POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma seminar [N2Inf1-ZTI>SEM]

Course

Field of study
Computing

Year/Semester
2/4

Area of study (specialization)
Advanced Internet Technologies

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
16

Projects/seminars
0

Number of credit points
1,00

Coordinators

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Lecturers

Prerequisites

Knowledge: The student starting this subject should have basic domain knowledge related to the chosen topic of the Master's thesis in computer science and should know the basic methods, techniques and tools used in solving tasks in this field. Skills: He/she should have the ability to solve basic problems in the selected field and to integrate knowledge from different areas of computer science and the ability to obtain information from indicated sources. Social competence: He/she should also understand the necessity of extending his/her competences. Moreover, in terms of social competences, a student must present such attitudes as honesty, responsibility, perseverance, cognitive curiosity, creativity, personal culture, respect for other people.

Course objective

1. Sharing fundamentals on the methodology of obtaining, collecting and disseminating research results, in particular those related to graduate dissertations in computing and information technology. 2. Sharing skills on forming and solving problems related to integrating and interpreting multi-source data and multi-source knowledge on various research aspects. 3. Sharing skills and knowledge on the ongoing research in the field related to the specific topic addressed in the dissertation.

Course-related learning outcomes

Knowledge:
2
students:
have knowledge about development trends and the most important cutting edge achievements in computer science and other selected and scientific disciplines, especially those related to topic addressed in the graduate dissertation [k2st_w4]
know advanced methods, techniques and tools used to solve complex engineering tasks and conduct research in a selected area of computer science related to the specific topic addressed in the graduate dissertation [k2st_w6]
have knowledge about ethical codes related to scientific research conducted in the field of computer science [k2st_w7]
Skills:
students:
are able to obtain information from literature, databases and other sources in polish (and possibly english), integrate, interpret and critically evaluate them, draw conclusions and formulate as well as justify opinions [k2st_u1]
are able to use it-based information and communication techniques when implementing various aspects of the graduate dissertation [k2st_u2]
can communicate both in polish (and possibly english) using different techniques in a professional environment and in other environments, also using it tools [k2st_u12]
are able to prepare and present a scientific study in polish (and possibly english), presenting the results of scientific research or oral presentation on specific issues related to the graduate dissertation [k2st_u13]
can determine the directions of further learning and implement the process of self-education, including education of other people [k2st_u16]
Social competences:
students:
understand that in the field of it the knowledge and skills quickly become obsolete [k2st_k1]
understand the importance of using the latest knowledge in the field of computer science in solving research and practical problems [k2st_k2]
understand the importance of popularization activities concerning the latest achievements in the field of computer science [k2st_k3]
are aware of the need to develop professional achievements and comply with the rules of professional ethics [k2st_k4]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Verification of students' knowledge/skills is based on completeness and corretness of delivered presentations.
Apart from presenting their arguments, when confronted with detailed questions or pieces of critical judgment (which may concern both the form and merits of the presentations), students are expected to put up justified defence of their own arguments. Simultaneously, they are expected to identify and point out potential weak points in the argumentation provided by other students

Programme content

In addition to practical skills, the realisation of the diploma thesis and the diploma seminar form the students' research skills, which are crucial here (among other things, by analysing the literature on the given issue). As part of the seminar classes, students learn sample techniques for solving research problems, and the basics of research-scientific problem-solving methodology are presented. The topics of these classes basically include two basic issues: the creation of documents 3 (indirectly, together with the thesis supervisor) and the preparation and delivery of presentations (directly).
Within the framework of presentation methodology, the following issues are discussed: principles of editing a presentation (in the form of a set of slides), including: technical means and their use, graphic elements, formatting, proofreading, preparation of a presentation (speech), method of presentation. As part of the course, students prepare and then present two detailed papers on the issues raised in their thesis, and then answer questions and participate in a discussion (main objective: gaining the ability to communicate and defend the presented solutions).

