student status. An introduction to analysis of clinical and research problems, including strategies for problem analysis and outcome.

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.

304. *Occupational Science*. 4 Hr. PR: OTH student status. An introduction to signs and symptoms and medical management of orthopedic and physical dysfunction/disabilities encountered by the occupational therapist. Emphasis is upon the effects of physical dysfunction/disabilities on human occupation.

306. *Kinesiologic Foundations*. 4 Hr. PR: OTH student status. Functional anatomical correlations and human movement. Statics, biomechanics, dynamics, and functional movement analysis.

307. *Neurobiologic Foundations*. 4 Hr. PR: OTH student status. Basic and clinical applications of neuroanatomy and neurology. Includes lectures on neurophysiological basis of physical and occupational therapy practice.

308. *Evaluation Procedures*. 3 Hr. PR: OTH student status. Theory and practice in evaluation procedures used by therapists. Includes Manual Muscle Test, isoknetic muscle testing, and assessment of components of movement, posture, balance, and hand function.

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.

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.
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.)
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.)
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.)
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.
402. *Clinical Decision Making 1*. 2 Hr. PR: OTH student status. Continuation of preparation for critical thinking and decision making in the field using appropriate information and technology in a case study format. An emphasis on autonomous practice and referral decisions.
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.
408. *Tests and Measures in Occupational Therapy*. I. 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.
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.
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.
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.
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.
432. *Occupational Therapy Interventions in Mental Health*. II. 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.
435. *Therapeutic Activity*. 3 Hr. PR: OTH student status. Students will develop skills in performance component analysis, performance context analysis, and occupational performance analysis.
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.
- 493 A-Z. *Special Topics*. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.
497. *Research*. I, II, S. 1-6 Hr. Independent research projects.
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.)
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.)
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.)
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.)
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.)

540. *Level II Fieldwork 1*. 3 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 during Summer 1 and again during Summer 2 for a full 12-week six credit fieldwork experience. (Course will be graded S/U.)

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.

551. *Occupational Therapy in Prevention and 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.

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.)

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.)

Pathology (PATH)

301. *Basic Pathology*. I. 2 Hr. PR: Enrollment in dental hygiene or physical therapy, or consent. A study of the basic pathologic processes in man.

302. *Oral Pathology*. II. 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.

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.

728. *General Pathology*. (For dental and graduate students). II. 5 Hr. PR: Consent. The broad spectrum of human diseases is studied at the clinical, physiological, and biochemical levels.

738. *Oral Pathology 1*. 3 Hr.

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.

753. *Oral Pathology 2*. (For dental students.) I. 2 Hr. PR: PATH 738 or consent. Continuation of PATH 738.

755. *Clinico-Pathologic Correlation Conference*. (For dental students.) II. 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.

782. *Advanced Oral Histopathology*. (For dental and graduate students, residents, and interns.) I, II. 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.

790. *Teaching Practicum*. I, II, S. 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.)

791. *Advanced Study*. I, II, S. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

792. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. I, II, S. 1-6 Hr. Seminars arranged for advanced graduate students.

795. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

796. *Graduate Seminar*. I, II, S. 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.

797. *Research*. I, II, S. 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.)

798. *Thesis or Dissertation*. I, II, S. 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.)

799. *Graduate Colloquium*. I, II, S. 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)

731. *Clinical Clerkship in Pediatrics*. (Third year.) 8 Hr. Cr. Required of third-year medical students. See description of clinical clerkship under MED 731. Clerkship in pediatrics occupies six weeks.

Pharmacology and Toxicology (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.

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.

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.

760. *Pharmacology and Therapeutics*. (For dental and graduate students.) I. 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.

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.

Physical Therapy (PT)

Course information for the doctor of physical therapy degree can be found on the following web site: <http://www.hsc.wvu.edu/som/pt>.

Physiology (PSIO)

241. *Elementary Physiology*. II. 4 Hr. PR: College biology and chemistry, or consent. (For undergraduate students in paramedical sciences.) Systematic presentation of basic concepts.

441. *Mechanisms of Body Function*. I. 4 Hr. PR: College chemistry, biology, physics, and algebra or graduate status and consent. A systematic examination of the hemostatic 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.)

741. *Physiological Methods 1*. II. 1-5 Hr. PR: Consent. Research techniques and strategies for physiology.

