



Philadelphia University

Faculty of Science

Department of Biotechnology and Genetic Engineering

1st Semester, 2009/2010

Course Syllabus

Course Title: Research Project	Course code: 240499
Course Level: 4 th year	Course prerequisite (s) and/or corequisite (s): Department approval preferred in Graduation Semester
Lecture Time: Open time and <u>one weekly meeting</u> at 09:10-10:00 (Wed)	Credit hours: 3

Academic Staff (the Coordinator)

Name	Rank	Office Number	Office Hours	E-mail Address
Dr. Khaled Al-Qaoud	Associate Professor	907	Mon +Wed 11.15-12.45 Thurs 11.10-12.00	al_qaoud_khaled@hotmail.com

Course module description:

This course is required from all students that study the New Plan (after 2005). It combines in one course both the Seminar and the Scientific Writing (from the earlier Plans). It also includes research work done under the supervision of one (or more) department staff. This course is intended to demonstrate the "research and development" process in a selected area of Biotechnology and Genetic Engineering or solving current problems in this field.

Course module objectives:

The main objective of this course is to gain some experience in some different aspects of research projects that include conducting field, laboratory and/or computer work, writing scientific reports and presenting scientific research results to an audience using appropriate visual aids.

Course/module Components and Teaching Methods:

The course contains one weekly meeting with the Coordinator for organization matters and to discuss general issues needed for successful research projects (e.g. proposal, progress and final report, scientific publication, poster and oral presentations).

Students will be asked to select (when possible) a research area and the Coordinator will assign one or more Advisors (Supervisor) from the Department Staff. All further follow-up and related scientific matters will be directly discussed with the Supervisor. However, copies of the research proposal and the progress and final reports should be given to the Coordinator after approval of the final form by the Supervisor.

The major aspects of research projects that should be done by each student include:

1. Talk to your Supervisor and define the specific Title and the main directions.
2. Write "one to two" pages (double space) a Research Proposal that clearly contains background information and justifications of the project, **objectives**, projected research outcomes, timetable of the work, availability of materials and equipment and expected cost of materials needed (purchasing material that are not available in the department will take long time and should be avoided when possible).
3. Conduct the research work (field, laboratory and/or computer).
4. Write an extensive Literature Review to discuss scientific issues related to your research subject (10-15 pages/double space). Students are advised to start writing the review as soon as the title is selected. This will help in improving your research work and result in a better writing.
5. Write around one-page Progress Report half way of the research work.
6. Discuss final results with your Supervisor and write the Final Report in a form that is acceptable by your Supervisor (depends on the type of your research work).
7. Prepare a Seminar containing your results and short introduction from your Literature Review and your Proposal.
8. Present your Seminar to the Department Staff and other students. Presentations should be 10-15 minutes followed by short question/answer session. The use of visual aids is very important. Your responsibility is to make sure to have every thing ready before the presentation time. Also make sure to prepare few days before your Seminar Date a "Seminar Announcement" that contains the date, place and time of your Seminar and the title and a short summary of your Seminar.

Learning outcomes:

- * Expose students to different aspects of research work that will be useful in their future career or graduate studies.
- * Practice scientific writing using available references and proper documentations.
- * Exposure to different research papers in one subject and learn how to correlate to each other.
- * Understand how to prepare a seminar using the latest software and visual aids and gain talkative and presentation skills in front of audience.

Documentation and academic honesty

The reports should be written using your words after understanding what you want to say. Figures and table are encouraged to be used. Student should avoid plagiarism. Copy/paste from internet or published reports and papers is completely not accepted.

Course/module academic calendar

Each student is expected to regularly visit the Supervisor during office hours and at least once in each week to discuss progress and future directions. All students should attend the weekly meeting with the Coordinator.

Expected workload:

On average students need to spend 6-9 hours in writing, work and preparation each week.

Attendance policy:

This course is mainly a research experience without the regular lecture format. However, absence from the weekly meetings shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of Science shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Module references: It is highly recommended to read about writing scientific papers and how to present oral talk (public speaking).

Assessment instruments

Grading will not be only based on your research results. Grading will be also based on your efforts and progress during the course. Meeting deadlines and follow-up early in the Semester are very important. Grading will be done by both the Coordinator and each student Supervisor.

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Module name: Research Project
Module #: 240499
Semester: 2st (2008-2009)
Coordinator: Dr. Sameer Masoud

Evaluation Form

The Supervisor Name	
Student Name	
Project Title	

#	Criteria*	Maximum grade		Student grade	Notes
		Suggested	Used		
1	Attending and interaction in the weekly lecture (Coordinator)	10			
2	Research Proposal	10			
3	Literature Review	10			
4	Scientific background of the student related to the subject	10			
5	Problem solving and scientific thinking	10			
6	Results of the students as expected	10			
7	The Final Report	10			
8	Seminar preparation, practice and invitation	5			
9	The student Seminar presentation	10			
10	Accumulated experience in research	10			
11	Attendance of other presentations	5			
Total Grade		100	100		

*Starting early in the different tasks and meeting deadlines are important part of each section grade.

Comments: