

COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

Course title	AI-Assisted Literature Review
Course code	71080
Scientific sector	IINF-05/A
Degree	PhD in Computer Science
Semester	1
Year	2024/2025
Credits	1
Modular	No
Total lecturing hours	10
Attendance	Not compulsory but recommended. Non-attending students must contact the lecturer <u>at the start of the course</u> to agree on the modalities of the independent study.
Prerequisites	There are no specific prerequisites for this course.
Specific educational objectives	Manually preparing and writing a literature review takes considerable time and effort. However, tools now exist to review large knowledge bases and deliver meaningful insights in a matter of minutes. Throughout this course, students will explore which stages of the literature review process can be automated using AI and to what extent human involvement remains necessary. Students will have the opportunity to engage in a hands-on assignment where they will apply their knowledge to develop the literature review required for their doctoral program. This assignment aims to deepen their understanding and enhance their research skills.
Lecturer	Ilenia Fronza
Contact	Via Buozzi 1, Bolzano, Room B1.4.30, Ilenia.Fronza@unibz.it
Scientific sector of lecturer	IINF-05/A
Teaching language	English
Office hours	During the lecture time span, arrange beforehand by email
Lecturing Assistant (if any)	--
Contact LA	--
List of topics	<ul style="list-style-type: none"> • Literature Review: stages and guidelines • Automating literature reviews using AI
Teaching format	The course consists of 3 modules, combining frontal lectures, hands-on activity, and group discussions. The first introductory module lasts 2 hours and focuses on theoretical foundations. The second module lasts 4 hours and is dedicated to hands-on activities to experiment with automating literature reviews using AI. In the final module, also 4 hours long, students will present their findings and engage in a discussion about the advantages and disadvantages of using AI for literature reviews. This presentation will be open to all students in the PhD programme.
Learning outcomes	Knowledge and understanding

	<ul style="list-style-type: none"> • Knowledge of the guidelines for conducting a literature review. • Knowledge of AI tools that can assist in conducting literature reviews. <p>Applying knowledge and understanding</p> <ul style="list-style-type: none"> • To be able to address and solve a problem using scientific methods. • To be able to choose methods appropriate to research aims and objectives. <p>Making judgments</p> <ul style="list-style-type: none"> • To be able to understand the limitations of specific research methods. <p>Communication skills</p> <ul style="list-style-type: none"> • To be able to prepare and deliver presentations with technical content in English. • To be able to synthesize knowledge from scientific and technical documentation, and to prepare reports and presentations. <p>Learning skills</p> <ul style="list-style-type: none"> • To be able to independently read and understand scientific and technical documentation in English.
<p>Assessment</p>	<p>Students will have the opportunity to engage in a hands-on assignment where they will apply their knowledge to develop the literature review required for their doctoral program. The assignment will be evaluated and discussed during the course.</p> <p>Non-attending students will work on the assignment autonomously and present it in the final module. Non-attending students must contact the lecturer at the start of the course to agree on the preparation modalities for the project work.</p>
<p>Assessment language</p>	<p>English</p>
<p>Assessment Typology</p>	<p>Monocratic</p>
<p>Evaluation criteria and criteria for awarding marks</p>	<p>The exam is graded on a pass/fail basis with no marks awarded. The following criteria are relevant for the assessment:</p> <ul style="list-style-type: none"> - Communication clarity and effectiveness. - Ability to summarize, evaluate, and establish relationships between topics. - Ability to apply the tools, methods, and processes introduced in the course to specific cases.
<p>Required readings</p>	<p>The reading material is specified during the course. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it and Ilaria Miceli, Ilaria.Miceli@unibz.it</p>
<p>Supplementary readings</p>	
<p>Software used</p>	<p>ASReview, Elicit, ChatPDF</p>