742. *Physiological Methods 2*. II. 1-4 Hr. PR: Consent. Research techniques and strategies for physiology.

743. *Fundamentals of Physiology*. I. 5 Hr. PR: College physics, algebra, chemistry, and consent. (For dental students and a limited number of regular, full-time graduate students in the Health Sciences Center's basic sciences departments.) Analysis of basic facts and concepts relating to cellular processes, organ systems, and their control. (3 lec., 1 conf., 1 lab.)

744. *Graduate Seminar*. I, II. 1-3 Hr. PR: Graduate standing and consent. (Grading may be S/U.)

746. *Neurophysiology*. II. 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 lec., 1 conf.)

750. *Graduate Physiology/Pharmacology*. I. 5 Hr. (For graduate students in HSC graduate programs and a limited number of other full-time graduate students.) PR: MATH 155 and PHYS 101 and PHYS 102 and CHEM 233 and CHEM 234 and BIOL 101 and BIOL 102 and consent of course coordinator. Survey at a quantitative level of basic concepts and experimental approaches to cellular, endocrine, and neural mechanisms controlling physiological processes and the pharmacological manipulation of the processes.

751. *Graduate Physiology/Pharmacology*. II 5 Hr. PR: PSIO 750 and/or consent of course coordinator. Survey at a quantitative level of basic concepts and experimental approaches to the physiology and pharmacology or cardiovascular, renal, pulmonary, and gastrointestinal function, including the mechanisms controlling these systems and their pharmacological manipulation.

790. *Teaching Practicum*. I, II, S. 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.)

791. *Advanced Topics*. I, II, S. 1-15 Hr. PR: Consent. Lecture-conference in: cellular physiology, neurophysiology, circulation, respiration, acid-base and renal physiology, digestion and energy metabolism, and endocrinology. (3 lec., 3 conf.)

792. *Directed Study*. I, II, S. 1-6 Hr. Directed study, reading, and/or research.

793. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

794. *Seminar*. 1-6 Hr. Seminars arranged for advanced graduate students.

795. *Independent Study*. I, II, S. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

796. *Graduate Seminar*. I, II, S. 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.

797. *Research*. I, II, S. 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.)

798. *Thesis or Dissertation*. I, II, S. 2-4 Hr. PR: Consent. This is an optional course for programs that believe that this level of control and supervision is needed during the writing of their students reports, thesis, or dissertations. (Grading may be S/U.)

799. *Graduate Colloquium*. I, II. 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.)

Public Health (PUBH)

595. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

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.

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.

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.

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.

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.

625. *Biology Society and Human Health*. 3 Hr. This course will cover fundamental biological knowledge about disease developments in individuals and populations. The interaction of social and physical environments with physiological, psychological, and emotional characteristics is emphasized.

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.

650. *Environmental Health*. 3 Hr. A review of issues illustrating the responsibilities and roles of the public health workforce 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.

660. *Public Health Epidemiology*. 3 Hr. Epidemiological study of populations in terms of morbidity, mortality, and other vital statistics in WV. Scientific appraisal of public health problems and analysis of data will be emphasized. Evaluation of current literature is included.

689. *Practicum*. 1-6 Hr. PR: Consent. Under guidance of faculty and field counselors, MPH students will assume major responsibilities for intervention and practice projects during a semester in a community-based organization. (Grading may be S/U.)

691 A-Z. *Advanced Topics*. I, II, S. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

695. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.

Surgery (SURG)

701. *Introduction Laboratory Animals Experiments*. 3 hr.

741. *Clinical Clerkship in Surgery*. (Third year.) CR. 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.

School of Nursing

Nursing (NSG)

110. *Health and the Caring Professions*. 3 Hr. Health promotion and risk reduction; data collection; cultural diversity; values that contribute to health; interpersonal communication in promoting professional relationships.

221. *Human Responses 1*. 3 Hr. PR: NSG 110 and COREQ: NSG 225. Focuses on human responses that promote health throughout the life span and individual health assessment.

