

BIOLOGY, MASTER OF SCIENCE

Admission Requirements

In addition to meeting the previously stated general requirements for admission to the Graduate School of Texas Southern University, applicants for admission to graduate standing within the department must present verified proof of having completed the following:

1. Graduation with a Bachelor of Science Degree in a Biological Science of related academic area.
2. A satisfactory sequence of courses in the natural and physical sciences to minimally include the following:

Code	Title	Hours
Biology		
	Thirty-one semester credit hours of biology coursework	31
Chemistry		
	General Chemistry with laboratory	8
	Organic Chemistry with laboratory	8
Mathematics		
	College Algebra	3
	Pre-Calculus	3
	Calculus	4
Physics		
	College or University Physics I and II with laboratory	8

3. An undergraduate grade point average (GPA) of 3.0 on a 4.0 system. Transcripts from international academic institutions must have been evaluated by a TSU approved transcript evaluation provider (detailed course-by-course evaluation required).

Degree Requirements

1. A Comprehensive Examination based upon a required core set of courses offered during the first year in the M.S. Program. This examination is to be given during the third semester following their admission into the graduate program. Students must achieve a minimum passing score of 70 percent on each of the major areas covered. If a score of less than 70 percent is earned in any of the major areas, a retest will be given in said area. Additionally, students not meeting this standard will not be allowed to proceed to the research phase of the program.
2. Demonstration of proficiency in English prior to admission to candidacy either by a score of 3.5 on the analytical writing section of the GRE or by satisfactory performance in English 501. GRE or English requirements must be met by the end of the first semester of admission.
3. A minimum of thirty (30) semester credit hours, six (6) of which must be earned in research.
4. During the first semester after entering the program, the student should consult with the graduate faculty with the goal of selecting a mentor and laboratory for research studies.
5. Once a committee has been chosen, students should meet with their thesis committee members on a regular basis throughout their research study. Students must meet with set committee at the end of the semester prior to their thesis defense.

6. An acceptable thesis resulting from approved, independently conducted and lab-based research. The thesis research may not be initiated prior to admission to candidacy, and it remains the responsibility of the student to seek acceptance into ongoing research efforts led by research mentors.
7. Completion and presentation (through an oral defense) of one's thesis to a committee composed of members of the Departmental Graduate faculty and a representative of the Graduate School.

In addition to the program described above for the Master of Science degree, the Department of Biology, in cooperation with the Department of Curriculum and Instruction in the College of Education, participates in a program for teachers interested in achieving professional certification for teachers of biology at the secondary school level.

The Department of Biology offers the Master of Science degree, which requires a minimum of thirty (30) semester credit hours including an acceptable research project. Students must meet the general requirements for all graduate students as prescribed in this bulletin. Degree plans must be approved by the graduate program advisor prior to submission to the Graduate School.

This program is designed to provide instructional enhancement to meet the needs of teachers, practitioners and others who wish to supplement their undergraduate education and expand their research capabilities in biology through study beyond the master's degree.

Summary

Code	Title	Hours
	Core Curriculum Requirements (p. 1)	6
	Electives (p. 1)	18
	Thesis (p. 2)	6
Total Hours		30

Core Curriculum

Code	Title	Hours
BIOL 452	Intermediary Cellular Metabol ¹	3
BIOL 715	Advanced Human Genetics	3
Total Hours		6

¹

BIOL 452 Intermediary Cellular Metabol is an advanced undergraduate course and will be offered temporarily as part of the Core Curriculum until a more permanent replacement is assigned.

Electives

Code	Title	Hours
Select eighteen (18) credits from the following:		
BIOL 526	Topics In Biology	
BIOL 527	Adv Plant Physiology	
BIOL 534	Entomology	
BIOL 631	Diagnostic Bacteriology	
BIOL 623	Neurobiology	
BIOL 636	Endocrinology	
BIOL 647	Experimental Biology	
BIOL 648	Experimental Biology	
BIOL 650	Enzymology	

BIOL 710	Microbial Genetics
BIOL 712	Biosynthetic Mech
BIOL 725	Biochemical Ecology
BIOL 775	Bio-Organic Chemistry
BIOL 785	Adv Plant Physic & Biochem
BIOL 795	Graduate Biology Seminar
Total Hours	18

Thesis

Code	Title	Hours
BIOL 861	Research Problems I	3
BIOL 862	Research Problems II	3
Total Hours		6

Degree Plan

Course	Title	Hours
First Semester		
BIOL 452	Intermediary Cellular Metabol	3
BIOL Elective		3
BIOL Elective		3
Hours		9
Second Semester		
BIOL 715	Advanced Human Genetics	3
BIOL Elective		3
BIOL Elective		3
Hours		9
Third Semester		
BIOL Elective		3
BIOL 861	Research Problems I	3
Hours		6
Fourth Semester		
BIOL Elective		3
BIOL 862	Research Problems II	3
Hours		6
Total Hours		30

Allocation of Thirty Semester Credit Hour Course Requirements

General Requirements: a minimum of thirty (30) semester credit hours, of which six (6) hours of thesis research credit should be satisfied by taking BIOL 861 and BIOL 862.