**MASTER IN MOLECULAR BIOLOGY AND BIOMEDICINE**

**BIO 680 SCIENTIFIC METHODOLOGY IN MOLECULAR BIOLOGY**

**COURSE DESCRIPTION**

Literature-based review in the context of the mandatory course BIO 680 Scientific Methodology in Molecular Biology and Biomedicine, for students who are pursuing the Master’s Degree in Molecular Biology and Biomedicine (Masters without Laboratory Thesis).

Students are eligible to sign up for this course once they have successfully completed 60 ECTS of coursework. This course aims at students’ theoretical training in traditional scientific methodology (Scientific Hypothesis formulation, proof and modification through appropriate experimentation and interpretation of results) as well as in modern data-driven approaches that emerged after the development of high throughput technologies. The course will include the presentation and analysis of various scientific methods and techniques for the design, execution and presentation of Molecular Biology research. To this end, students will be educated in the critical reading and analysis of published research papers and in the presentation of research results and research proposals to an audience and in writing. Students will analyse a number of original and review articles on a subject in biological sciences that they choose in collaboration with their tutor, as well as study (using special laboratory manuals), the various methods of modern molecular biology, so that they become familiar with routine laboratory methods that molecular biologists use in their research.

All student assignments are written, presented and evaluated in English.

**DEPARTMENTAL REGULATIONS**

**COURSE REGISTRATION**

Students may register in course BIO 680 provided they have successfully completed at least 60 ECTS in restricted elective courses of the program of study.

Students who wish to enroll for the course, must do so through the online BannerWeb system after obtaining the written confirmation of their Academic Advisor for completing 60 ECTs in restricted elective courses of the program of study and the registration approval of the course instructor using the [**Course Registration Approval Form**](https://ucy.ac.cy/biol/documents/forms/pg/BIO%20680%20or%20681%20Registration%20Approval%20Form.docx). The course instructor will confirm that there are no students enrolled in the class who are not eligible to enroll based on the submitted forms and submit the completed forms to the Department's Secretariat after the course registration deadline of the semester.

**EXAMINING COMMITTEE**

The Examining Committee will consist of the course instructor (who will also serve as the coordinator of the Committee) and two *ad hoc* Committee members who are faculty of the Department with expertise in the general field of Molecular Biology and are not on Sabbatical Leave or Unpaid Leave during the semester.

The *ad hoc* Committee members will be selected among eligible faculty members through a random drawing conducted by the course instructor, in the presence of any member of the departmental Postgraduate Studies Committee. A substitute *ad hoc* Examining Committee member will also be selected in the same fashion, who will participate in a Committee in the event of *force majeure* replacement of another faculty.

The proposed composition of the Examining Committees will be submitted by the course instructor to the Department for approval by using a provided electronic template by **October 5 for the Fall Semester** and by **February 5 for the Spring Semester**.

Once the composition of the Examining Committee is approved by the departmental Postgraduate Studies Committee and the Departmental Council, the course instructor will be notified for further actions.

The course instructor is responsible for informing faculty members of details regarding their participation in the Examining Committee and of informing students accordingly.

**FINAL EXAMINATION: PROCEDURES AND SCHEDULING**

The examination includes a written assignment and an oral presentation and examination, which will be evaluated by the three-member Examining Committee. The work is written, presented and evaluated in English as per the teaching language of the program of study.

The subject of the literature-based study will be decided by the course instructor in collaboration with the student at the beginning of the semester, based on topics provided to students in the course syllabus.

The written assignment must be prepared in accordance to the guidelines provided in the last Section of this document titled “*STRUCTURE AND FORMATTING OF THE WRITTEN ASSGINMENT”*.

The oral presentations and examinations will take place during**the (Final) Exam period on a specific date, time and location assigned by the University** (see official [**UCY Exams Schedule**](http://www.ucy.ac.cy/fmweb/en/exams-schedule)). The exact time of each student presentation, within the allocated time-frame, will be determined by the course instructor in consultation with the members of the Examining Committee. The presentation schedule will be determined by the course instructor in collaboration with Committee members.

