

**State University of New York at
New Paltz
Department of Biology
Graduate Student Handbook**

2012-2013 Academic Year

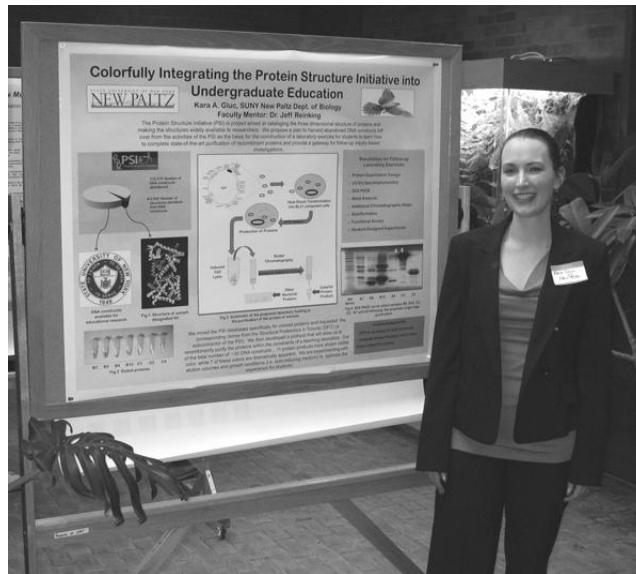
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INTRODUCTION

Welcome to the State University of New York at New Paltz Department of Biology Graduate Program. Students awarded a Master's degree from the Department of Biology should have a strong foundation of knowledge in the basic concepts of biology. Most of these concepts are acquired through previous undergraduate academic work. It is expected that candidates for graduate degrees have a broad-based understanding of the basic principles of biology.

Graduate work is more than a continuation of undergraduate studies. The most critical assurance of success is your dedication to scholarship, manifested in your commitment to productivity and quality in your coursework and/or research. Upon entering your graduate program, you have a multi-faceted commitment to achieve high standards: to yourself, to the Department of Biology, to your peers, and to your advisor. If you are working toward the completion of a Master's Thesis, your research is expected to be of publication quality. Your relationship with the Department of Biology will continue throughout your professional career. Your participation in courses, research, and departmental affairs will influence how you are perceived by the faculty and by your graduate student peers, and how their perceptions are conveyed to others.



BIOLOGY DEPARTMENT FACULTY & STAFF

The Department of Biology currently has ten faculty members that are either tenured, tenure-track or on renewable contracts, many of whom participate in graduate level instruction.

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A full list of the Department of Biology staff, including visiting professors, adjunct and term-limited lecturers can be found at:

<http://www.newpaltz.edu/biology/faculty.cfm>

FINANCIAL SUPPORT

Teaching Assistantships. Teaching assistant lines through the Biology Department are no longer available.



Scholarships. The SUNY New Paltz Foundation offers competitive scholarships, some of which may be appropriate for graduate students. Scholarships also exist through the Graduate school, in particular for Teacher Candidates in Adolescence Education. More generally, the Financial Aid Office has information on scholarships and loans.

SUNY New Paltz Foundation:

<http://www.newpaltz.edu/foundation/>
(845) 257-3239

Graduate School:

<http://www.newpaltz.edu/graduate/funding.html>
(845) 257-3285

Financial Aid Office:

<http://www.newpaltz.edu/financialaid/>
(845) 257-3250

Research Support. Students conducting research should consider applying for a Research and Creative Projects grant from the Graduate School or a Student Association Research Line for funds to support their projects.

Research and Creative Projects Awards:

<http://www.newpaltz.edu/graduate/grant.html>

Student Association Research Line:

<http://www.newpaltzsa.com/forms/research-application>

MASTER'S OF ARTS IN BIOLOGY PROGRAM (PROGRAM CODE 202)
Through the Department of Biology

As of Fall 2011, we are no longer accepting new applicants to the MA program.

Program Requirements

All Students Must:

1. File a **Plan of Study** with the graduate school
2. Complete prescribed course work within five years of matriculation.
3. Maintain a cumulative average of 3.00 or better, with no more than two grades below B-.
4. Complete either the Thesis or Non-thesis Curriculum Options (below)

Thesis Curriculum: 30 credits

- A minimum of 18 credits of course work (i.e. not independent study)
- A minimum of 6 credits and maximum of 12 credits of independent study.
- Prepare and defend a thesis (see Thesis Preparation, page 14).

Non-thesis Curriculum: 32 credits

- A minimum of 23 credits of course work (i.e. not independent study)
- A maximum of 9 credits of independent study.
- Pass the Biology Comprehensive Exam (see Comprehensive Exam, page 10).