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.
241. *Human Responses 2*. 3 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 lifespan; emphasizes professional nursing role in health restoration and critical thinking; examines family health assessment.
245. *Nursing Interventions 2*. 3 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.
325. *Interventions: Pediatric*. 2 Hr. PR: NSG 361 or consent; Co-Req: NSG 332. Nursing interventions specific to human responses to pediatric problems. Emphasis on advanced independent and collaborative nursing activities.
332. *Human Response to Multiple Physiological System Dysfunction*. 5 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.
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.
335. *Interventions: Medical Surgical*. 2 Hr. PR: NSG 361 or consent; Co-Req: NSG 332. Nursing interventions specific to human responses to multiple physiological system dysfunction. Emphasis on advanced independent and collaborative nursing activities.
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.
345. *Interventions: Psychosocial*. 2 Hr. PR: NSG 361 or consent; Co-Req: NSG 356. Nursing interventions specific to human response to multiple psychosocial system dysfunction. Emphasis on advanced independent and collaborative nursing activities.
351. *Theory: Maternal Child Nursing*. 2 Hr. PR: NSG 361 or consent and COREQ: NSG 355. Human response to adaptations of child-bearing family. Emphasis on professional role in caring for child-bearing families.
355. *Interventions: Maternal Child*. 2 Hr. PR: NSG 361 or consent; Co-Req: 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.
356. *Alterations in Psychosocial Health*. 3 Hr. PR: PSYC 241. COREQ: NSG 351 and NSG 355. Normal psychosocial functions change as a result of altered health; integration of developmental changes and preventive aspects of health.
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.
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.
376. *Clinical Nursing Pharmacology*. 3 Hr. PR: Junior standing; Co-Req: 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.
421. *System Responses to Physiological Dysfunction*. 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.
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.
425. *Nursing Interventions 5*. 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.
433. *Seminar 8: Professional Role Synthesis*. 3 Hr. PR: NSG 333. 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.
441. *Community Response to Health Promotion*. 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.
442. *Advanced 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.

445. *Nursing Interventions 6*. 6 Hr. PR: Senior standing in nursing or consent. COREQ: NSG 441. 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 is on vulnerable populations.
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.
481. *Cardiac Nursing*. 2 Hr. Web-based. Mastery format. NSG juniors and seniors. Introduction to the interpretation and treatment of cardiac arrhythmias.
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.
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.
- 493 A-Z. *Special Topics*. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.
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.
- 593 A-Z. *Special Topics*. I, II, S. Variable 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
622. *Theory and Critical Analysis*. 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.
623. *Concepts of Advanced Nursing*. 2 Hr. PR or CONC: NSG 622. Exploration and evaluation of theories and research in leadership, education, organization, and management concepts applicable in the advanced practice of nursing.
624. *Advanced Pathophysiology*. 4 Hr. Theoretical basis of pathophysiological changes in acute and chronic illness across the lifespan. This course lays the foundation for subsequent courses in diagnosis management and therapeutic interventions.
625. *Primary Care: Rural Families 1*. 3 Hr. PR: NSG 622 and NSG 624. Introduction to the knowledge and skills basic to the assessment of health status, diagnosis, treatment, and evaluation in the advanced practice of nursing.
626. *Health Promotion for All Ages*. 2 Hr. Exploration of the theoretical foundations of health promotion, prevention of illness, and maintenance of function across the life-span applicable to the advanced practice of nursing.
627. *Research, Evaluation, and Analysis*. 5 Hr. PR: NSG 622. An overview of research, measurement, and evaluation models useful to nursing practice.
630. *Family, Community, Rural Health Systems*. 2 Hr. PR: NSG 622. Exploration and analysis of theories and research on family, community, and rural health systems applicable in the advanced practice of nursing.
631. *Advanced Pharmacology*. 3 Hr. This course reviews and updates the nurse practitioner's knowledge of pharmacology and therapeutics. Overviews of underlying disease processes and reviews of pharmacological principles of available therapeutic agents are presented.
635. *Primary Care: Rural Families 2*. 4 Hr. PR: NSG 625. Application of the theoretical foundations of advanced practice nursing in rural family health care; management of care for prevention, intervention, and evaluation.
640. *Pediatric Primary Care 1*. 3 Hr. PR: NSG 622 and NSG 624. An introduction to the knowledge and skills basic to the assessment of health status, diagnosis, treatment, and evaluation of children in the primary care setting.
650. *Pediatric Primary Care 2*. 4 Hr. PR: NSG 640. Further acquisition of knowledge and skills central to the assessment of health status, diagnosis, treatment, and evaluation of children in the primary care setting.
651. *Pediatric Practicum 1*. 5 Hr. PR: NSG 631 and NSG 640 and PR or CONC: NSG 650 or consent. This supervised practicum designed to facilitate the student's competency in the delivery of primary health care to children.
652. *Pediatric Practicum 2*. 5 Hr. PR: NSG 651. This supervised clinical practicum is designed to facilitate the student's competency in the delivery of primary health care to children.
661. *Rural Family Health Practicum 1*. 5 Hr. PR or CONC: NSG 660. Implementation of theory-based advanced nursing practice with individuals, families, and groups in the rural community systems; student development of the advanced practice role in managing, consulting, and caring for families.
662. *Rural Family Health: Practicum 2*. 5 Hr. PR: NSG 661. Supervised clinical experience under the direction of an advanced practice nurse faculty in the delivery of primary health care to individuals, families, and groups in rural areas.
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.
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.

