

a) General			
<i>School</i>	ENGINEERING		
<i>Academic unit</i>	MECHANICAL ENGINEERING		
<i>Level of studies</i>	Undergraduate		
<i>Course code</i>	MM010Y00	<i>Semester</i>	10
<i>Course title</i>	<b>Final year thesis</b>		
<i>Independent teaching activities</i>		<i>Weekly teaching hours</i>	<i>ECTS</i>
Lectures			30.0
Laboratory exercises			
<i>Course type</i>	Knowledge deepening/consolidation		
<i>Course category</i>	Compulsory		
<i>Prerequisite courses</i>	-		
<i>Language of instruction and examinations</i>	Greek		
<i>Is the course offered to Erasmus students</i>	Yes		
<i>Course website (url)</i>			
b) Learning outcomes and general competences			
b1. Learning outcomes			
<p>The final year thesis (FYT) aims mainly at the development of self-efficacy and the deepening of the student in a subject that is directly related to the science of engineering, applying a strict, systematic and scientific approach. In particular, the student during the FYT is called to: a) apply various knowledge acquired during his studies, b) get used to the search and critical study of literature and other sources of information and c) apply the scientific methodology for solving problems of his branch of knowledge. The FYT is the culmination of the student's studies while at the same time it becomes the forerunner for a professional career or for postgraduate studies at a University of the homeland or abroad.</p> <p>Upon successful completion of FYT, the student will be able to:</p> <ul style="list-style-type: none"> <li>- Apply the knowledge and skills acquired during his studies, some of which are cutting-edge knowledge and are the basis for original thinking,</li> <li>- develop research skills and critical study of bibliography and other sources of information,</li> <li>- develop critical awareness of the issues of knowledge of the subject of his specialty and his connection with different fields,</li> <li>- apply the scientific methodology for solving problems (research, innovation, planning, implementation, development of strategic approaches, etc.) to the full range of his branch of knowledge.</li> </ul>			
b2. General competences			
<ul style="list-style-type: none"> <li>- Search for, analysis and synthesis of data and information with the use of the necessary technology</li> <li>- Adapting to new situations</li> <li>- Decision-making</li> <li>- Working independently</li> <li>- Working in an interdisciplinary environment</li> <li>- Criticism and self-criticism</li> <li>- Production of new research ideas</li> <li>- Production of free, creative and inductive thinking</li> </ul>			
c) Syllabus			

The elaboration of the FYT is done individually by each student or exceptionally by a group of students if required by the nature of the subject and with full justification as well as with distinction of both individual work and contribution both during the elaboration and during the presentation. The scope of the subject should be such that its completion is possible within a full academic semester concerning the student's work, although the actual completion time depends on meeting the requirements of the subject and the degree of employment. The total estimated hours of systematic employment must be of the order of 750 hours per student.

The topics of the FYT proposed by the faculty members or by students with the consent of a faculty member, are approved by the general assembly of the Department's Section. The proposed FYT must be comprehensive and describe in detail the problem and the methodology of its solution.

In terms of its object, a FYT can be:

- Research-theoretical, when it concerns the development of a new theoretical model or expansion of an existing one and its application in problem solving.
- Research - development in which an experimental device or complex is designed and / or constructed, experimental measurements are performed and / or processed, a computational methodology or an algorithmic scheme is developed.
- Experimental investigation of a problem with data collection, processing, analysis and documentation.
- Study of an issue of technological interest which is investigated in detail or computationally.
- Independent bibliographic research of a topic with description, recording of existing knowledge and documented critique.

The aim of the FYT is for students to acquire the necessary skills in order to:

- Analyze a complex problem by identifying the basic knowledge and tools required to solve it.
- Design and implement a structured, articulated problem-solving methodology by adopting scientific practices.
- Record the process of problem analysis, methodology and the result of their work in a comprehensive and understandable way.
- Present their work to an audience, answering any questions asked about their work.

d) Teaching and learning methods - Evaluation		
Delivery	Face-to-face	
Use of information and communications technology	<ul style="list-style-type: none"> <li>- Commercial/free/open source software</li> <li>- Multimedia applications</li> <li>- Email</li> </ul>	
Teaching methods	<i>Activity</i>	<i>Semester workload</i>
	Lectures	
	Tutorials	
	Laboratory exercises	
	Computational exercises	
	Individual work	750
	Course total	750
Student performance evaluation	<p>After the end of the examination periods in February, June and September, the examination-evaluation of the FYT takes place. The evaluation of a FYT is done by a three-member examination committee on a date and place announced by the Department. The members of the three-member committee monitor the presentation of the work and submit clarification and examination questions, in order to form an opinion on the correctness and completeness of the</p>	

	<p>solution given to the problem.</p> <p>The following criteria are mainly taken for the evaluation of a FYT:</p> <ul style="list-style-type: none"> <li>- The bibliographic investigation, the acquisition and evaluation of special data, the logical processing,</li> <li>- the structure of the FYT and its written report,</li> <li>- the originality of FYT,</li> <li>- the zeal and initiative of the student and</li> <li>- the oral presentation of the FYT</li> </ul> <p>The weighting factors of the above evaluation criteria vary depending on the nature of the issue and are assessed at the discretion of the examination committee. The final score in FYT results as the average of the grades of the three examiners, rounded to the nearest whole or half unit, with a minimum success score of 5.5 (scale 0-10).</p> <p>In the case that a FYT is deemed incomplete by the examination committee, it is referred for additional processing, according to the recommendations of the examination committee.</p>
<p>e) Suggested bibliography</p>	
<p>Depending on the subject matter, books, international journals, conference proceedings, etc. in the cognitive area of the research field.</p>	