

DEPARTMENT OF BIOLOGY

GRADUATE PROGRAM GUIDE FOR BIOLOGY DEGREE

STUDENT NAME: _____ DATE _____

DEGREE: _____

INSTRUCTIONS: Use this form to designate the areas of specialization you intend to satisfy in your degree plan. For Ph.D. students, four (4) areas must be designated, whereas three (3) areas are required for M.S. students. Each chosen area must be fulfilled by passing a course from the approved course list for that area (see attached). A minimum of two (2) semester hours must be completed in each area selected. Alternatively, a faculty member may certify that you have sufficient expertise in an area. In the space below, specify the approved course or provide faculty signatures for the areas you intend to satisfy for your degree. NOTE: the courses selected must appear on the student's degree plan.

	<u>Course</u>	or	<u>Professor's Approval</u>
1. Genetics	_____		_____
2. Biochemistry	_____		_____
3. Molecular Biology	_____		_____
4. Cell Biology	_____		_____
5. Developmental Biology	_____		_____
6. Microbiology	_____		_____
7. Computational/ Mathematical Biology	_____		_____

We certify that _____ will be required to demonstrate competence in the areas listed above by taking and completing with a grade of B or better the courses named, or by demonstrating expertise in the area to our satisfaction. All work must be completed prior to the preliminary examination for Ph.D. students.

_____ Chair

_____ Member

_____ Member

_____ Member

_____ Member

_____ Student

**COURSES THAT FULFILL GRADUATE REQUIREMENTS
FOR THE BIOLOGY DEGREE**

GENETICS

- BICH 631 Biochemical Genetics (3)
BIOL 616 Biochemical Systematics and Evolution (4)
GENE 603 Genetics (3)
GENE 612 Population Genetics (3)
GENE 613 Quantitative Genetics (3)
BIOL 650 Genomics (2)

BIOCHEMISTRY

- BICH 601 Biochemistry (3)
BICH 602 Biochemistry (3)
BICH 603 General Biochemistry (3)
BICH 604 General Biochemistry (3)
BICH 624 Enzymes, Proteins, Nucleic Acids (3)
BICH 625 Nucleic Acid-Protein Interactions (1)

MOLECULAR BIOLOGY

- BICH 631 Biochemical Genetics (3)
BICH 662 Eukaryotic Transcription (1)
BICH 689 mRNA Splicing (1)
BIOL 672 Molecular Biology of Photosynthesis (1)
BOTN 635 Plant Molecular Biology (3)
MICR 620 Transcriptional Mechanics (3)

CELL BIOLOGY

- BIOL 602 Transmission Electron Microscopy (1)
BIOL 617 Cell Biology (1-5)
BIOL 636 Plant Cell Biology (3)
BIOL 670 The Cell Cycle (1)
ZOO 601 Biological Clocks (3)
ZOO 634 Comparative Neurobiology (3)

DEVELOPMENTAL BIOLOGY

- BIOL 611 Molecular Biology of Differentiation and Development (3)
BIOL 674 Cellular and Molecular Aspects of Development (3)
ZOO 601 Biological Clocks (3)

MICROBIOLOGY

- MICR 438 Bacterial Physiology (4)
MICR 614 Microbial Development (3)
MICR 620 Transcription Mechanisms (3)

COMPUTATIONAL/MATHEMATICAL BIOLOGY

- STAT 651 Statistics in Research I (3)
STAT 652 Statistics in Research II (3)
WFSC 604 System Analysis and Simulation in Ecology and Natural Resource Management (3)
WFSC 624 Dynamics of Populations (4)

These courses are a guide for the Advisory Committee and the student. Other courses and 689 Special Topics or 685 Problems may be substituted with the approval of the Committee as evidenced by signatures on the Departmental Graduate Program Guide.