INFORMATION TECHNOLOGIES AND ENGINEERING COMPUTER GRAPHICS

Title of Study Programme and Code	Type (compulsory/optional)	Cycle	Year of study when the component is delivered (if applicable)
Environment Protection Engineering, 6531EX042	Compulsory	1st	1st
Semester/trimester when the component is delivered	**Number of ECTS credits allocated**	**Language of instruction**	**Mode of delivery (face-to-face/e-learning/…)**
2th	5	LT, RU, EN	face-to-face

Learning outcomes		Study methods	Assessment methods
After completion of the study subject, a student should be able:		Explanation; Demonstration; Interactive lecture; Practical work; Individual work; Project work; Working in groups; The study of the sources of information.	Defence of practical work; Control work; Presentation of project work.
LO 1	To create independently templates of textual and graphical documents.		
LO 2	To create programs for calculation according to formula.		
LO 3	To apply creatively means of textual, graphical and digital information processing.		
LO 4	To know the principles and means of information search on the Internet and storage of information on databases.		
LO 5	To know the principles and means of information search on the Internet and storage of information on databases.		
LO 6	To use of databases, which gives an overview of the European Union, Lithuania international, environmental legislation.		
LO 7	To know systems of computerized design, principles of operation and modern design technologies.		
LO 8	To use MS Visio and AutoCAD computerized design system.		
LO 9	To transfer informatikon clearly and comprehensively.		
LO 10	To creatively and critically apply computer programs, addressing a variety of environmental challenges.		
LO 11	To creatively and critically apply computer programs, addressing a variety of engineering tasks to work individually or in a group.		

Prerequisites (these courses must be sucessfully completed prior to taking this particular course)
-

Course content
1. Means of preparation of complicated documents. Documents of special purpose. 2. Preparation of graphic documents with *MS Visio*. 3. Basics of work with databases using a spreadsheet. Representation of data using diagrams. 4. Information skills. 5. Introduction to Engineering computer graphics. Design of drawings. 6. Introduction to *AutoCAD*. Design of drawings. 7. Graphical primitives and their attributes. Image editing tools. 8. Blocks creation. 9. Text, shade and dimensions writing. Printing. 10. Rectangular projection. 11. Two-dimensional transformations and display operations. 12. Drawing prospective projections. 13. Drawing of objects in three-dimensional space. Realistic representation.
Recommended or required reading and other learning resources/tools
1. James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes. Computer Graphics: Principles and Practice. Third edition in C. Addison-Wesley Publishing Company, 2014. Online access: http://ptgmedia.pearsoncmg.com/images/9780321399526/samplepages/0321399528.pdf