672. *Education Practicum*. 6 Hr. PR: NSG 625, specialty practicum 1 in area of interest. Supervised practice in the application of theories and methods related to nursing education.
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.
680. *Health Policy: Issues and Ethics*. 3 Hr. PR: NSG 622 or consent. A focus on the social, political, technological, ethical, and economical dynamics that shape health care delivery.
- 691 A-Z. *Advanced Topics*. 1-6 Hr. PR: consent. Investigation of advanced topics not covered in regularly scheduled courses.
- 693 A-Z. *Special Topics*. I, II, S. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
695. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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.)
726. *Research Methods 1*. 3 Hr. Advanced qualitative and quantitative research methods relevant to conducting research in nursing are studied, focusing on the study of phenomena that support clinical practice. Interrelationships among questions, theoretical framework, and design are emphasized.
727. *Contemporary Nursing Science*. 3 Hr. PR: NSG 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.
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.
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.
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.
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.
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.
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).
782. *Research Mentorship 2*. 1 Hr. PR: NSG 781. This is the second guided practicum in which the student participates in the mentorship process for the purpose of continued development of the student's research skills.
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.
784. *Dissertation Seminar 2*. 2 Hr. PR: NSG 783. This seminar provides an opportunity for refinement of the proposal developed in NSG 783. Student critique of presented proposals, as well as feedback of faculty, is expected to result in the dissertation proposal.
- 791 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
792. *Directed Study*. 1-6 Hr. Directed study, reading, and/or research.
793. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
794. *Seminar*. 1-6 Hr. Seminars arranged for advanced graduate students.
795. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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.
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.)

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.)

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)

691 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

693 A-Z. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.

694 A-Z. *Seminar*. 1-6 Hr. Seminars arranged for advanced graduate students. (Grading may be S/U.)

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.)

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.)

700. *Pharmacy as a Profession*. 3 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.

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.

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.

707. *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.

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.

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.

710. *Practicum*. 1 Hr. PR: First professional year standing or consent. The course exposes students to a variety of pharmacy practice settings and patient care experiences. Students also receive training in first aid and cardiopulmonary resuscitation.

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.

712. *Pharmaceutical Care Lab 2*. 2 Hr. PR: First professional year standing or consent. Continuation of PHAR 701.

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.

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. Physicochemical properties, enzymatic transformations, and structure-activity relationships (SAR) of important pharmaceutical agents are discussed.

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).

723. *Pharmaceutical Care Lab 3*. 2 Hr. PR: Second professional year standing or consent. Continuation of PHAR 712.

724. *Pharmaceutical Care Lab 4*. 1 Hr. PR: Second professional year standing or consent. Continuation of PHAR 723.

725. *Pathophysiology/Therapeutics 2*. 4 Hr. PR: PHAR 715 or consent. A continuation of PHAR 715.

726. *Chemistry of Drug Action 2*. 2 Hr. PR: PHAR 716 or consent. A continuation of PHAR 716.