**At least 10 days prior to the start of the (final) Exam period** which, is defined on the yearly [**academic calendar**](https://www.ucy.ac.cy/graduateschool/en/postgraduate-studies/academic-calendar) of the University of Cyprus, students must complete the [**Presentation Announcement template**](https://ucy.ac.cy/biol/documents/forms/pg/Presentation%20Announcement%20Template.docx), and submit it through the **[Presentation Announcement Submission Platform](https://forms.office.com/Pages/ResponsePage.aspx?id=tObRjayNjkCNjWdT6YAFMMgk_Vq_Jg1MsQq03PYc7cVUNVo0NUhORDlJT1JaRFk4M1lRVEhCSERSQi4u)**, after confirming the accuracy of the information with the course instructor.

**At least 10 days prior to presentation date** students are required to submit to the Department a copy of their thesis through the **[Postgraduate Thesis Submission Platform](https://forms.office.com/Pages/ResponsePage.aspx?id=tObRjayNjkCNjWdT6YAFMMgk_Vq_Jg1MsQq03PYc7cVUMUVFMlZHTVo0R1ZKQ0gwSEpYMU1NSDBaQy4u)**.

**At least 10 days prior to presentation date**, students must also submit a copy of their written assignment to the Examining Committee in electronic or printed format as requested by the Committee members.

Prior to the examination date, students must download the [**Student Evaluation Form**](https://ucy.ac.cy/biol/documents/forms/pg/BIO%20680%20Student%20Evaluation%20Form.docx) available on the Departmental website, and fill out the appropriate Sections. **On the day of the examination**, students must provide a printed copy to the course instructor.

 The student presentation should last for up to 40 minutes without serious interruptions except for clarifications asked by the Examining Committee members. After the presentation, an in-depth examination is carried out to determine the student’s range of knowledge and understanding in the subject matter.

The student presentation is open to students and staff of the Department, unless the Examining Committee deems there are special circumstances that require alternative treatment.

The oral examination takes place only in the presence of the three-member Examining Committee.

**FINAL GRADE**

The course is graded with a score of 0-10.

Students are not eligible to receive a grade of “Incomplete” for this course. Students who enroll in the course but, do not successfully complete the course requirements will automatically be assigned a grade of “0” (zero).

At end of the examination, the Examining Committee will determine the student grade and complete the appropriate section on the Student Evaluation Form. The course instructor will assign the final grade on BannerWeb accordingly. The completed and signed Student Evaluation Form will be submitted to the Department Secretariat, [Ms. Anna Christou](mailto:annac@ucy.ac.cy?subject=Query%20about%20submitting%20a%20course%20registration%20form), for archiving and the Departmental Council will be informed of the final grade after it is posted on Banner.

**STRUCTURE AND FORMATTING OF THE WRITTEN ASSIGNMENT**

The written assignment is a literature review on a current topic in Molecular Biology.

A template is available to facilitate the process of structuring and formatting the written assignment. Click [**here**](https://ucy.ac.cy/biol/documents/forms/pg/Literature-based%20Master%20Thesis%20Template.docx) to download the document. If using the template, students must still ensure that the final document complies with the information provided below.

Formatting

* Page size: A4,
* Page Margins: 2.54 cm (Top, Bottom, Right and Left)
* Font Characteristics: Times New Roman, Size 12pt
* Line Spacing: 1.5
* Language: English
* Referencing Style: Harvard - British Standard 2010 (According to the Harvard bibliographic template the journal name should be italics and the names of the authors in uppercase.)

Structure

* Title Page: Thesis title, Student full Name, Program of Study, Examination Date
* Abstract Page: Summary of up to 500 words
* Dedication
* Acknowledgements
* Composition of the Examining Committee
* A copy of the seminar Announcement
* Table of Contents
* Introduction (up to 10 pages): General information on the subject, significance, and relevance
* Overview of the experimental results and methodology used in thematic sub-sections with separate titles (20-30 pages)
* Discussion (5-10 pages): Conclusions and main unanswered questions
* Abbreviations (only if abbreviations are used in the text)
* Bibliography (unlimited)

The use of diagrams, figures and tables (citing the relevant source) is recommended throughout the text.