As part of the thesis methodology, the tutor may (independently of the thesis supervisor)
provide organisational supervision of the theses prepared by the students. As part of the presentation methodology, the following issues are discussed: principles of thesis editing, graphic elements, formatting and proofreading. An important part of the programme is also introducing the students to the form of the diploma exam.

An additional aim of the course is to make students aware of the social role of a technical university graduate, especially to understand the need to formulate and communicate to the public, information and opinions on the achievements of technology and other aspects of engineering activity.

As part of the seminar activities, students are expected to prepare and present, at approximately
monthly intervals, two or three presentations in Polish or English concerning the
the topic of the master's thesis in progress. These presentations, in addition to the primary objectives listed below, are also aimed at developing the ability to formulate and communicate to the public, information and opinions on technological achievements and other aspects of engineering activity.

The first presentation aims to present:
- the chosen topic of the work, its purpose and scope,
- the rationale for the choice of the given topic and the desirability of its implementation,
- the anticipated division of the work into stages and the timetable for the completion of the various stages,
- the tools and methods initially selected to carry out the task,
- the current state of knowledge in the field,
- the value that the completed work will bring.
The second presentation includes the presentation of:
- the current progress of the work,
- compliance with the planned schedule,
- detailed plan for further work and possible modifications to previous assumptions,
- possible updates and changes in the state of the field knowledge.
The third presentation:
- is presented when the student is close to completion or has already completed the preparation of the thesis,
- should be as close as possible to the final version prepared for the thesis defence,
- in the allotted time is to present:
- the state of knowledge in the field,
- the problem solved and the motivation for the thesis,
- the tools and techniques selected (and possibly rejected with reasons for rejection),
- results achieved, possible failures and their reasons, conclusions, limitations, possibilities for further development.

During the individual presentations, the other students are expected to:
- actively participate in the class,
- indicate doubts / uncertainties regarding the presented material and solutions,
- make suggestions for possible improvements and deepening of the topic,
- participate in the discussion scheduled after each presentation.
The presenters present the students with opportunities for further training (e.g. second and third level studies, postgraduate studies). Problems of dilemmas related to the IT profession and the social role of a technical university graduate are also analysed in the form of a panel discussion.

Didactic methods: multimedia presentations, consultations on the implemented projects and discussions on the presented diploma projects, presentation of the obtained results, demonstration of the created or developed software, questions and discussion.

Course topics

Skills:
- Research and practice.
- Literature analysis.
- Research problem solving.
Class topics:
- Document production.
- Editing of the thesis.
- Preparation for the diploma exam.
- The social role of a technical university graduate.
Student participation:

- Active participation and discussions.
- Suggestions for improvement.
Didactic methods:
- Multimedia presentations.
- Project consultations.
- Discussions and demonstrations of results.
Additional objectives:
- Awareness of the social role of the engineer.
- Further training.

Teaching methods

Multimedia presentations, consultations of the implemented projects and discussions on the presented diploma projects, presentation of the obtained results, demonstration of the created or developed software, questions and discussion.

Bibliography

Basic
1. Profesjonalna prezentacja multimedialna. Jak uniknąć 27 najczęściej popełnianych błędów, Lenar P., Helion, Gliwice, 2010.
2. Sekrety skutecznych prezentacji multimedialnych. Wydanie II rozszerzone, Lenar P., Helion, Gliwice, 2011.
Additional
1. Prezentacja, która robi wrażenie. Projekty z klasą, Williams R., Helion, Gliwice, 2011.
2. Microsoft PowerPoint 2010 PL. Praktyczne podejście, Muir N., Helion, Gliwice, 2011.
3. The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid, Alley M., sharif.edu/~namvar/index_files/Scientific-Presentation.pdf, 2002.
4. The Non-Designer"s Presentation Book, Williams R., Peachpit Press, San Francisco, 2009.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	16	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	9	0,50