727. *Medical Literature Evaluation*. 2 Hr. PR: Second professional year standing or consent. Will be built upon information describing drug literature resources presented previously with emphasis on the review and evaluation of the primary literature, secondary and computerized resources, drug policy management, and drug information controversies.
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.
730. *Pathophysiology/Therapeutics 3*. 5 Hr. PR: PHAR 725 or consent. Principles and concepts of pathophysiology and pharmacotherapeutics. An organ system approach to disease states and their therapeutic management will be followed.
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).
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.
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.
735. *Pharmaceutical Care Lab 5*. 1 Hr. PR: PHAR 724. Continuation of PHAR 724.
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.
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.
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.
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.
740. *Pathophysiology/Therapeutics 4*. 3 Hr. PR: PHAR 730 or consent. Principles and concepts of pathophysiology and pharmacotherapeutics. An organ system approach to disease states and their therapeutic management will be followed.
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.
745. *Hospital Pharmacy and Administration*. 3 Hr. PR: Enrollment in the School of Pharmacy or consent. Basic concepts of the organization, management, and services of hospitals and pharmacist's role in the modern hospital. Emphasis on principles of hospital pharmacy administration and practice.
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.
- 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.)
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.
760. *Medicine Rotation 1*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in an acute care setting. (Course will be graded S/U.)
761. *Medicine Rotation 2*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in an acute care setting. (Course will be graded S/U.)
762. *Ambulatory Care Rotation 1*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in an ambulatory care setting. (Grading will be S/U.)
763. *Ambulatory Care Rotation 2*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in an ambulatory care setting. (Course will be graded S/U.)
764. *Elective Rotation 1*. 4 Hr. PR: Fourth-year professional standing or consent. Students will gain pharmacy experience in an acute care or ambulatory care setting, research environment, or nontraditional pharmacy site. (Course will be graded S/U.)

765. *Elective Rotation 2*. 4 Hr. PR: Fourth-year professional standing or consent. Students will gain pharmacy experience in an acute care or ambulatory care setting, research environment, or nontraditional pharmacy setting. (Course will be graded S/U.)
766. *Elective Rotation 3*. 4 Hr. PR: Fourth-year professional standing or consent. Students will gain pharmacy experience in an acute care or ambulatory care setting, research environment, or nontraditional pharmacy site. (Course will be graded S/U.)
767. *Elective Rotation 4*. 4 Hr. PR: Fourth-year professional standing or consent. Students will gain pharmacy experience in an acute care or ambulatory care setting, research environment, or nontraditional pharmacy site. (Grading will be S/U.)
768. *Elective Rotation 5*. 4 Hr. PR: Fourth-year professional standing or consent. Students will gain pharmacy experience in an acute care or ambulatory care setting, research environment, or nontraditional pharmacy site. (Course will be graded S/U.)
770. *Community Rotation 1*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in a community pharmacy setting. (Course will be graded S/U.)
771. *Community Rotation 2*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in a community pharmacy setting. (Course will be graded S/U.)
772. *Institutional Rotation 1*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in a health system setting. (Course will be graded S/U.)
773. *Institutional Rotation 2*. 4 Hr. PR: Fourth-year professional standing or consent. Experience in the delivery of pharmaceutical care in a health system setting. (Course will be graded S/U.)
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.
776. *Advanced Pharmaceutics*. 3 Hr. Physicochemical and biopharmaceutical principles involved in disperse systems (liquid, semi-solid, and solid) which function as dosage forms. Considerations of properties of solid dispersions, micromeritics, diffusion of liquid dispersions, interfacial phenomena, emulsification, suspensions, and prolonged action medication.
777. *Economics of the Pharmaceutical Industry*. 3 Hr. History, background, and formation of major drug industries. Oligopolistic practices, mergers, combines, costs of research, and production.
778. *Advanced Pharmaceutical Analysis 1*. 3 Hr. Spectroscopic and chromatographic methods of analysis with emphasis on their applications in pharmaceutical problems and in biological sciences.
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.)
- 791 A-Z. *Advanced Topics*. 1-6 Hr. PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.
792. *Directed Study*. 1-6 Hr. Directed study, reading, and/or research.
- 793 A-Z. *Special Topics*. 1-6 Hr. A study of contemporary topics selected from recent developments in the field.
- 794 A-Z. *Seminar*. 1-6 Hr. Seminars arranged for advanced graduate students.
795. *Independent Study*. 1-6 Hr. Faculty supervised study of topics not available through regular course offerings.
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.
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.)
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.)
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.)

For a description of all graduate-level (Year III) courses, please refer to the online *West Virginia University Graduate Catalog* at www.ia.wvu.edu:8888.

