A candidate for the M.S. degree in Genetics and Developmental Biology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College. For a more complete statement of requirements, the student is referred to the program’s Guidelines for Graduate Students in the Genetics and Developmental Biology Program.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Select one of the following: 3

- STAT 511: Statistical Methods 1
- BIOS 601: Applied Biostatistics 1

Select one of the following: 3

- STAT 512: Statistical Methods 2
- BIOS 603: Applied Biostatistics 2

Select three of the following: * 9

- AGBI 512: Nutritional Biochemistry
- AGBI 514: Animal Biotechnology
- AGBI 612: General Biochemistry
- BIOL 611: Epigenetics
- BIOL 658: Systems Biology
- GEN 535: Population Genetics
- GEN 726: Advanced Biochemical Genetics
- PLSC 560: Plant Biochemistry
- WMAN 630: Conservation Genetics

Seminar 3

- GEN 796: Graduate Seminar

Research 6

- GEN 797: Research

Required Coursework

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>GEN 521</td>
<td>Basic Concepts of Modern Genetics</td>
<td>3</td>
</tr>
<tr>
<td>AGBI 512</td>
<td>Nutritional Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>or AGBI 610</td>
<td>General Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>or PLSC 560</td>
<td>Plant Biochemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

Plan of Study

Total Hours 30

* Substitution of a course containing some genetics and of special interest to the student may be allowed when approved by the student's committee.

Major Learning Outcomes

GENETICS AND DEVELOPMENT BIOLOGY

- Students will acquire fundamental knowledge of genetics and associated fields such as biochemistry, chemistry, and biology.
- Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.
- Students will acquire technical skills in the laboratory.
- Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.
- Students will develop the ability to design, conduct, and interpret the results of experiments.