Fakultät für Ingenieurwesen
Facoltà di Ingegneria
Faculty of Engineering

COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

Course title	Seminar in Software Engineering Advances
Course code	76094
Scientific sector	ING-INF/05
Degree	Master in Software Engineering (LM-18)
Semester	2
Year	1
Credits	6
Modular	No

Total lecturing hours	60
Total exercise hours	
Attendance	Not compulsory, but strongly recommended. Non-attending students must contact the lecturer at the start of the course to agree on the modalities of the independent study.
Prerequisites	--
Course page	https://ole.unibz.it/, course "Seminar in Software Engineering Advances - 2024/25 – 76094"

Specific educational objectives	The course belongs to the type "attività formative caratterizzanti" scientific area "Informatica". The course provides a general overview of scientific content. It aims to expose students to a seminar-based overview of advanced subjects on the edge of research in Software Engineering. The course will introduce the topics, provide recent research samples, and stimulate discussion by letting students read scientific papers, elaborate on the content, and deliver presentations.

Lecturer	Ilenia Fronza
Contact	Faculty of Engineering, Via Buozzi 1, Room B1.4.30, Ilenia.Fronza@unibz.it
Scientific sector of lecturer	ING-INF/05
Teaching language	English
Office hours	During the lecture time span, Thursday 14:00 - 15:00, arrange beforehand by email

Lecturing Assistant (if any)	-
Contact LA	-
Office hours LA	-
List of topics	• Sustainability in Software Engineering • Diversity and Inclusion in Software Engineering • AI and Software Engineering • Remote/Hybrid Software Engineering • Computing Education and Training • Creating video seminars: guidelines
Teaching format	Frontal lectures, hands-on activity, and discussion.

Learning outcomes	**Knowledge and understanding**

- D1.3 have an in-depth knowledge of the scientific method of investigation applied to even complex systems and innovative technologies that support information technology and its applications;
- D1.8 ability to read and understand specialist scientific documentation, such as conference proceedings, articles in scientific journals, technical manuals.

Making judgments
- D3.1 ability to independently select documentation from various sources, including technical books, digital libraries, technical scientific journals, web portals or open source software and hardware tools.

Communication skills
- D4.1 ability to present the contents of a scientific/technical report in a set time in front of an audience, including non-specialists;
- D4.4 ability to prepare and deliver presentations with technical content in English;
- D4.7 ability to synthesise knowledge gained from reading and studying scientific and technical documentation and to prepare reports and presentations.

Learning skills
- D5.1 ability to independently extend the knowledge acquired during the course of study by reading and understanding scientific and technical documentation in English;
- D5.2 ability to independently keep up to date with developments in the most important fields of information technology.

Assessment	**For attending students** Coursework [30% of mark] + Video seminar [40% of mark] + Final exam (oral) [30% of mark] Coursework. During the course, students will actively participate by reading papers, critically analysing, presenting, and discussing their content. This assessment component is needed to assess LOs D1.8, D4.1, D4.4, D4.7. Video seminar. Students will be assigned randomly to one of the course topics and prepare a 15-minute video seminar. In case of a positive mark, the mark will count for the remaining regular exam sessions of the academic year. A new video seminar needs to be submitted for the next exam session in case of a negative mark. This assessment component is needed to assess LOs D1.3, D3.1, D5.1, D5.2. Final exam (oral). Verification questions about the topics of the course. This assessment component is needed to assess LOs D1.8, D4.7, D5.1.

	For non-attending students
	Final exam (oral) [100% of mark]. Verification questions about the topics of the course. This assessment component is needed to assess all LOs.
	Note: Attendance is not compulsory but strongly recommended.
Assessment language	English
Assessment typology	Monocratic
Evaluation criteria and criteria for awarding marks	**For attending students**

For attending students, the content continues:

To enroll in the oral exam, a student must:

- Deliver the video seminar (the video seminar must be evaluated BEFORE the final exam, otherwise the exam cannot be registered).

- Have earned a sufficient evaluation of both the coursework and the video seminar.

Relevant for assessment:

- Coursework: ability to read and understand specialist scientific documentation; ability to prepare and deliver presentations (in English) with scientific/technical content; ability to summarize in own words, evaluate, and establish relationships between topics; skills in critical thinking; methodological rigor.

- Video seminar: quality of the video seminar (according to the guidelines provided during the course); ability to independently select documentation from various sources; ability to independently extend the knowledge acquired during the course; ability to summarize in own words, evaluate, and establish relationships between topics; skills in critical thinking; methodological rigor.

- Final exam (oral): correctness of answers; clarity of answers; ability to summarize in own words, evaluate, and establish relationships between topics; skills in critical thinking.

For non-attending students

Relevant for assessment:

- Final exam (oral): correctness of answers; clarity of answers; ability to summarize in own words, evaluate, and establish relationships between topics; skills in critical thinking.

| **Required readings** | • Alley, Michael (2013): The craft of scientific presentations. Critical steps to succeed and critical errors to avoid. Second Edition. New York, NY: Springer |

	Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Supplementary readings	Additional readings will be communicated during the course.
Software used	Tools for video editing (e.g., Powtoon, VideoScribe, Animaker)