Health Sciences Faculty

School of Dentistry

- Camillo A. Alberico, D.D.S. (Marquette U.). *Professor Emeritus*, Endodontics.
- Timothy A. Atkinson, D.D.S. (U. Detroit). Clinical Assistant Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
- Michael D. Bagby, D.D.S. (Loyola U.). Director of Dental Materials. Associate Professor, Operative Dentistry.
- Lester H. Bakos, D.D.S. (WVU). Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
- Frank S. Balaban, D.D.S. (WVU). Clinical Professor, Endodontics.
- Arthur J. Beaumont Jr., D.D.S. (WVU). Professor, Prosthodontics.
- Henry J. Bianco Jr., D.D.S. (U. Md.). *Professor Emeritus*, Prosthodontics.
- W. Robert Biddington, D.D.S. (U. Md.). *Professor Emeritus*, Endodontics.
- Byron H. Black, D.D.S. (WVU). Clinical Associate Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
- Joseph J. Bonello, D.D.S. (U. Pitt.). Clinical Associate Professor, Orthodontics.
- Dale C. Bowers, D.D.S. (Ohio St. U.). Professor, Diagnostic Services.
- Glenn A. Boyles, D.D.S. (WVU). Clinical Assistant Professor, Pediatric Dentistry.
- Eric R. Brannon, D.D.S. (WVU). Clinical Associate Professor, Dental Practice and Rural Health.
- Regina R. Brannon, D.D.S. (WVU). Clinical Associate Professor, Dental Practice and Rural Health.
- Emmett F. Brown, D.M.D. (U. Pitt.). *Professor Emeritus*, Dental Practice and Rural Health.
- K. Birgitta Brown, D.M.D. (Wash. U.). Associate Professor, Operative Dentistry.
- Leilani S. Brown, D.D.S. (WVU). Clinical Assistant Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
- James G. Bryant, D.M.D. (U. Ky.). Clinical Assistant Professor, Oral and Maxillofacial Surgery, Hospital Dentistry.
- John W. Byers, D.D.S. (WVU). Clinical Assistant Professor, Dental Practice and Rural Health.
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Index

A

Abbreviations Used in Course Listings 131
Absences 27
Academic Advising 13
Academic Dishonesty Defined 33
Academic Dismissal Regulations 31
Academic Forgiveness Policy 12
Academic Information 11
Administration Health Sciences 7, WVU 6
Appeal of Suspension 30
Academic Integrity and Dishonesty 32
Academic Leave of Absence 28
Academic Progress 23
Advanced Placement Program 18, 19
Aliens 50
Anatomy (*see Neurobiology*)
Anesthesiology courses 138
Appeal of Dismissal 31
Application and Admission 37
Application Fees 12
Approved 300-Level Courses 17
Auditors 21

B

Baccalaureate Degrees 13
Behavioral Medicine and Psychiatry
 courses 138
Biochemistry and Molecular Pharmacology
 67, admission 67, degrees 67, doctor
 of philosophy 68, master of science 68,
 research 68
Biochemistry Courses 139
Board of Governors 4

C

Calendar 2
Cell Biology 102
Change of Residence 49
Cheating 33
Check Policy, NSF 45
Classification of Students 22
Classification of Students for Admission and
 Fee Purposes 48
Classifications 40
Clinical Education Facilities 8
Cluster Courses 14
College Level Examination Program
 (CLEP) 18, 20
Commitment to Social Justice 10
Committee Approval 43
Committee on Academic Standards 28
Committee's Students' 43
Common Course Numbers and
 Descriptions 131

Community Health 69, admission
 requirements 69, course of study 70,
 degree 69, goal of the M.S. program
 69, performance standards 70,
 required courses 70
Community Health Promotion courses 139
Community Medicine 69, admission 69,
 community health promotion 69,
 courses 159, public health 70
Conjoined Basic Sciences Courses 142
Contents 3
Contractual Nature of Graduate Study 42
Course Descriptions 133
Courses 130
Credit by Examination 18
Credit for Correspondence Work 18
Credits 38
Credits Required 13

D

Deans 6
Degree Programs 11
Dental Hygiene 53, 56, academic policies
 54, admission requirements 53,
 advanced education program 56,
 courses 133, degree completion
 program 54, degree offered 53,
 program goals 53, requirements 54,
 suggested curriculum 55
Dental Surgery, Doctor of 60
Dentistry, School of 51, accreditation 51
 administration 51, advanced education
 programs 56, books and instruments
 52, courses 135, dental clinic 51,
 dental hygiene 53, 56, doctor of dental
 surgery 60, endodontics 58, faculty
 159, organizations 52, orthodontics 59,
 prosthodontics 59, undergraduate
 program 53
Dependency Status 49
D/F Repeat policy 25
Dismissal 43
Dismissal Regulations 31, appeal 30, 31
Dissertation Procedures 42
Doctor of Dental Surgery 60, admission
 requirements 60, course schedule 63,
 curriculum 62, international dental
 guidelines 61, promotion 62, require-
 ments 62

