UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
COMP-500	Research Seminars and Methodology	4
Prerequisites	**Department**	**Semester**
None	Computer Science	Spring
Type of Course	**Field**	**Language of Instruction**
Required	Data Science	English
Level of Course	**Lecturer(s)**	**Year of Study**
2nd Cycle	Prof. Athena Stassopoulou	1st
Mode of Delivery	**Work Placement**	**Corequisites**
Conventional	N/A	None

Course Objectives:

This course is designed to provide a deep and systematic understanding of the nature and conduct of CS research and to equip students with the ability to undertake independent research. The course will consist of three parts:

a) Introduction to research: This will include lectures on research strategy and tactics, how to search and review literature, how to evaluate research, how to present research (both written and oral).

b) Research Seminars: The course will include CS seminars from faculty of the Department or/and other Universities as well as from research centers and the industry. Each seminar will focus on the area of specialization of the speaker and will clearly detail the approach used such as models, methodologies, algorithms, experimental set up and results etc.

c) Literature Review: Students will undertake a literature review on a specific topic within one area of specialization. The student will do a literature search and write the findings of this search in the form of a paper which will then be presented in class at a mini-conference. Students opting for the thesis option for their MSc, can use this part of the coursework to perform introductory-background work for their thesis.

Learning Outcomes:

After completion of the course students are expected to be able to:

- demonstrate an understanding of how established techniques of research and enquiry are used to extend, create and interpret knowledge in Computer Science.

- evaluate critically current research in Computer Science, and propose possible alternative directions for further work.
- deal with complex issues at the forefront of the academic discipline of Computer Science in a systematic and creative manner and to communicate conclusions clearly to both specialists and non-specialists.
- demonstrate independence and originality in tackling and solving problems within the area of Computer Science, and to act autonomously in planning and implementing solutions in a professional manner.
- continue to advance their knowledge and understanding, and to develop new skills to a high level, and become independent life-long learners across the discipline of Computer Science.
- define and plan a piece of independent research.

Course Content:

1. Introduction and overview
2. The nature of Computer Science research: what is research
3. Literature searches, information gathering
4. Reading and understanding research papers
5. Technical writing, referencing, bibliographies
6. Presentation skills, written and oral
7. A series of research seminars from academia and industry
8. Review of legal, ethical, social and professional issues including data protection and standards

Learning Activities and Teaching Methods:

Lectures, Seminars, Assignments.

Assessment Methods:

Assignments, Seminar Reports, Research Report, Presentation.

RecommendedTextbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Practical Research: Planning and Design (9th edition)	P. D. Leedy and J. E. Ormrod	Prentice Hall	2009	0136100872

The Elements of Style (4th edition)	W. Strunk Jr. and E. B. White	Longman	1999	9780205309023
Thesis Projects A Guide for Students in Computer Science and Information Systems (2nd edition)	M. Berndtsson, J. Hansson, B. Olsson and B. Lundell	Springer	2008	978-1-84800-008-7