

| STUDY MODULE DESCRIPTION FORM | | |
|--|--|--|
| Name of the module/subject Computer Aided Design I | | Code 1010614151010640419 |
| Field of study Mechanical Engineering | Profile of study (general academic, practical) (brak) | Year /Semester 3 / 5 |
| Elective path/specialty Motor Vehicles and Tractors | 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: 18 Project/seminars: 16 | | No. of credits 7 |
| 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 | | ECTS distribution (number and %) |
| Responsible for subject / lecturer: dr hab inż. Arkadiusz Stachowiak email: arkadiusz.stachowiak@put.poznan.pl tel. 665-2655 WMRiT ul. Piotrowo 3 Poznań | | |
| Prerequisites in terms of knowledge, skills and social competencies: | | |
| 1 | Knowledge | Knowledge of technical drawing and numerical methods as carried out in the course of their studies. Knowledge of technical drawings and numerical methods on required area of expertise. |
| 2 | Skills | Student can: prepare a scheme of arrangement, choose right components and perform basic calculations using provided calculation procedure. |
| 3 | Social competencies | Student understands the need for continuous learning. |
| Assumptions and objectives of the course: Using AutoCAD as aided tool to create technical documentation. Formation the ability to create computer tools to aid design calculations. | | |
| Study outcomes and reference to the educational results for a field of study | | |
| Knowledge: | | |
| 1. Student knows basic features and functions of AutoCAD and drawing and modification tools. Student knows how to create basic Delphi code. - [K1A_W12] | | |
| Skills: | | |
| 1. Student can use Delphi to create computer-aided design tools. Student can create computer program to solve given problem. - [K1A_U13 K1A_U14] | | |
| Social competencies: | | |
| 1. Student is able to think and act creatively. - [K1A_K05] | | |
| Assessment methods of study outcomes | | |
| Examination based on an ongoing review of the Students preparation. | | |
| Course description | | |
| Knowledge of basic features and functions of AutoCAD. Drawing and modification tools. Working with functions: hatching, filling. Tools to support the dimensioning. Practice of Delphi programming ? creating computer-aided design tools. Features of the Delphi (types of components). Creating basic Delphi code. Use complex instructions in Delphi . Creating computer program based on sample calculation algorithm. | | |

Basic bibliography:

1. Poradnik niezawodności. T 1. pod red. J. Migdalskiego, Wyd. WEMA, Warszawa 1982r.
2. Poradnik niezawodności. T 2. pod red. J. Migdalskiego, Wyd. WEMA, Warszawa 1996r.
3. Szopa T. Niezawodność i bezpieczeństwo. W: ?Podstawy konstrukcji maszyn? pod red. M. Ditycha. tom 1. PWN Warszawa 1999r.
4. Nadolny K., Tribologia kół zębatych. Zagadnienia trwałości i niezawodności. Biblioteka Problemów Eksploatacji. Wyd. Instytut Technologii Eksploatacji, Radom, 1999r
5. Podstawy modelowania niezawodności materiałów eksploatacyjnych.pod red.K.Nadolnego, Biblioteka Problemów Eksploatacji. Wyd. Instytut Technologii Eksploatacji, Radom, 1999r
6. Szopa T., Niezawodność i bezpieczeństwo. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2009.
7. Tor A., Excel 2002/XP. Visual Basic. TORTECH, Warszawa 2004.
8. Reisdorph K., Delphi 6 dla każdego. Helion, Warszawa, 2001.
9. Pikoń A., AutoCad 2007 PL. Helion, Warszawa, 2007.

Additional bibliography:

1. Warszyński M., Niezawodność w obliczeniach konstrukcyjnych. PWN. Warszawa 1988r.
2. Radkowski S., Podstawy bezpiecznej techniki. Oficyna Wydawnicza Pol. Warszawskiej, Warszawa 2003.
3. Bobrowski D., Modele i metody matematyczne teorii niezawodności w przykładach i zadaniach, WNT, Warszawa, 1985r.

Result of average student's workload

| Activity | Time (working hours) |
|--|----------------------|
| 1. Preparation for laboratory | 28 |
| 2. Participation in laboratory exercises | 30 |
| 3. Capturing the content of the lab exercises and a report | 29 |
| 4. Preparing for classes of design | 15 |
| 5. Participation in the activities of design | 30 |
| 6. Preparation of the draft | 30 |
| 7. Consultation | 8 |
| 8. Preparing to pass | 8 |

Student's workload

| Source of workload | hours | ECTS |
|----------------------|-------|------|
| Total workload | 177 | 7 |
| Contact hours | 68 | 3 |
| Practical activities | 177 | 7 |