E

Employed Graduate Students 41
Endodontics 58, admission requirements 58, courses 137, degree offered 58, degree/program requirements 58
English Language Proficiency 39
Estimated Expenses 47
Evaluation of Student Progress 23
Evening Classes 22
Exercise Physiology 72, bachelor of science 73, courses 142, curriculum plan 74, degrees 72, doctor of philosophy 76, introduction 72, master of science 75, program requirements 73
the profession 73
Expulsion 29
Extended learning fees 44

F

Faculty 159
Failure to Meet Academic Standards 31
Family Educational Rights and Privacy Act 25
Family Medicine courses 144
Fees, application 12, cost of and academic year's work 48, exceptions 46, financial aid 44, laboratory fees 44, non-sufficient funds 45, off-campus 44, refund of fees 45, refund schedule 46, regulations 44, special fees 45, summer tuition and fees 45
Final Grade Appeals 26
Financial Aid 44
Financial Documents and Student Visa 39
500-Level Courses 21
Forgery 33
Former Domicile 50
Frequently Contacted Offices 5

G

General Information 8
Gerontology courses 144
Government and Organization of WVU 10
GPA Calculations 24
GRE 37
Grade Point Average 22
Grade Points 24
Grade Reports 25
Grading 42
Grading System 23
Graduate Admission and Policies 37
Graduate Credit Via Senior Petition 21
Graduate-Level Common Course Numbers and Descriptions 132
Graduation with Honors 22

H

Health Sciences at West Virginia University 8
Health Sciences Center Graduate Council 37
Health Sciences Faculty 159
Health Sciences Library 9
Health Sciences Degree Programs 11
Health Service 9
Higher Education Policy Commission 4
Human Performance and Applied Exercise Science 72, exercise physiology 72, occupational therapy 86, physical therapy 90

I

Identification Card 48
Immunology 102
Incompletes 42
International Dental Graduate Guidelines 61
International Student Admission 38, English language proficiency 39, financial documents and student visa 39, intensive English program 39, required academic credentials 39
Intra-University Transfers 38
International students 38, financial documents 39, student visa 39

L

Laboratory Fees 44
Liberal Studies Program (LSP) 14, 16, cluster courses 14, distribution of cluster requirements 15, inventory of LSP courses 15, program components 14, skills requirements 14
Library 9

M

Maximum Allowable Grade Point Deficiency 30
Medical Technology 92, admission 93, application 94, courses 144, curriculum plan 94, degree 92, graduation requirements 95, nature of program 92, the profession 92
Medicine, Department of 95, academic coursework review 97, accreditation 96, admission 96, advanced standing 97, application procedure 96, clinical years 102, conditions following acceptance 97, courses 146, curriculum 101, degree 95, departure from scheduled work 101, faculty 162, first year 101, fourth year 102, grading policy 100, pre-admission tests 96, professional standards review 100, promotion and graduation requirements 97, second year 101,

third year 102, united states medical licensure exam 100,

Medicine, School of 65, biochemistry and molecular pharmacology 67, chairs 66, 67, committees 67, community medicine 69, community service 101, courses 146, degrees 65, departments 66, exercise physiology 72, faculty 162, human performance and applied exercise science 72, medical technology 92, medicine 95, microbiology, immunology, and cell biology 102, neurobiology and anatomy 104, occupational therapy 86, pharmacology and toxicology 106, physical therapy 90, physiology and pharmacology 106

Microbiology, Immunology, and Cell Biology 102, admission 103, courses 146, degrees 102, doctor of philosophy 103, master of science 103, program requirements 103, research 104

Military 49

Mission of West Virginia University 8

N

Neurobiology and Anatomy 104, admission 104, courses 147, degrees 104, general description 104, master of science 105, prerequisites 104, research 105, seminars and journal clubs 105, requirements for Ph.D.

