# COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma Seminar [S2Teleinf2-SzIiUM>SD]

## Course

Field of study
Teleinformatics

Year/Semester
2/3

Area of study (specialization)
Artificial intelligence and machine learning

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

## Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
150

## Number of credit points

10,00

## Coordinators

dr inż. Sławomir Maćkowiak
slawomir.mackowiak@put.poznan.pl

## Lecturers

## Prerequisites

Knowledge: A student starting this subject should have basic knowledge, skills and competences acquired in earlier years of study, enabling him to complete his master's thesis. Skills: A student starting this subject should have basic knowledge, skills and competences acquired in earlier years of studies, enabling him to complete his master's thesis. Social Competencies: In addition, in terms of social competences, the student must demonstrate such attitudes as honesty, responsibility, perseverance, cognitive curiosity, creativity, personal culture, and respect for other people..

## Course objective

The main goal is for students to carry out specific scientific research or a complex project in the field of ICT and to help them complete their master's thesis. This is a continuation of the pre-graduate seminar from the semester before.

## Course-related learning outcomes

Knowledge:
It has a comprehensive knowledge of:
advanced data transmission and processing systems,

hardware components used within complex data communication systems,
key principles of software engineering [K2_W02].
Understands the design methodology of advanced data communication systems; uses hardware description languages and computer simulation and system modelling tools; proficient in modern programming languages and software engineering foundations [K2_W04].
Aware of current trends and recent developments in the field of ICT [K2_W07].
Has in-depth knowledge in the area of data processing and information security issues in ICT systems [K2_W08].

Skills:
Is able to gather information from a variety of sources, including literature, databases and other materials, and is able to integrate, interpret, critically evaluate and draw conclusions from this information. Additionally, he/she is able to formulate and justify his/her views [K2_U01].
Demonstrates proficiency in both individual and team work. Is able to accurately estimate the time required to complete a task and has the ability to manage a small group effectively, ensuring timely completion of assigned tasks [K2_U02].
Is able to produce detailed documentation of the results of experiments, project tasks or research activities. Additionally, he/she has the ability to produce comprehensive reports that include a detailed analysis of these results [K2_U03].
Demonstrates proficiency in making presentations on project tasks or research results and has the ability to discuss the material presented [K2_U04].
Can evaluate the usefulness and feasibility of implementing the latest developments in technical techniques and design methodologies to innovate and improve the design and manufacturing processes of ICT systems [K2_U10].
Can identify areas for further learning and actively participates in self-learning processes to acquire new information and skills [K2_U11].
Can carry out a project by using appropriate methods, techniques and tools, including by adapting existing tools or developing new ones. K2_U20

Social competences:
Demonstrates a readiness to recognise the importance of knowledge in the process of solving both theoretical and practical problems, and to critically analyse the acquired content [K2_K01].
Demonstrates readiness to perform a variety of professional roles with integrity, taking into account changing social requirements, including:
developing their own professional competence,
promoting professional ethos,
observing and promoting principles of professional ethics, and taking actions to observe these principles [K2_K06].

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Summary rating:
Checking the assumed learning outcomes is carried out by:
1. continuous assessment, through the students' report on the progress of work related to the implementation of the thesis, (max 70% of the final mark)
2. evaluation of the student's progress in using the learned principles and methods (max. 10% of the final mark)
3. evaluation of the quality of the developed documentation and timely completion of individual tasks, (max. 10% of the final mark)
4. if the work is carried out as a team - assessment of the ability to work in a team. (max 10% of the final mark)
Grading scale: <50% - 2.0 (ndst); 50% to 59% - 3.0 (dst); 60% to 69% - 3.5 (dst+) ; 70% to 79% - 4.0 (db); 80% to 89% - 4.5 (db+); 90% to 100% - 5.0 (bdb).

## Programme content

The subject of a master's thesis is most often the implementation of a research or design and implementation project defined by the thesis supervisor. The project is carried out under the supervision of the promoter or supervisor and a supervisor appointed by the promoter. This task may be

the design, implementation and implementation of an ICT system based on indicated technologies or solutions (including implementation and tests) of the research problem.
A well-run project should be based on a recognized project implementation methodology, and the progress of implementation should be visible with appropriate indicators, models and effects. The final result of the project is a report (publication) on the implementation of scientific research, working prototype software or fully functional prototypes of the developed devices. Additionally, the project's appendix includes its technical and operational documentation..

## Course topics

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A well-run project should be based on a recognized project implementation methodology, and the progress of implementation should be visible with appropriate indicators, models and effects. The final result of the project is a report (publication) on the implementation of scientific research, working prototype software or fully functional prototypes of the developed devices. Additionally, the project's appendix includes its technical and operational documentation..

## Teaching methods

Consultations on ongoing projects, workshops, discussions regarding presented diploma projects

## Bibliography

Basic:
Literature on the subject, indicated by the course tutor and found by the student in the bibliographic databases indicated

Additional:
Additional literature on the subject, indicated by the course tutor and found by the student in the bibliographic databases indicated

## Breakdown of average student's workload

|  | Hours | ECTS |
|---|---|---|
| Total workload | 250 | 10,00 |
| Classes requiring direct contact with the teacher | 150 | 6,00 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 100 | 4,00 |