

**CIIC 4998 - Course Syllabus**

**1. General Information:**

Alpha-numeric codification: CIIC 4998  
 Course Title: Undergraduate Research  
 Number of credits: 1-3  
 Contact Period: 1-3 hours per week

**2. Course Description:**

**English:** Development of a research project related to Computer Science and Engineering, under the supervision of a faculty member.

**Spanish:** Desarrollo de un proyecto de investigación relacionado con ciencia e ingeniería de la computación bajo la supervisión de un miembro de la facultad.

**3. Pre/Co-requisites and other requirements:**

Prerequisites: (CIIC 4020 or ICOM 4035) and authorization of the Director of the Department

**4. Course Objectives:**

Students will work under the supervision of a faculty member to define a research project, and then conduct experiments, field studies, and the necessary literature survey to complete a report on the project outcomes.

**5. Instructional Strategies:**

- conference discussion computation laboratory
- seminar with formal presentation seminar without formal presentation workshop
- art workshop practice trip thesis special problems tutoring
- research other, please specify:

**6. Minimum or Required Resources Available:**

Students will use the Departmental computer laboratories to complete course projects.

**7. Course time frame and thematic outline**

Outline	Contact Hours
Introduction to research plan and strategies	6

Topics depending on specific research projects	7-37
Oral presentation and technical report	2
<b>Total hours: (equivalent to contact period)</b>	15-45

**8. Grading System**

<input checked="" type="checkbox"/> Quantifiable (letters) <input type="checkbox"/> Not Quantifiable
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**9. Evaluation Strategies**

	Quantity	Percent
<input type="checkbox"/> Exams		
<input type="checkbox"/> Final Exam		
<input type="checkbox"/> Short Quizzes		
<input checked="" type="checkbox"/> Oral Reports	1	30%
<input type="checkbox"/> Monographies		
<input type="checkbox"/> Portfolio		
<input checked="" type="checkbox"/> Projects	1	50%
<input type="checkbox"/> Journals		
<input checked="" type="checkbox"/> Other, specify: Review of research papers	2-5	20%
<b>TOTAL:</b>		<b>100%</b>

**10. Bibliography:**

<ol style="list-style-type: none"> <li>Justing Zobel, <i>Writing for Computer Science</i>, 2nd ed., Springer, 2004. [Classic Book]</li> <li>Lutz Hering, and Heike Hering, <i>How to Write Technical Reports: Understandable Structure, Good Design, Convincing Presentation</i>, Springer, 2010. <a href="http://dx.doi.org/10.1007/978-3-540-69929-3">http://dx.doi.org/10.1007/978-3-540-69929-3</a> [Available via Springer eBooks, UPRM General Library Databases]</li> <li>Electronic resources available through the UPRM Library's website: <a href="http://www.uprm.edu/library/cre/listdbsp.php?!=1&amp;st=0&amp;topic=63">http://www.uprm.edu/library/cre/listdbsp.php?!=1&amp;st=0&amp;topic=63</a>.</li> <li>Other references, depending on specific selected topic chosen by students.</li> </ol>
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**11. Course Outcomes**

Upon completion of this course, the student will be able to:	Program Student Outcomes Impacted
<ol style="list-style-type: none"> <li>Understand what research is.</li> <li>Apply research strategies in the discovery of solutions to problems.</li> <li>Apply science and engineering in solving new problems.</li> </ol>	1-8

**12. According to Law 51**

Students will identify themselves with the Institution and the instructor of the course for purposes of assessment (exams) accommodations. For more information please call the Student with Disabilities Office which is part of the Dean of Students office (Office #4) at (787)265-3862 or (787)832-4040 extensions 3250 or 3258.

**13. Academic Integrity**

-The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the UPR Students General Bylaws (Board of Trustees Certification 13, 2009-2010) states that academic dishonesty includes, but is not limited to: fraudulent actions; obtaining grades or academic degrees by false or fraudulent simulations; copying the whole or part of the academic work of another person; plagiarizing totally or partially the work of another person; copying all or part of another person answers to the questions of an oral or written exam by taking or getting someone else to take the exam on his/her behalf; as well as enabling and facilitating another person to perform the aforementioned behavior. Any of these behaviors will be subject to disciplinary action in accordance with the disciplinary procedure laid down in the UPR Students General Bylaws.—