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
Pre-master thesis

Course

Field of study	Year/Semester
Aviation and cosmonautics	1/2
Area of study (specialization)	Profile of study
Civil aviation	general academic
Level of study	Course offered in
Second-cycle studies	polish
Form of study	Requirements
full-time	elective

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
0	0	0
Tutorials	Projects/seminars	
0	15	

Number of credit points

4

Lecturers

Responsible for the course/lecturer:

dr inż. Mateusz Nowak
mateusz.s.nowak@put.poznan.pl

dr inż. Remigiusz Jasiński

dr inż. Anna Kobaszyńska-Twardowska

dr inż. Marta Galant-Gołębiewska

dr Jędrzej Łukasiewicz

Responsible for the course/lecturer:

Wydział Inżynierii Lądowej i Transportu

Instytut Silników Spalinowych i Napędów

Zakład Lotnictwa

ul. Piotrowo 3, 60-965 Poznań

Prerequisites

Student has required knowledge, necessary for understanding of profile subjects and specialist knowledge about construction, methods of construction, manufacturing, exploitation, air traffic management, security systems, impact on the economy, society and environment of the aviation and cosmonautics for selected specialties: 1. Civil aviation.

Student has the ability to self-study using modern teaching tools, such as remote lectures, websites and databases, didactic programs, e-books. Student can obtain information from literature, the Internet, databases and other sources. Can integrate the information obtained and interpret conclusions and create and justify opinions.

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Student understands the need to learn throughout life; he can inspire and organize the learning process of other people

Course objective

Getting to know the methodology of solving engineering problems on the example of selected system and process issues in the field of air transport. To familiarize the student with rules of writing and editing the master thesis.

Course-related learning outcomes

Knowledge

1. Has broadened knowledge, necessary for understanding of profile subjects and specialist knowledge about construction, methods of construction, manufacturing, operation, air traffic management, security systems, impact on the economy, society and the aviation and aerospace environment for selected specialties: 1. Aviation Engineering, 2. Space Engineering, 3. Civil Aviation, 4. Virtual Engineering in Aeronautics.

Skills

1. Is able to communicate using various techniques in the professional environment and other environments using the formal record of construction, technical drawing, concepts and the definition of the scope of the studied field of study.

2. Has the ability to self-study using modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books.

3. Is able to obtain information from literature, the Internet, databases and other sources. Is able to integrate the obtained information, interpret and draw conclusions, and create and justify opinions.

4. Is able to prepare and present a short verbal and multimedia presentation devoted to the results of the engineering task.

Social competences

1. Understands the need to learn throughout life; can inspire and organize the learning process of other people.

2. Is ready to critically evaluate the knowledge and content received, recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in the event of difficulties in solving the problem by themselves.

3. Is able to properly define the priorities for the implementation of tasks, specified by himself or others.

4. Correctly identifies and resolves dilemmas related to the profession.

5. Is aware of the social role of a technical university graduate, and especially understands the need to formulate and communicate to the public, in particular through mass media, information and opinions on the achievements of technology and other aspects of engineering activities; makes efforts to provide such information and opinions in a widely understood way

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Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Project assessment (P).

Programme content

The subject is of a project nature. Classes are carried out in working groups whose participants determine the issue they want to address. Students identify the scientific field of the problem and isolate the area of phenomena from the broadly understood air transport, affecting a selected issue. They conduct a cause and effect analysis of the problem and seek ways to solve it. Program content is contained in the broadly understood field of air transport and is of technical, organizational, logistic and economic nature.

Teaching methods

Project method (individual or team implementation of a large, multi-stage cognitive or practical task, the effect of which is the creation of a work);

Bibliography

Basic

1. Lewitowicz (red.) – Podstawy eksploatacji statków powietrznych, tomy 1-6, Wydawnictwo ITWL, Warszawa2001-2012

2. B. Branowski - Metody twórczego rozwiązywania problemów inżynierskich, Wielkopolska Korporacja Techniczna NOT, Poznań 1999

3. Zb. Kłos (red.) - Rozprawy naukowe. Wydawnictwo Politechniki Poznańskiej, Poznań 2011

Additional

1. Lewitowicz J. (red) - Problemy badań i eksploatacji techniki lotniczej. Wydawnictwo ITWL, Warszawa 2006.

2. Wisłocki K.: Metodologia i redakcja prac naukowych. Wyd. Politechniki Poznańskiej, Poznań 2013

Breakdown of average student's workload

	Hours	ECTS
Total workload	120	4,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, project preparation) [1]	90	3,0

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[1] delete or add other activities as appropriate