Limitations on Transfer Credits for the MA Program

Courses taken more than seven years prior to admission into the program will **not** be credited toward degree requirements, even if taken as a Graduate Student matriculated at SUNY New Paltz.

A maximum of eight graduate level transfer credits from an accredited institution may be accepted toward graduation, as long as the course was taken prior to matriculating at SUNY New Paltz and a grade of B- or better was earned. This limit includes courses taken at SUNY New Paltz as a Non-Matriculated Graduate Student.

For rules and regulations on transfer credits, graduation requirements, academic standing, etc., please refer to the Graduate School Webpage:

<http://www.newpaltz.edu/graduate/>

MASTER OF SCIENCE IN EDUCATION (PROGRAM CODE 013M)
Through the Department of Elementary Education
Specializing in Mathematics, Science & Technology

The Master of Science in Education (MSEd) in Childhood Education is designed for students that already hold current teacher certification in either elementary or childhood education in New York state and wish to become permanently certified and/or pursue a higher degree. Currently, the curriculum is a total of 36 credits, including three courses (9 credits) within the specialized field (including, but not limited to, Biology).

MSEd students that specialize in biology are not required to take the Biology comprehensive exam.

Please see the School of Education's webpage for details:
<http://www.newpaltz.edu/elementaryed/msed.html>

MASTER OF SCIENCE IN EDUCATION (PROGRAM CODE 031A)
Through the Department of Secondary Education
Specializing in Biology

The Master of Science in Education (MSEd) in Adolescence Education is designed for students that already hold current teacher certification in either secondary or adolescence education in New York state and wish to become permanently certified and/or pursue a higher degree. Currently, the curriculum is a total of 30 credits, including 6 (minimum) - 15 (maximum) credits within Biology.

MSEd students that specialize in biology are not required to take the Biology comprehensive exam.

Please see the School of Education's webpage for details:
http://www.newpaltz.edu/secondaryed/sec_ed_msed_prog_req.html

MASTER OF ARTS IN TEACHING (PROGRAM CODE 101A)
Through the Department of Secondary Education
Specializing in Biology

The MAT in Biology degree is designed for students that already possess an undergraduate degree in Biology (or equivalent) and are seeking permanent teaching certification in New York state. Currently, the program is designed as a full-time, two-year degree with a total of 45 credits including 6 (minimum) – 9 (maximum) credits within Biology and a final semester of student teaching.

MAT students that specialize in biology are not required to take the Biology comprehensive exam.

Additional requirements, including those necessary for obtaining teaching certification and student teaching (e.g. foreign language proficiency, workshops, fingerprinting and NYS Examinations) are detailed on the School of Education's webpage:

http://www.newpaltz.edu/secondaryed/sec_ed_mat.html

MA/MAT IN BIOLOGY

As of Fall 2011, we are no longer accepting new applicants to the MA program.
Only current MA students may enroll in the dual-degree program.

Motivated graduate students may complete the Master of Arts degree in Biology and the Master of Arts in Teaching (Biology) in a joint MA/MAT program. This joint program is intended for students who wish to have the benefits of additional graduate study in Biology through the MA program and also wish to earn a New York State teaching credential (grades 6-12, Biology) through the MAT program. Total credits required for the dual degree program are either 66 (w/ thesis) or 68 (w/ comp. exam).

Eligibility

Current students in the MA program may apply for admission to the Joint Program after they have satisfactorily completed at least 6 graduate credits in Biology with a GPA of at least 3.0. Their matriculation into the Joint Program must be within five years of the matriculation date for their first degree, and they must complete the Joint Degree program within seven years of the matriculation date for their first degree.

Joint Degree Application Process

- After completing 6 graduate credits in Biology, MA students meet with their graduate advisor to discuss their intentions;
- Students then will be advised to write an application essay in which they explicate their reasons for wanting the additional degree;
- Students then submit an additional letter of recommendation supporting them in this endeavor (someone who can speak to their talents for working with young people);
- Students send this application to the Graduate School in the Haggerty Administration Building, Room 804. The Graduate School will direct the application to both departments for approval.

Special Limitations on Transfer Credits for the Joint MA/MAT Program

Students who are enrolled in or have completed the MA in Biology will be permitted to transfer up to 9 graduate credits in Biology into the MAT program. Effectively, the total number of credits for the program is 36 credits taken through the School of Education and 30-32 credits taken through the Department of Biology, depending on the degree option (thesis vs. comprehensive exam).

