UNIVERSITY OF GUAM
UNIBETSEDÅT GUÅHAN

COLLEGE OF NATURAL AND APPLIED SCIENCES

MASTER OF SCIENCE IN BIOLOGY

OVERVIEW

OBJECTIVES

The College of Natural and Applied Sciences offers a Master of Science Degree in Biology. Courses for the Master of Science Degree are taught by faculty from the College and Applied Sciences, the Marine Laboratory and the Water and Environmental Research Institute. The program is designed to serve those students who are pursuing a research-oriented career at the master's level, those using the master's degree as a stepping stone to a doctorate, a career in natural resource management or environmental consulting, and biology teachers who have fulfilled requirements for teacher's certification but seek a broader knowledge of biology. In addition to obtaining the Master of Science in Biology, candidates have the opportunity to study in one of the most interesting regions in the Western Pacific. The Graduate Program in Biology has many facets comparable to mainland programs and provides outstanding opportunities in tropical marine science (see the section on the Marine Laboratory in this Bulletin).

PROGRAM LEARNING OUTCOMES

Upon successful completion of the program, students will demonstrate the following:

1. Demonstrate ability to analyze data and design experiments using standard statistical procedures.
2. Demonstrate ability to write technical scientific reports and articles.
3. Demonstrate knowledge of basic organismal and ecological principles.
4. Demonstrate knowledge of basic cellular and molecular-level principles.
5. Demonstrate knowledge of the latest advances in a variety of fields in biology.
6. Demonstrate ability to conceive, conduct and report original research.
7. Demonstrate the ability to disseminate scientific concepts and research findings in a variety formats (e.g., written and oral).

ADMISSION

ADMISSION REQUIREMENTS

*CNAS Graduate Program applicants are strongly encouraged to submit a completed application by **July 1** for the Fanuchånan/Fall semester and by **December 1** for the Fañomnåkan/Spring semester. Reviews and decisions for applications received after this deadline, are at the program's discretion and not guaranteed.*

1. Completed all the pre-requisites for the program:
   - One term (semester or quarter) of Calculus,
   - Two terms of Physics or Geology,
   - Four terms of Chemistry and
   - Four terms of Biology, of which at least two are upper division.
2. Students may take these pre-requisites while at UOG; however, courses taken to make up any deficiencies shall not be applied to the total credits required for a graduate degree.
3. Submit three letters of reference from academics or professionals who are familiar with the student's qualifications. Letters should be submitted directly to the Graduate Admissions office.
4. Complete and submit a Program Entry Form (steps on how to do this are given on the Program website) which is then signed by the Graduate Biology Program Chair. It is recommended that this form is completed in the first semester of graduate coursework to be eligible for financial aid.
5. Complete and submit a Program Contract, detailing your elective courses and emphasis of study, to be

approved by the Program Chair. It is advised that this form is submitted before completion of 12 credit hours of graduate courses so that these courses count towards graduation.

6. Establish a thesis committee by completing and submitting a Permission for Thesis/Special Project Form which is then signed by the Graduate Biology Program Chair and Dean. The thesis committee is composed of a minimum of three (3) members; at least two (2) Biology Program Graduate Faculty members and one (1) outside member. The outside member is compulsory and can either be from the UOG Faculty (Graduate or otherwise), or from off-campus. If the latter, then these individuals may serve as committee members after submitting a CV documenting their qualifications for approval by the Biology Program Chair. The advisor or Committee Chair must be a listed Biology Program Graduate Faculty member.

Interested students may contact Sarah Lemer, Graduate Biology Chair for Admissions, for more information.

DEGREE REQUIREMENTS

Students enrolled in the Graduate Biology Program are required to complete all coursework and the degree requirements within seven years of admission to the Graduate School. Students requiring leave of absence must write to the Program Chair and provide evidence (e.g. medical certificate) to support their claim. If approved, the time in absence does not count towards the seven-year rule (a definition of this rule is in the General Admission Requirements section).

COURSE REQUIREMENTS (30 CREDIT HOURS)

The degree program requires a total of 30 hours of graduate credit, at least 18 of which must be at the 500 or 600 level including six hours of Thesis Research (BI-695). A maximum of six credit hours may be accepted in related graduate-level courses. Graduate students must maintain a B average (3.0) and make no more than one grade of C (2.0) or lower to be admitted to the degree program. Once admitted, students must meet the same criteria in order to continue in the Program. A student whose cumulative grade-point average (GPA) Fs below 3.0 has one semester of probation to raise the average back to at least 3.0 before being dismissed from the program. Cumulative GPA is calculated each semester by the Office of Admissions & Records.

Required Courses (21 Credit Hours)

Course	Course Title	Credits	Term Offered
BI507	ADVANCED STATISTICAL METHODS	4	FALL ONLY/ ALL YEARS
BI503	BIOLOGICAL LITERATURE AND SCIENTIFIC WRITING	2	SPRING ONLY/ ALL YEARS
BI520	CURRENT TOPICS IN CELLULAR BIOLOGY	3	SPRING ONLY/ ODD YEARS
BI557	POPULATION ECOLOGY	3	FALL ONLY/ ODD YEARS
BI557L	POPULATION ECOLOGY LABORATORY	1	FALL ONLY/ ODD YEARS
BI691	SEMINAR	1	FALL/SPRING/ ALL YEARS
BI695	THESIS	1 - 6	FALL/SPRING/ ALL YEARS

Elective Courses (9 credit hours)

Complete at least 9 credit hours

FACULTY

PROGRAM CHAIR

David Combosch
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