POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name

CONTROL METHODS IN TECHNOLOGICAL PROCESS

Course

Proposed by Discipline	Year/Semester
Chemical sciences	II/3
Type of studies	Course offered in
Doctoral School	English
Form of study	Requirements
full-time	elective

Number of hours

Lecture	Tutorials	Projects/seminars
4		

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

prof. dr hab. inż. Adam Voelkel

email: adam.voelkel@put.poznan.pl

phone: +48 61 665 3687

Faculty of Chemical Technology

Poznan University of Technology

ul. Berdychowo 4, 60-965 Poznan, Poland

Prerequisites

Knowledge: basic knowledge on chromatographic and other analytical techniques.

Skills: possibility of simple analytical.

Social competencies: ability to analyze and asses new scientific information.

Course objective

Presentation of methods and techniques used in process control in chemical technology.

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Course-related learning outcomes

Knowledge

A PhD student who graduated from doctoral school knows and understands:

1) key developmental trends of science disciplines in which education takes place at the doctoral school, [P8S_WG/SzD_W02]

2) scientific research methodology in disciplines represented at the doctoral school. [P8S_WG/SzD_W03]

Skills

A PhD student who graduated from doctoral school can:

1) use the knowledge from different branches of science to creatively identify, formulate and to innovatively solve complex problems or to execute research tasks in particular:

- define the aim and subject of scientific research, form a research hypothesis,

- develop research methods, techniques and tools and use them creatively,

- draw conclusions on the basis of research results, [P8S_UW/SzD_U01]

2) critically analyze and asses scientific research results, work of experts and other creative activities together with their contribution into knowledge development, [P8S_UW/SzD_U02]

3) use the English language on at least B2 level, according to the Common European Framework of Reference for Languages (CEFR), to a degree which allows active participation in the international scientific and professional community, [P8S_UK/SzD_U08]

4) plan and implement individual and team research projects, also in the international community. [P8S_UO/SzD_U09]

Social competences

A PhD student who graduated from doctoral school is ready to:

1) acknowledge the importance of knowledge in solving cognitive and practical problems. [P8S_KK/SzD_K03]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

PQF code	Methods for verification of learning outcomes	Assessment criteria
W02, W03	oral examination	proper answers and/or participation in discussion
U01, U02, U08, U09	oral examination	proper answers and/or participation in discussion
K03	oral examination	proper answers and/or participation in discussion

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Programme content

1. Process control (technical and economic aspects).
2. Process gas chromatography (equipment and solutions).
3. Process liquid chromatography (equipment and solutions).
4. Legal regulations concerning process control.

Teaching methods

Lecture: multimedia presentation including illustrations and examples.

Bibliography

Basic

1. practically no literature in this field. Lecture attendance suggested.

Additional

1. as above.

Breakdown of average student's workload

	Hours	ECTS
Total workload	15	1.0
Classes requiring direct contact with the teacher	5	0.5
Student's own work (literature studies, preparation for tutorials, project preparation) [1]	10	0.5

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[1] delete or add other activities as appropriate