This transfer policy is available only to students who are enrolled in or have completed the first graduate degree program at SUNY New Paltz, and the credits must be transferred within seven years of matriculation in the first degree program. No more than eight credits of graduate work at another institution may be transferred into either the SUNY New Paltz MA or MAT program.

INDEPENDENT STUDY

The primary purpose of independent study is to enable students to assist a professor on a research project, develop their own research project, or pursue knowledge in an area not covered by a regularly offered course.

In doing an independent study, students work closely with a faculty member. For independent studies, students are expected to be involved with many different types of research activities, including: developing a research question, experimental design, conducting the research, and analyzing data. The nature of the independent study will vary depending on the type of research being conducted and the stage of the research project.

To initiate an independent study project, the student should consult with a potential faculty sponsor about the possibility of such a project. If the faculty member and student agree upon an independent study experience (including the nature of the project, the student's role, and the number of credits), the student completes the **Independent Study** form, detailing the project and his or her anticipated tasks. After the instructor has outlined the basis of evaluation, signatures of the student, sponsoring faculty member, Department of Biology Chair, and Dean are required for the student to register for the course.

Currently, no more than six independent study credits (including thesis credits) can be applied towards one's graduate degree.

Education students as well as MA students seeking teaching certification should be aware that NY teaching certification requires that masters-level coursework be supervised by instructors that possess a terminal degree in their field (this means a doctoral degree in the Biological Sciences, which is held by all professors in the department, but not necessarily all lecturers). Carefully consider the qualifications of your potential sponsor and consult with your education supervisor when choosing an independent study sponsor.

ADVISING

All incoming graduate students are assigned an Academic Advisor from among the full time Department of Biology faculty. Students in programs through the School of Education will also be assigned an Education advisor. You should meet regularly with your Academic Advisor(s) as you progress through your graduate education. Academic Advisors should serve as a source of information and support to incoming students. Academic Advisors should also be consulted at registration time in order to make sure students register for appropriate coursework. Upon acceptance into the graduate program, students should consult with their Academic Advisors as early as possible in order to complete their **Degree Plan of Study** (see page 9). A graduate student's Thesis Advisor may not serve as that student's Academic Advisor. If a student elects to have their current Academic Advisor serve as their Thesis Advisor, a new Academic Advisor will be assigned.

DEGREE PLAN OF STUDY

The **Degree Plan of Study** form is the means by which graduate students outline their intended academic course of study and plan their timeframe for degree completion. Students must complete the **Degree Plan of Study** during the first month of their first semester. Once a **Degree Plan of Study** has been filed, any changes must be made by either (1) completing a "**Request for Change in Plan of Study**" form (available from Academic advisors or the Graduate School); or (2) filing a new **Degree Plan of Study** form. Failure to submit the Degree Plan of will prevent students from being cleared to graduate.

Degree Plan of Study forms for Biology the Biology MA program are available online at <http://www.newpaltz.edu/biology/gradprograms.html>

Education plan of study forms are available from your Education advisor.

Degree Plan of Study forms require students to list the courses they have successfully completed, those they may be currently registered for, and those they intend to complete. Non-required credits (i.e., any classes beyond those necessary to complete the degree) should not be listed on the degree plan in case students wish to apply them to another degree at a later date. When the Degree Plan of Study form is complete, it must be signed by the student, his or her Academic Advisor, the Department Chair, the Graduate Committee Chair, and the Dean of Graduate Studies. Any alterations in courses taken require the filing of a Request for Change in Degree Plan of Study form, available here:

<http://www.newpaltz.edu/graduate/forms.html>

DEGREE APPLICATION

The semester before graduation, students must file an **Application for Master Degree or Certificate of Advanced Study** with the Records and Registration Office, which is in the basement of the Haggerty Administration Building (Room 19; phone: 257-3110). The coursework the student has completed must match that listed on the Degree Plan of Study; if it does not match, a Request for Change in Degree Plan of Study form or a new Degree Plan of Study form must be filed. The degree application form is available from the Registrar:

<http://www.newpaltz.edu/registrar/forms.html>

COMPREHENSIVE EXAM

For those students that do not complete a thesis, the comprehensive exam serves as an assessment of the students' mastery of facts and concepts related to the biological sciences that is commensurate with a Master's degree in the Biological Sciences. The comprehensive exam is an **oral** exam that is administered on common exam day. Examiners will be comprised of the three members of the Biology Graduate Committee and one (optional) additional faculty of your choosing. The comprehensive exam should be scheduled one month prior to the exam with the departmental secretary. Only students in the MA program that have filed an **Application for Master Degree or Certificate of Advanced Study** are eligible to take the exam. Students that do not take or successfully complete the scheduled comprehensive exam on their first attempt may be automatically enrolled in additional coursework as per the policies of the Graduate School, with associated fees and tuition. The comprehensive exam may only be taken twice.

