COURSE DESCRIPTION CARD - SYLLABUS

Course name
Internship [S1MiKC1E>PRAKT]

Course

Field of study
Microelectronics and Digital Communication

Year/Semester
3/6

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
English

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other
160

Tutorials
0

Projects/seminars
0

Number of credit points

6,00

Coordinators

dr inż. Sławomir Maćkowiak
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Lecturers

Prerequisites

A student starting this subject should have basic knowledge, skills and social competences resulting from the implementation of the study program for the Microelectronics and Digital Communication field of study within the group of basic and major subjects.

Course objective

Gaining practical knowledge of issues related to the field of study.

Course-related learning outcomes

Knowledge:
1. Has practical knowledge acquired in subjects taught in the Microelectronics and Digital Communication Microelectronics amnadjoDri.gital Communication
2. Has basic knowledge in the design, construction or repair of electronic, optical or optoelectronic systems and devices.
3. Has knowledge in the implementation or modification of computer programs.
4. Has basic knowledge in the construction, configuration and operation of electronic devices.
5. Has in-depth knowledge in the field of data analysis and processing, including knowledge in the field

of digital communication techniques.
6. Has basic knowledge in the field of running a business.

Skills:
1. Is able to apply in practice the principles of occupational health and safety related to the profession of a microelectronics and telecommunications engineer and has the necessary preparation to work in economic organizations.
2. Is able to use in practice the knowledge acquired during studies.
3. Has skills in the design, implementation and measurement of digital, optoelectronic and optical systems.
4. Has skills in creating and testing IT applications.
5. Has skills in configuring electronic devices and measuring signals in such devices.
6. Has skills in data analysis and processing, including skills in secure data transmission.

Social competences:
1. Is aware of the need for a professional approach to solving technical problems and taking responsibility for the technical solutions they propose. Is able to implement team projects.
2. Has a sense of responsibility for designed systems (IT, electronic, telecommunications) and is aware of the threats to people and society in the event of their improper design or implementation.
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3. Correctly interprets and resolves dilemmas related to work in the field of Microelectronics and Digital Commun
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Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The achievement of learning outcomes is verified by the internship supervisor based on the following documents: (1) internship implementation report, in which the achievement of the intended learning outcomes was confirmed by the internship supervisor from the enterprise; (2) internship completion certificates - if issued by the institution accepting the student for the internship. In the event that the student credits the internship based on professional experience, the following documents provided by the student are analyzed: (1) internship implementation report - completed and signed by the representative of the Enterprise, (2) original document confirming employment. The professional work performed must guarantee the achievement of the intended learning outcomes for student internships.

Programme content

The module program includes: Occupational Health and Safety training, familiarization with the company's activities, familiarization with the company's IT infrastructure, active participation in solving practical problems, performing an independent task adapted to the trainee's level of knowledge, preparing a report on the implementation of the internship.

Course topics

The basic tasks of a student-intern should include:
1. Undergoing occupational health and safety training according to the regulations applicable to employees of the department in which the student is doing the internship.
2. Familiarization with the business profile and principles of work organization in the enterprise, organizational structures, division of competences, work planning and control procedures, and document circulation and information flow.
3. Familiarization with the IT infrastructure of the enterprise, the way in which Internet technologies are used in the enterprise's activities, and technical issues related to data protection.
4. Active participation in solving practical problems consisting (depending on the specifics of the workplace), among others, of:
• performing an independent engineering task adapted to the level of knowledge of the intern in the field of design, construction or repair of electronic, optical or optoelectronic systems and devices and settling the performance of this task, or;
• performing an independent task in the field of implementing or modifying computer programs, or joining the team design and implementation of IT systems, or;

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• participating in the management of the telecommunications or computer network that is the subject of the activities at the place of practice; in particular in starting, configuring and testing devices and measuring the parameters of these devices;
• participating in the introduction, configuration and supervision of data security procedures and securing the network and systems against external attacks;
5. Preparation of a report on the implementation of the practice.

Teaching methods

Depending on the place of internship and the tasks performed, the following teaching methods may be used: (1) problem-based or conversational lecture; (2) exchange of ideas (brainstorming); (3) project or expert table method; (4) observation, measurement in the field.

Bibliography

Basic:
1. Regulations for student internships at the Poznań University of Technology. Annex to Order No. 11 of the Rector of Poznań University of Technology of 29 March 2023 (RO/III/11/2023)
2. Regulations for full-time and part-time first-cycle and second-cycle studies adopted by the Academic Senate of the Poznan University of Technology.

Additional:
1. Announcement of the Minister of Economy, Labour and Social Policy of 28 August 2003 on the announcement of the uniform text of the regulation of the Minister of Labour and Social Policy on general occupational health and safety provisions. Journal of Laws 2003 No. 169 item 1650.

Breakdown of average student's workload

	Hours	ECTS
Total workload	160	6,00
Classes requiring direct contact with the teacher	160	6,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	0	0,00