

# Bachelor of Science Degree in Biology

## Purpose

1. A primary purpose of the *Bachelor of Science Degree in Biology* is to prepare students for careers in biology instruction at the public school, private school and community college levels. Graduate programs in biology education (M.Ed., D.Ed.) are essential for contemporary and quality instruction in both public and private schools, as well as in the many associate degree granting programs offered by nationwide community college systems.
2. Additionally, this program will prepare students for graduate education (M.S., Ph.D.) and training programs, for graduate education and research programs in multiple and varied biological disciplines (botany, zoology, microbiology, genetics, cell biology, anatomy, physiology, etc.).
3. A general biology curriculum may also serve effectively as a preparatory program for students interested in careers in: physician's associate programs (P.A.), medicine (M.D., D.O.), dentistry (D.M.D., D.D.S.), veterinary medicine (D.V.M.), physical therapy (M.P.T.), optometry, podiatric medicine and in industrial research and design, i.e. pharmacology.
4. This program also provides important foundational and contemporary courses related to B.S., M.S. and Ph.D. degrees in such allied health fields as: nursing, emergency health science, dental hygiene, nurse practitioner, nurse anesthetist, physician's associate, radiologic technology and radiation biology, and laboratory technology programs.
5. The program places emphasis on contemporary research and related developments.

## Goals

This biology program is a traditional general biology program. The goals of the program are:

1. To designed to train, educate and expose students to the diverse and multiple aspects of organismal biology, population biology, genetics, cellular biology, molecular biology, developmental biology, environmental biology and biodiversity
2. To introduce students to a broad spectrum of life sciences courses and related research in biodiverse subject areas.
3. To prepare students for careers in teaching, graduate education in the life sciences, and biological research. Reading assignments involving biology research journals and Internet research will be emphasized.
4. To expose students to both past (historical) and present (contemporary) new biological information and ongoing research activities, techniques and analytic methods in multiple fields of the life sciences. Analyses will include methodologies developed and designed to promote and enhance the critical and interpretative thinking skills of students.
5. To emphasize research, interpretation, scientific writing and statistical analyses will be emphasized throughout the instructional curriculum.
6. To promote and advance the critical thinking, reading, writing, and reasoning skills of all participants.
7. To promote the development of analytical and interpretative skills.
8. To prepare students for advanced education and training.

### Admission Requirements

1. Students must apply for admission to the Bachelor of Science in Biology Program prior to completing the final 60 credit hours required for the degree. However, early application, especially within the freshman year, is strongly encouraged.
2. Applicants to the degree program must meet with a faculty advisor to develop a degree plan. The Dean of Arts and Sciences must approve all degree plans.
3. Requirements for acceptance into this program are the same as for acceptance to Our Lady of the Lake College.
4. Following admission to any Arts and Sciences bachelor's program, students **MUST MEET** with the program advisor every semester prior to pre-registration for the next semester.

## Curriculum Plan for the Bachelor of Science Degree in Biology

Course	Number	Title	Credit Hours
Freshman Year		Semester I	
ACSM	100	Academic Seminar	1
BIOL	111	General Biology I	3
BIOL	113	General Biology I Lab	1
CHEM	101	General Inorganic Chemistry I	3
CHEM	103	General Inorganic Chemistry I Lab	1
ENGL	101	English I	3
MATH	112	College Algebra	3
PSYC	100	Introduction to Psychology	<u>3</u>
			18
Freshman Year		Semester II	
ACSM	101	Introduction to Baccalaureate Education	3
BIOL	112	General Biology II	3
BIOL	114	General Biology II Lab	1
CHEM	102	General Inorganic Chemistry II	3
CHEM	104	General Inorganic Chemistry II Lab	1
ENGL	102	English II	3
CSCI	100	Introduction to Computers	<u>3</u>
			17
Sophomore Year		Semester I	
CHEM	201	Organic Chemistry I	3
CHEM	203	Organic Chemistry I Lab	1
MATH	120	Trigonometry	3
BIOL	300	General Botany	3
BIOL	280	General Microbiology	3
BIOL	281	General Microbiology Lab	1
General Elective		HIST, PSYC, SOCI, PHIL, ENGL, ART, RELS, LING, OR ANTH	<u>3</u>
			17
Sophomore Year		Semester II	
CHEM	202	Organic Chemistry II	3
CHEM	204	Organic Chemistry II Lab	1
MATH	250	Calculus	3
BIOL	346	Cellular, Molecular and Developmental Biology	3
BIOL	312	Genetics	3
Elective	200 or 300 Level	Biology	3
General Elective		HIST, PSYC, SOCI, PHIL, ENGL, LANG, MUSI, ART, RELS, LING, OR ANTH	<u>3</u>
			19

Junior Year		Semester I	
PHYS	121	General Physics I	3
PHYS	123	General Physics I Lab	1
BIOL	301	History of Biology and Medicine	3
CHEM	335	Biochemistry	3
Elective	300 or 400 Level	Biology Elective	3
General Elective		HIST, PSYC, PHIL, SOCI, ENGL, LANG, MUSI, ART, RELS, LING, OR ANTH	<u>3</u>
			16
Junior Year		Semester II	
PHYS	122	General Physics II	3
PHYS	124	General Physics II Lab	1
BIOL	350	Principles of Ecology	3
Elective	300 or 400 Level	Biology Elective	3
General Elective		HIST, PSYC, PHIL, SOCI, ENGL, LANG, MUSI, ART, RELS, LING, OR ANTH	<u>3</u>
			13
Senior Year		Semester I	
BIOL	475	Paleo-Evolution	3
BIOL	480	Pathogenic Microbes w/Lab	4
Elective	300 or 400 Level	Biology Elective	3
General Elective		HIST, PSYC, PHIL, SOCI, ENGL, LANG, MUSI, ART, RELS, LING, OR ANTH	<u>3</u>
			13
Senior Year		Semester II	
MATH	252	General Statistics	3
BIOL	400 Level	Biology Elective	3
BIOL	496	Human Medicine/Biology Seminar	3
General Elective		HIST, PSYC, PHIL, SOCI, ENGL, LANG, MUSI, ART, RELS, LING, OR ANTH	<u>3</u>
			12

\*BIOL 476, Environmental Biology,  
Course currently under development

Total Credits for the Bachelor of Science Degree in Biology	124/125
Total Biology Credits Hours	52
Total Chemistry Credit Hours	19

Requirements for Graduation

1. Completion of one hundred twenty-five (125) semester hours in the required courses.
2. An overall grade point average of 2.00 (out of 4.00), including all transfer courses.
3. Fulfillment of the residency requirement of the College for the baccalaureate degree, which is 36 Credit Hours.
4. Clearance of indebtedness to the College including the return of all borrowed materials from the Center for Information and Learning.