Neurology courses 148

Non-Degree Graduate Students 41

Non-Sufficient Funds Check Policy 45

Nursing, School of 109, academic standards 112, accreditation 110, admission 111, core courses chart 117, courses 152, curriculum for the basic student 113, curriculum for the registered nurse student 113, degrees 109, doctor of science in nursing summer program 119, doctoral application and admission 120, doctoral degree requirements 119, faculty 172, family track progression plans 117, fees; housing; transportation; immunization 110, first year basic student curriculum 111, graduate programs 115, graduation requirements 112, introduction 109, master of science 115, post-graduate certificate program 118, scholarships 110, undergraduate program 110

O

Obstetrics and Gynecology 148

Occupational Therapy 86, accreditation 87, admission standards 87, courses 148, curriculum plan 88, degree 86, distance learning 88, introduction 86, master's program 89, the profession 86, what to expect 88

Off-Campus Fees 44

Official Transcripts 26

Organization of WVU 10

Orthodontics 58, admission requirements 58, courses 137, degree 58, requirements 58,

P

Pass-Fail Grading 23

Pathology courses 150

Pediatrics courses 151

Pharmaceutical Sciences 128, doctor of philosophy 128, master of science 129

Pharmacology and Toxicology 106, admission 106, course requirements 106, courses 151, degrees 106, research 106

Pharmacy, School of 122, academic performance 124, accreditation 122, advanced standing 124, course load 125, courses 156, degree requirements 126, degrees 122, doctor of philosophy 128, entry-level Pharm.D. admission 123, entry-level Pharm.D. professional curriculum 127, M.S. degree requirements 129, Ph.D. requirements 129, professional standards review 126, faculty 174, grading policy 125, graduate programs 128, introduction 122, legal requirements and reciprocity 122, master of science 129, personal interview 124, pharmacy college admission test 124, promotion and graduation requirements 125, special requirements 126

Physical Therapy 90, admission 91, courses 151, degree 90, baccalaureate preparation 92, nature of the program 90, the profession 90

Physiology and Pharmacology 106, admission 107, courses 151, degrees 106, doctor of philosophy 107, master of science 107

Plagiarism 33

Plan for Numbering Courses 130

Plan of Study 42

Probation, Suspension, Readmission, Expulsion Policy 29

Procedure for Handling Academic Dishonesty Cases 33, deans level 34,

instructor's level 33, president's level 37, university committee level 35
Professional Programs 11
Prosthodontics 59, admission requirements 60, courses 138, degree 59, requirements 60
Public Health 70, admission requirements 71, course of study 72, courses 152, degree 70, mission and goals 71, performance standards 72, program description 71, required courses 72

R

Range of University Activity 8
Readmission 29
Reapplication 37
Reclassification of Provisional Students 40
Records of Graduate Students 42
Re-Enrollment After Withdrawal 28
Refund of Fees 45
Refund Schedule 46
Regulations Affecting Degrees 13
Reinstatement After Suspension 29
Required Academic Credentials for International Students 39
Residence Determined by Domicile 48
Residence Requirements 17
Residency Decisions/Appeals 50
Residency Policy 48
Responsibilities 32

S

Schedule of Courses 130
School of Dentistry 51, courses 135, faculty 159
School of Medicine 65, courses 146, faculty 162
School of Nursing 109, courses 152, faculty 172
School of Pharmacy 122, courses 156, faculty 174
Second or Multiple Bachelor's Degree 12
Skills Requirements 14
Social Justice 10
Special Fees 45
Student Classifications 22
Student Responsibility 13
Students' Committees 43
Summer Sessions 21
Summer Tuition and Fees 45
Surgery Courses 152
Suspension 29, appeal of 30

T

Time Limits for Graduate Study 41
Transcripts 26
Transfer or Transient Credit 38
Transient Students 18

U

Undergraduate and Professional Programs 11
Undergraduate Common Course Numbers and Descriptions 131
Uniform Academic Suspension Regulations 29
University Health Service 9

V

Visitors 21

W

West Virginia Higher Education Governance 4
West Virginia Higher Education Policy Commission 4
West Virginia University Administration 6
West Virginia University Board of Governors 4
West Virginia University Policy on the Family Educational Rights and Privacy Act 25
Withdrawals From All Classes for the Term 28
Withdrawals From Individual Classes 27
Work Done Out of Residence 17
WVU Health Sciences Administration 7
WVU Transient Students 18