

(BIO) Biology – Thesis

33 Credit Hours

MinGPA cumulative 3.0. MinGrade C*. Degree M.S.

CORE COURSES	
BIO 512 Instr in Biological Sciences	3
BIO 513 Research Ethics	1
BIO 690 Seminar	1
BIO 692 Research	1
CONCENTRATION	21
THESIS	
Grade is Pass / Fail. MinHrs 6.	
BIO 699 Master’s Thesis	1-3
Oral Defense	
TEACHING ASSISTANT	
Course subj/no., title, credit hours, semester taught	

BIO 660 Ecosystem Dynamics (UAH)	4
NRE 578 GIS, Spatial Analysis & Modeling	4
NRE 580 Natural Resource Policy	3
NRE 581 Hydrology & Watershed Management	3
NRE 586 Restoration of Forest Ecosystems	3
NRE 588 Wildlife Technology	3
NRE 589 Forest Ecological Management	3

*One grade of C allowed at graduation.

(BIO) Biology – Non-thesis

36 Credit Hours

MinGPA cumulative 3.0. MinGrade C*. Degree M.S.

CORE COURSES	
BIO 512 Instr in Biological Sciences	3
BIO 513 Research Ethics	1
BIO 690 Seminar [RPP]	1
BIO 692 Research	1
CONCENTRATION	21
ELECTIVES	9
TEACHING ASSISTANT	
Course subj/no., title, credit hours, semester taught	
MASTER’S REPORT	
Grade is Pass / Fail.	
COMPREHENSIVE EXAM	
Grade is Pass / Fail.	
Exam composed jointly by Advisory Committee.	
To be taken after ≥ 66% completion of required coursework.	

*One grade of C allowed at graduation.

[RPP] = Research project paper or portfolio required.

(BIO) ENTOMOLOGY CONCENTRATION (ENT)	
BIO 500 Current Concepts in Biology	3
Choose remaining 18 hours from the following:	
BIO 551 Insect Physiology	4
BIO 552 Insect-Pest Management	4
BIO 553 Insect Taxonomy & Morphology	4
BIO 651 Medical Entomology	4
BIO 652 Advanced Applied Entomology	4
BIO 653 Taxonomy of Immature Insect	4

(BIO) GENETICS & MOLECULAR BIOLOGY CONCENTRATION (GMB)	
BIO 500 Current Concepts in Biology	3
Choose remaining 18 hours from the following:	
BIO 540 Molecular Biology	4
BIO 542 Analytical Biochemistry Lab	4
BIO 546 Cytogenetics	4
BIO 641 Advanced Cell Biology	4
BIO 642 Advanced Cell Physiology	4
BIO 643 Microscopy (UAH)	4
BIO 645 Human Cytogenetics & Applications	3
BIO 646 Molecular Genetics	3
BIO 647 Enzymology (UAH)	3
BIO 648 Enzymology Lab (UAH)	2
BIO 649 Advanced Genetics I	4

(BIO) MICROBIOLOGY CONCENTRATION (MBC)	
BIO 500 Current Concepts in Biology	3
Choose remaining 18 hours from the following:	
BIO 522 Microbial Physiology	3
BIO 523 Principles of Virology	3
BIO 524 Mycology	3
BIO 525 Parasitology	5
BIO 526 Microbial Ecology	3
BIO 621 Pathogenic Bacteriology (UAH)	5
BIO 622 Applied/Industrial Microbiology	3
BIO 623 Advanced Virology (UAH)	4
BIO 624 Immunology	4
BIO 625 Medical Mycology Lecture	3
BIO 631 Pharmacology	3

Concentrations, Specializations & Electives

(BIO) ECOLOGY & SYSTEMATICS CONCENTRATION (ECS)	
BIO 500 Current Concepts in Biology	3
Choose remaining 18 hours from the following:	
BIO 526 Microbial Ecology	3
BIO 560 Environmental Biology	3
BIO 561 Physiological Ecology (UAH)	4
BIO 562 Community Ecology (UAH)	4
BIO 564 Limnology (UAH)	4
BIO 565 Phycology	4
BIO 570 Plant Pathology	4
BIO 571 Plant Anatomy & Physiology	3
BIO 580 Adv Invertebrate Zoology (UAH)	4