

| STUDY MODULE DESCRIPTION FORM | | |
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| Name of the module/subject Fundamentals of lighting engineering | | Code 1010324391010320832 |
| Field of study Electrical Engineering | Profile of study (general academic, practical) (brak) | Year /Semester 5 / 9 |
| Elective path/specialty Lighting Engineering | Subject offered in: Polish | Course (compulsory, elective) obligatory |
| Cycle of study: First-cycle studies | Form of study (full-time, part-time) part-time | |
| No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: 9 | | No. of credits 1 |
| Status of the course in the study program (Basic, major, other) (brak) | | (university-wide, from another field) (brak) |
| Education areas and fields of science and art technical sciences Technical sciences | | ECTS distribution (number and %) 1 100% 1 100% |
| Responsible for subject / lecturer: Małgorzata Zalesińska Ph.D. email: Malgorzata.Zalesinska@put.poznan.pl tel. 61 6652398 Faculty of Electrical Engineering ul. Piotrowo 3A 60-965 Poznań | | |
| Prerequisites in terms of knowledge, skills and social competencies: | | |
| 1 | Knowledge | Knowledge of the basics of lighting engineering: the calculation and the measurement of light parameters, lighting equipment. |
| 2 | Skills | The ability to use knowledge in lighting engineering to carry out computations, measurement and evaluation of lighting parameters. Ability to effectively self-education in a field related to the chosen field of study. |
| 3 | Social competencies | Is aware of the need to broaden their competence, willingness to work together as a team. |
| Assumptions and objectives of the course: Grounding knowledge of fundamentals of lighting engineering. | | |
| Study outcomes and reference to the educational results for a field of study | | |
| Knowledge: | | |
| 1. List and describe the method of calculation of basic lighting parameters. - [[K_W06 ++,K_W14 +, K_W15 +++]] | | |
| Skills: | | |
| 1. Perform calculations of basic lighting simplified methods. - [[K_U17 ++, K_U22 +]] | | |
| Social competencies: | | |
| 1. . Student understands and knows the need continuous training opportunities, improving professional skills, personal and social. Able to work in a group. Able to share and coordinate the work between team members. - [[K_K03 +]] | | |
| Assessment methods of study outcomes | | |
| Project: evaluate the knowledge and skills associated with the implementation of the project. Get extra points for the activity in the classroom, especially for the following: ability to work within a team performing a task specific practice in the laboratory, developed aesthetic diligence reports and tasks, the self-study. Student activity is taken into account when giving a final grade | | |

| Course description | | |
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| <p>Calculation of lumines flux. Determination of illuminance by a point. Calculation of luminance. Update 2017: Calculation of Circumference Size Applied methods of education: Analysis of the results obtained. Discussion of various aspects of solved problems.</p> | | |
| <p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Bąk J., Pabiańczyk W.: Podstawy techniki świetlnej. Wyd. Pol. Łódzkiej, Łódź 1994. 2. Żagan W.: Podstawy techniki świetlnej. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2005 3. Laboratorium z techniki świetlnej. Praca zbiorowa. Wyd. Pol. Pozn. nr 1792, Poznań 1989. 4. Lighting Handbook, Reference &#38;#38;Application. IES of Nofth America, New York 2010 5. Publication CIE 146:2002 &#38;#38; CIE 147:2002: CIE Collection on Glare 2000 6. Publication CIE 203:2012 A Computerized Approach to Transmission and Absorption Characteristics of the Human Eye | | |
| <p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. Hauser J.: Elektrotechnika.Podstawy elektrotermii i techniki świetlnej, Wyd. PP, Poznań, 2006 2. Publication CIE 186:2010: UV-A PROTECTION AND SUNSCREENS 3. Publication CIE 187:2010: UV-C Photocarcinogenesis Risks from Germicidal Lamps 4. Zalesińska M., Wandachowicz K.: Badanie systemu oświetlenia ewakuacyjnego na statkach i promach pasażerskich, IAPGOS 2015; 5(1): 14-19, p-ISSN 2083-0157, e-ISSN 2391-6761 (dostępne: http://e-iapgog.pl/abstracted.php?level=4&#38;#38;id_issue=877971&#38;#38;dz=s6), DOI.6504/20830157.1148041 5. Zalesińska M., Wandachowicz K. Working conditions for the low location lighting system on passenger ships. (Zeszyty Naukowe Akademii Morskiej w Szczecinie) Scientific Journals of the Maritime University of Szczecin, no. 43 (115), 2015, pp 125-130, ISSN 1733-8670 (Printed), ISSN 2392-0378 (online) (http://repository.am.szczecin.pl/handle/123456789/769) | | |
| Result of average student's workload | | |
| Activity | Time (working hours) | |
| 1. Participation in project activities | 9 | |
| 2. Participation in consultation. | 9 | |
| 3. Participation for colloquium | 7 | |
| 4. Colloquium | 2 | |
| Student's workload | | |
| Source of workload | hours | ECTS |
| Total workload | 27 | 1 |
| Contact hours | 20 | 1 |
| Practical activities | 16 | 1 |