

## Bachelor Practicum and Thesis Module

### MSE4095E Bachelor Practicum

Module designation	Bachelor Practicum and Thesis
Module level, if applicable	
Code, if applicable	MSE4095E
Subtitle, if applicable	
Courses, if applicable	Bachelor Practicum
Semester(s) in which the module is taught	8 <sup>th</sup> Semester
Person responsible for the module	Prof. Bui Anh Hoa Assoc. Prof. Dang Quoc Khanh
Lecturer	Staffs in the School of Materials Science and Engineering
Language	English
Relation to curriculum	<p>Upon completion of this course, student will be able to:</p> <ul style="list-style-type: none"> <li>-Understand the practical knowledge of structure, principles of details and systems;</li> <li>-Applying theoretical knowledge into evaluation and solving some practical problems in model rooms, and companies.</li> <li>-Able to participate in designing and manufacturing of new products in the field of materials engineering.</li> </ul>
Type of teaching, contact hours	<p>Target students: Students of school of mechanical engineering</p> <p>Type of teaching: theoretical and practical teachings</p> <p>Contact hours: 120 hours</p> <p>Theoretical teaching: 00 hours</p> <p>Practical teaching: 00 hours</p> <p>Experiment: 120 hours</p>
Workload (incl. contact hours, self-study hours)	<p>Workload = 180 hours</p> <p>Contact hours = 120 hours</p> <p>Self-study hours = 60 hours</p>
Credit points	2(0-0-4-4)
ECTS	3.67
Teaching method	Experiments, technical practice, teamwork, and communication with the teachers for scientific research and graduation thesis

Requirements according to the examination regulations	Students with no discussion scores or no test scores will receive a process score of less than 3.0/10. If the process score or the final exam score is lower than 3.0/10, students do not complete the course.
Recommended prerequisites	
Module objectives/intended learning outcomes	<p>Module objectives:</p> <p>This module aims to help students synthesize and apply gained knowledge and practice at internship enterprises according to management aspects, identify problems of enterprises/manufacturing/factory/industry, factors affecting business results and effectiveness, and create firm basic to carry out graduation thesis. After completing this module, students will be able to:</p> <ul style="list-style-type: none"> <li>- Know the key contents need to collect data and analyze in their internship fields at enterprise;</li> <li>- Know how to plan and conduct the actual data collection on production and business as required by the subject;</li> <li>- Know how to assess the level of business performance and the functional aspects of business management based on evaluation criteria (sales and marketing, human resources, materials and fixed assets management, cost management, and financial performance);</li> <li>- Identify key issues facing the business; determine the topic for graduation thesis.</li> </ul>
Content	Provide students with practical knowledge about the orientation of intensive mechatronics technology. Students are allowed to practice the technical work, operate or monitor the management of a process, a stage, or a product, to participate in technical design, technological design ... of intensive materials orientation. With the help of instructors and engineers at the production facility. Through this module, students are initially acquainted with the duties of a technician, with a deeper understanding of their career when graduated.
Study and examination requirements and examination forms	<p>Students are expected to follow the regulations of Hanoi University of Science and Technology</p> <p><b>Progress mark (30%):</b></p> <ul style="list-style-type: none"> <li>-Presentation</li> </ul> <p><b>Final mark (70%):</b></p> <ul style="list-style-type: none"> <li>-Final exam: Report, presentation and interview</li> </ul>
Media employed	PPT courseware, multimedia computers, projectors, laser pens, blackboards, etc.
Reading list	

**MSE4999E Bachelor Thesis**

Module designation	Bachelor Practicum and Thesis
Module level, if applicable	
Code, if applicable	MSE4999E
Subtitle, if applicable	
Courses, if applicable	Bachelor Thesis
Semester(s) in which the module is taught	8 <sup>th</sup> Semester
Person responsible for the module	Prof. Bui Anh Hoa Assoc. Prof. Dang Quoc Khanh
Lecturer	Lecturers in the School of Materials Science and Engineering
Language	English
Relation to curriculum	<p>The Bachelor thesis is a student's initial research on a practical or theoretical problem with the purpose of supplementing, completing, enriching the knowledge and skills that have been provided in the first step is to solve practical problems with the creativity of the students under the guidance of the instructor.</p> <p>A basis for the university to allow the thesis defense, assessment, recognition, and award of graduation degrees for students.</p>
Type of teaching, contact hours	<p>Target students: Students of school of mechanical engineering</p> <p>Type of teaching: theoretical and practical teachings</p> <p>Contact hours: 240 hours</p> <p>Theoretical teaching: 00 hours</p> <p>Practical teaching: 00 hours</p> <p>Experiment: 240 hours</p>
Workload (incl. contact hours, self-study hours)	<p>Workload = 480 hours</p> <p>Contact hours = 240 hours</p> <p>Self-study hours = 240 hours</p>
Credit points	6(0-0-12-12)
ECTS	11
Teaching method	Experiments, technical practice, teamwork, and communication with the teachers for scientific research and graduation thesis
Requirements according to the examination regulations	<p>Students with no discussion scores or no test scores will receive a process score of less than 3.0/10.</p> <p>If the process score or the final exam score is lower than 3.0/10, students do not complete the course.</p>

Recommended prerequisites	
Module objectives/intended learning outcomes	<p>Module objectives:</p> <p>Upon completion of this course, student will be able to:</p> <ul style="list-style-type: none"> <li>-Apply the knowledge learned to solve the tasks of mechanical engineering industry such as: Design of materials, Design of technological process of manufacturing a materials product according to the concentration of the Materials Science and Engineering Program.</li> <li>-Propose a technical solution and participate in designing and manufacturing of new products in the field of materials engineering.</li> <li>-Working in interdisciplinary team to solve complex interdisciplinary problems of the industries.</li> <li>-Working in groups and using mechanical software to solve related issues, report, presentations and discussions.</li> <li>- Synthesize, systematize all the knowledge and skills that they use to solve a specific task in the field of industrial metallurgy, materials science, and engineering in organizations/businesses and/or manufacturing/factories.</li> <li>- Practice thinking, analytical skills, problem solving and problem-solving skills, writing and presentation skills.</li> <li>- Training skills independently and promote capacity as well as creative ability.</li> </ul> <p>A basis for the university to allow the thesis defense, assessment, recognition, and award of graduation degrees for students.</p>
Content	Students apply the knowledge gained from the courses to solve specific tasks of the graduation project under the guidance of instructors; write thesis and complete the technical drawings related to the project; present of graduation projects for thesis defense
Study and examination requirements and examination forms	<p>Students are expected to follow the regulations of Hanoi University of Science and Technology</p> <p>Progress mark (50%): writing exam</p> <p>Final mark (50%): writing exam, presentation and interview</p>
Media employed	PPT courseware, multimedia computers, projectors, laser pens, blackboards, etc.
Reading list	