COURSE OUTLINE

GENERAL

SCHOOL	Sciences and Engineering		
ACADEMIC UNIT	Computer Science		
LEVEL OF STUDIES	1st Cycle		
COURSE CODE	COMP-449	**SEMESTER**	Fall, Spring
COURSE TITLE	Industry Placement in Data Science		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
	N/A	6
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Specialization and skills development
PREREQUISITE COURSES:	3rd or 4th year of study, Preferably CPA 3.0 or higher; consent by the Department
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English
IS THE COURSE OFFERED TO ERASMUS STUDENTS	
COURSE WEBSITE (URL)	

LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

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

- Critically evaluate the current state of industry practices and technologies in their specific field of concentration within Data Science.
- Analyze and reflect on the role and impact of practical implementation of data science concepts in industrial contexts, including challenges in real-world application.
- Apply research and evaluation methodologies to assess software, tools, or devices, and determine their effectiveness in meeting user and business needs.
- Independently design, implement, and evaluate data science solutions to complex, real-

world problems, demonstrating the ability to compare and justify alternative approaches.
- Elicit, document, and interpret end-user requirements, and translate them into technical specifications for data-driven projects.
- Communicate findings and results of data analysis and data mining processes effectively to both technical and non-technical stakeholders using clear, audience-appropriate language.
- Demonstrate professional awareness of industrial work culture, including teamwork dynamics, motivation, and collaborative practices in diverse environments.
- Perform effectively and responsibly in a real-world professional, industrial, or research setting, managing tasks independently and contributing meaningfully to team goals.
- Integrate and apply communication, technical writing, and analytical skills acquired through the program to produce high-quality workplace documentation and presentations.
- Operate within organizational structures, understanding hierarchies, workflows, and institutional procedures, while contributing proactively to team-oriented projects.
- Synthesize and apply advanced knowledge and skills from the Data Science curriculum to address practical challenges and generate meaningful results in a professional context.
- Collaborate with supervisors and colleagues to plan, execute, and report on a data-driven project, demonstrating initiative, accountability, and reflective practice.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*
Production of new research ideas	*Others…*
	…….

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues
Criticism and self-criticism
Production of free, creative and inductive thinking

SYLLABUS

The course contents vary according to each project's nature. Topics will be related to Data Science and relevant fields targeting tangible best practices. Students will be able to explore, demonstrate and provide solution(s) within the context of the project.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	*Use of ICT in teaching / Χρήση ΤΠΕ* *Communication with students / Επικοινωνία με Φοιτητές*
TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	
STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	- Log Book - Self-Reflection Report - Self Evaluation Report - Practicum Supervisor Evaluation by employer/host at end of practicum

Activity	***Semester workload***
Industry placement work	150
Course total	***150***

ATTACHED BIBLIOGRAPHY

Required Textbooks / Readings:

Depends on topic*

Recommended Textbooks / Readings:

Depends on topic*

*Note: *Published articles as well as Industrial manuals and white papers in the field will also be considered as a part of the required reading material.*