Pre-Biomedical Laboratory Diagnostics, A.A.

Degree Offered
• Associate of Arts

Nature of the Program
The associate's program in pre-biomedical laboratory diagnostics fulfills the first two years of undergraduate study required for admittance to the bachelors program in biomedical laboratory diagnostics offered by the West Virginia University School of Medicine. Courses in the program provide all the general education, biology, chemistry, and math courses required for admission and provide the foundations required for success in the bachelor program. Students accepted into the program complete an additional two years of courses in biomedical laboratory diagnostics and receive a Bachelor’s degree. Once admitted into the bachelor program, students can choose to emphasis to become a clinical laboratory scientist or histotechnologist.

Career Opportunities
Clinical laboratory scientists analyze, develop and perform medical laboratory tests and evaluate results on blood and bodily fluids. Histotechnologists are responsible for routine and specialized procedures on tissue and autopsy specimens for diagnosis. Both can find employment in labs in hospitals, doctor's offices or private lab facilities.

In addition, students can apply to medical school, dental school or other graduate programs upon completion of the bachelors program and completion of any additional prerequisite courses required.

FACULTY
CHAIR
• Vicki Huffman - Ph.D. Biomedical Science
  Year @ PSC (2005)

ADVISOR
• Candace Lawrence - M.A. Mathematics
  Year @ PSC (2017)

General Education Foundations
Please use this link to view a list of courses that meet each GEF requirement. (http://registrar.wvu.edu/gef/)

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

General Education Foundations
F1 - Composition & Rhetoric
  3-6
  ENGL 101 & ENGL 102
  Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research
  or ENGL 103
  Accelerated Academic Writing

F2A/F2B - Science & Technology
  4-6
F3 - Math & Quantitative Reasoning
  3-4
F4 - Society & Connections
  3
F5 - Human Inquiry & the Past
  3
F6 - The Arts & Creativity
  3
F7 - Global Studies & Diversity
  3
F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)
  9

Total Hours
  31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.
Curriculum Requirements

GEF Elective Requirements (4, 5, 6, and 7)  
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
<td>6</td>
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<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric and Research (GEF 1)</td>
<td>6</td>
</tr>
<tr>
<td>MATH 124</td>
<td>Algebra with Applications (or higher - GEF 3)</td>
<td>3</td>
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<tr>
<td>STAT 211</td>
<td>Elementary Statistical Inference</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101</td>
<td>General Biology 1</td>
<td>4</td>
</tr>
<tr>
<td>&amp; BIOL 103</td>
<td>and General Biology Laboratory (GEF 8)</td>
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</tr>
<tr>
<td>BIOL 102</td>
<td>General Biology 2</td>
<td>4</td>
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<tr>
<td>&amp; BIOL 104</td>
<td>and General Biology Laboratory 1 (GEF 8)</td>
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<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry 1</td>
<td>4</td>
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<tr>
<td>&amp; 115L</td>
<td>and Fundamentals of Chemistry 1 - Laboratory (GEF 2)</td>
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<tr>
<td>CHEM 116</td>
<td>Fundamentals of Chemistry 1</td>
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<td>&amp; 116L</td>
<td>and Fundamentals of Chemistry 2 - Laboratory (GEF 8)</td>
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Select one of the following sequences:  
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<th>Course</th>
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<tr>
<td>CHEM 231</td>
<td>Organic Chemistry: Brief Course</td>
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<tr>
<td>&amp; 231L</td>
<td>and Organic Chemistry: Brief Course - Laboratory</td>
<td>4</td>
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<tr>
<td>CHEM 233</td>
<td>Organic Chemistry 1</td>
<td>4</td>
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<tr>
<td>&amp; CHEM 234</td>
<td>and Organic Chemistry 2</td>
<td>4</td>
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<tr>
<td>&amp; CHEM 235</td>
<td>and Organic Chemistry Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>&amp; CHEM 236</td>
<td>and Organic Chemistry Laboratory 2</td>
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<td>PSIO 241</td>
<td>Elementary Physiology</td>
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<td>PALM 200</td>
<td>Medical Terminology</td>
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<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
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Electives (hours may vary depending on which Chemistry courses are taken)  
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<th>Hours</th>
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<tbody>
<tr>
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<tr>
<td>GEF 6</td>
<td></td>
<td>3</td>
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<tr>
<td>Elective</td>
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Total Hours: 60

Suggested Plan of Study

First Year

<table>
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<th>Course</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>MATH 124</td>
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<td>3</td>
</tr>
<tr>
<td>BIOL 101     &amp; BIOL 103</td>
<td>General Biology 1 &amp; General Biology Laboratory (GEF 8)</td>
<td>4</td>
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<tr>
<td>CHEM 115     &amp; 115L</td>
<td>Fundamentals of Chemistry 1 &amp; Fundamentals of Chemistry 1 - Laboratory (GEF 2)</td>
<td>4</td>
</tr>
<tr>
<td>GEF 5</td>
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<td>3</td>
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<td>WVUE 191</td>
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Total: 15

Second Year

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<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 102</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>CHEM 233     &amp; CHEM 235</td>
<td>Organic Chemistry 1 &amp; Organic Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>STAT 211</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GEF 6</td>
<td></td>
<td>3</td>
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</tbody>
</table>

Total: 14

Total credit hours: 60
Major Learning Outcomes

PRE-BIOMEDICAL LABORATORY DIAGNOSTICS

Upon completion of the associates in pre-biomedical laboratory diagnostics program, students will be able to:

1. Describe general biological concepts including cell structure and function, physiology and genetics.
2. Use mathematical concepts to solve problems.
3. Use chemical principles and laboratory techniques to describe and analyze the chemical structure and reactivity of organic molecules.
4. Apply for admission into the biomedical laboratory diagnostics program at WVU School of Medicine or equivalent program.