



Iligan Institute of Technology
of the Mindanao State University
Quality Education for a better Mindanao

MASTER OF BIOLOGY

Rationale

The Mindanao State University-Iligan Institute of Technology, recognizing the great need to improve the quality of education attuned to the manpower requirements of the MINSUPALA Region and also at the national and global levels, proposed this non-thesis Master of Biology (MOB) curriculum. Such is a branched-out curriculum of the existing program which envisioned to be a strong catalyst in the development of biological education, research and extension, thus providing for the manpower needs of the region and enabling the future generation to address problems of biological significance such as pollution, abuse of natural resources, increased demand for food sources, disease prevention and control in man, livestock or agricultural crops.

Objectives

The branching out from the existing Master of Science in Biology program to the degree of Master of Biology seeks to attain the following objectives:

1. to develop graduates who will become competent teachers in tertiary biology education ;
2. to produce graduates who will be knowledgeable in many areas of biology;
3. to produce graduates whose teaching skills and strategies are attuned to their institution's needs; and
4. to produce highly-trained biology faculty members who will contribute to the betterment of student learning and greater productivity of graduates in the labor market.

Admission Requirements

1. A baccalaureate degree in Biology or any of the allied fields from a recognized institution, and/or currently teaching biology course in the tertiary level.
2. Have a background (formal or non-formal) in each of the following areas of study:
 - a. Taxonomy
 - b. Genetics
 - c. Ecology
 - d. Physiology
 - e. Developmental Biology
 - f. General Biology
 - g. Cell Biology
 - h. Organic Chemistry
 - i. Inorganic Chemistry
 - j. Biochemistry
3. Be a full-time faculty member and currently teaching in a public or private college or university included in the list of sending institutions.
4. Does not have a master's degree.
5. Have a grade point average (GPA) of 2.0 or better in major courses taken or show evidence of capabilities necessary for completion of the program, e.g, good or better teaching performance and/or trainings or workshops attended.
6. Have no pending criminal/administrative charges or conviction for violation for violation of any Philippine law. Certification must be obtained from appropriate agencies.
7. A letter of endorsement from the head of the sending institution.
8. Two (2) letters of recommendation from former instructors in undergraduate major biology courses attesting to the student's intellectual capacity for graduate studies in biology.

Degree Requirements

To qualify for the Master of Biology degree, a student must successfully complete a minimum of 37 units of course work specified in his program of study with a grade point average of 2.0 or better.

A. Core Courses (22 units)

Bio	211	Advanced Systematics	3 units
Bio	221	Advanced Ecology	3 units
Bio	241	Advanced Physiology	3 units
Bio	251	Advanced Genetics	3 units
Bio	261	Advanced Developmental Biology	3 units
Bio	281	Advanced Cell and Molecular Biology	3 units
Bio	291	Special Problem	3 units
Bio	296	Seminar in Biology	1 unit

B. Major Courses (15 units)

Bio	223	Terrestrial Ecology	3 units
Bio	224	Freshwater Ecology	3 units
Bio	230	Problems in Environmental Biology	3 units
Bio	248	Radiation Biology	3 units
Bio	249	Biology of Symbiosis	3 units
Bio	250	Radiation Ecology	3 units
Bio	252	Advanced Cytogenetics	3 units
Bio	253	Molecular Genetics	3 units
Bio	255	Genetics of Evolution	3 units
Bio	256	Population Genetics	3 units
Bio	257	Genetics of Eukaryotes	3 units
Bio	262	Cell Differentiation in Embryonic Systems	3 units
Bio	267	Evolutionary Biology	3 units
Bio	287	Advanced Theoretical Biology	3 units
Bio	288	Critique in Evolution	3 units
Bio	289	Philippine Biology	3 units
Bot	215	Aquatic Botany	3 units
Bot	227	Phytogeography	3 units
Bot	232	Morphology of Higher Vascular Plants	3 units
Bot	233	Morphology of Thallophytes	3 units
Bot	241	Advanced Plant Physiology	3 units
Bot	242	Plant and Water Relations	3 units
Bot	262	Plant Growth and Development	3 units
MB	221	Advanced Marine Ecology	3 units
MCB	221	Microbial Ecology	3 units
MCB	241	Microbial Physiology	3 units
MCB	251	Microbial Genetics	3 units
Zoo	220	Ornithology	3 units
Zoo	227	Zoogeography	3 units
Zoo	243	Comparative Endocrinology of Vertebrates	3 units
Zoo	244	Physiology of Reproduction	3 units
Zoo	263	Experimental Embryology	3 units
Zoo	271	Comparative Histology of Vertebrates	3 units

C. Cognates

Bio	293	Biometry	3 units
Bio	294	Bioethics	1 unit

Departmental Requirements

Courses in the program can be classified into seven areas, namely: Taxonomy, Developmental Biology, Physiology, Genetics, Ecology, Cell Biology and General Biology.

Delivery Mode

During summer terms, the student is in campus as a full-time student while during the regular semesters, there will be two modes of delivery, namely:

1. Weekend lectures that may start on Friday evening up to Sunday and may be scheduled at least once a month either in the venue where more students originate or at MSU-IIT:
2. On-line learning mode: Interactive type through the internet – question and answer between the faculty and the students and among the students themselves.

Program of Study

This two-year Master of Biology program starts in summer. The student undertakes full-time schooling during summer carrying a 9-unit load. During three regular semesters, the student carries a 6-unit load, but on the last semester, the student carries a 7-unit load which includes the presentation of a special problem report in a seminar.

**MASTER OF BIOLOGY (MOB)
(LIST OF COURSES BY SEMESTER)**

First Year, Summer

Course No.	Course Title	Units	Hrs/Wk			Prerequisite(s)
			Lec	Lab	Total	
Bio 281	Advanced Cell and Molecular Biology	3	2	3	5	Bio 181 or its eq.
Bio 251	Advanced Genetics	3	2	3	5	Bio106 or its eq.
Bio 241	Advanced Physiology	3	2	3	5	Bio 109 or its eq.
	Total	9	6	9	15	

First Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Prerequisite(s)
			Lec	Lab	Total	
Bio 211	Advanced Systematics	3	2	3	5	Bio 105 or its eq.
Bio 221	Advanced Ecology	3	2	3	5	Bio 107 or its eq.
	Total	6	4	6	10	

First Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Prerequisite(s)
			Lec	Lab	Total	
Bio 261	Advanced Developmental Biology	3	2	3	5	Bio 120 or its eq.
Major 1		3	2	3	5	
	Total	6	4	6	10	

Second Year, Summer

Course No.	Course Title	Units	Hrs/Wk			Prerequisite(s)
			Lec	Lab	Total	
Major 2		3	2	3	5	
Bio 291	Special Problem	3	1	6	7	All Core Courses
Major 3		3	2	3	5	
	Total	9	5	12	17	

Second Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Prerequisite(s)
			Lec	Lab	Total	
Major 4		3	2	3	5	
Major 5		3	2	3	5	
Bio 296	Seminar in Biology	1	1	0	1	
	Total	7	5	6	11	