STUDYING FOR THE COMPREHENSIVE EXAM

The comprehensive exam is designed to allow the student to demonstrate that they possess a master's-level knowledge base of Biology, its associated cognate disciplines and the scientific method. All of the questions are built upon common fundamental concepts in biology that are first introduced in freshman-level General Biology classes, and often reviewed and expanded upon in later specialized classes. These concepts are a necessary pre-requisite to answer any of the questions in the comprehensive exam. We do not feel extensive, if any, preparation should be required for students with a firm fundamental understanding of Biology. However, students that performed poorly as undergraduates, on the GRE subject test for admission, or during their graduate studies should not expect to be able to be able to cram for this exam and perform well. For students that do not feel prepared, we recommend they review a college-level general biology textbook over the course of several months or even a year prior to the exam, rather than review material from specific graduate courses.

THESIS GUIDELINES

Selection of Thesis Project and Thesis Advisor:

Students who choose the thesis option must identify an appropriate thesis project and ask a full-time member of the Department of Biology research faculty (i.e. tenured and tenure-track professorial faculty) to serve as their thesis advisor (see faculty list, page 2). Signing up for independent study work with a faculty member is a good way to meet and work with a prospective Thesis Advisor. The selected project should be within the thesis advisor's "area of expertise". Familiarity with the faculty and their respective areas of research is critical for identifying an appropriate advisor/thesis project.

Once a student has identified and secured a Thesis Advisor and appropriate research project, a thesis committee must be assembled.

Selection of a Thesis Committee

All thesis students, in consultation with their Thesis Advisor, must form a Thesis Committee. The Biology Department requires that the Thesis Committee for the Master's of Arts degree will consist of three members (including the Thesis Advisor). Each Thesis Committee must have at least two full-time professorial faculty from the Biology Department, and may include one "external" member (i.e. a lecturer or faculty from another institution). The members of the thesis and brief synopsis of the project must be included and approved as part of the **Plan of Study**.

The Thesis Committee should be formed as soon as possible after the student decides to pursue a thesis and should meet shortly after being formed and is required to meet with the student by the end of the second semester of study (earlier is advisable), and at least once a year thereafter. All Committee members must attend the thesis defense. It is the student's responsibility to arrange Thesis Committee meetings. The Thesis Committee serves with the Thesis Advisor to advise the student in the design of the student's thesis research. To be effective in these roles, it is imperative that the committee be formed as early in the project as possible. It is not appropriate to form a thesis committee only after the project has been completed.

Thesis Credits

Consult with your academic advisor to determine what are the appropriate credits to sign up for when conducting your thesis. Several options are available including "Independent Study", and "Thesis in Biology".

Thesis Preparation Guidelines

- Thesis students should work on initial drafts of their thesis with their Thesis Advisor. Once the thesis student and advisor agree on a completed draft, it should be circulated among committee members for review.
- The thesis write-up should follow the library's guidelines in the General Instructions for Preparation, Format, and Submission of Theses to the Sojourner Truth Library:

<http://library.newpaltz.edu/policies/masters.html>
- Written thesis should follow a standard scientific writing format: a summary of the study (Abstract), the background and rationale for the study and its hypotheses (Introduction), the methodology used (Methods), the findings (Results), a discussion section (Discussion), and references (References).
- After the committee members finish reading the thesis draft, the advisor consults with them to determine if all are in agreement that the thesis is ready to be defended. If there is not agreement, the advisor takes feedback from the readers back to the student and another revision is made; this process continues until all committee members feel the thesis is ready to be defended.
- Once the student and the Thesis Committee concur that the thesis is ready to be defended, an oral defense must be scheduled with the department secretary.

GRADUATE PROGRAM COMMITTEE

The Department of Biology Graduate Program Committee serves to coordinate and assist graduate students throughout the course of their academic studies/thesis work. The roles of the Graduate Program Committee include:

Review applications to the all Masters programs in Biology

Approve *Plan of Study* forms

Mediate conflicts between students, advisors, committee members and faculty in general

Handle all intradepartmental administrative matters relevant to the graduate program

Maintain fair and rigorous standards for the comprehensive exam

Monitor students' progress to ensure compliance with graduate program guidelines

Continue to conceal the exact location of Heinz Meng's treasure chest

Provide graduate students with guidance regarding all academic matters