



15. Engineering Ethics and Professional Skills (PE020IU)

Module designation	<i>This course is designed to introduce engineering students to the concepts, theory and practice of engineering ethics. It will allow students to explore the relationship between ethics and engineering and apply classical moral theory and decision making for engineering issues encountered in academic and professional careers. This course also provides students with the professional skills: sharing ideas and concepts, team working, and presentation skills.</i>
Semester(s) in which the module is taught	1, 2, summer semester
Person responsible for the module	Dr. Nguyễn Hoài Nghĩa, Dr. Huỳnh Võ Trung Dũng
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, presentation, and assignments.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 127.5 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): lecture: 37.5 Private study including examination preparation, specified in hours: 90
Credit points/ECTS	3 credits/4.62 ECTS
Required and recommended prerequisites for joining the module	None
Course learning outcomes	Overall objectives are to equip IU students with knowledge about the philosophies of ethics, professional practice, and world culture. Students who complete the course will be able to perform the following tasks: <ul style="list-style-type: none"> ● Having knowledge of the definition of engineering ethics, codes of ethics, ethic philosophies, intellectual property, copyright, and fair use of copyrighted materials and



	<p>research data.</p> <ul style="list-style-type: none"> Using different problem-solving techniques to solve ethical dilemmas. Analyzing social, environmental, legal aspects, safety and sustainability issues of engineering activities. 																																				
Content	<p><i>The description of the contents should clearly indicate the weighting of the content and the level.</i></p> <p>Weight: lecture session (3 hours)</p> <p>Teaching levels: I (Introduce); T (teach); U (Utilize)</p>																																				
	<table border="1"> <thead> <tr> <th>Topic</th> <th>Weight</th> <th>Level</th> </tr> </thead> <tbody> <tr> <td>Introduction to engineering professionalism and ethics</td> <td>1</td> <td>I</td> </tr> <tr> <td>Engineers in Society</td> <td>1</td> <td>T, U</td> </tr> <tr> <td>Moral choices and codes of ethics</td> <td>1</td> <td>T, U</td> </tr> <tr> <td>Philosophical ethics</td> <td>2</td> <td>I, T, U</td> </tr> <tr> <td>Ethical problem-solving techniques</td> <td>1</td> <td>T, U</td> </tr> <tr> <td>Engineers at the Workplaces - Leadership</td> <td>2</td> <td>T, U</td> </tr> <tr> <td>Truth in actions and words Academic and Research Ethics</td> <td>1</td> <td>T</td> </tr> <tr> <td>Commitment to Safety</td> <td>1</td> <td>T, U</td> </tr> <tr> <td>Internet ethics, Privacy Issues and Intellectual Property Rights</td> <td>1</td> <td>T, U</td> </tr> <tr> <td>Environmental ethics Sustainable engineering</td> <td>1</td> <td>T</td> </tr> <tr> <td>Review</td> <td>1</td> <td>T</td> </tr> </tbody> </table>	Topic	Weight	Level	Introduction to engineering professionalism and ethics	1	I	Engineers in Society	1	T, U	Moral choices and codes of ethics	1	T, U	Philosophical ethics	2	I, T, U	Ethical problem-solving techniques	1	T, U	Engineers at the Workplaces - Leadership	2	T, U	Truth in actions and words Academic and Research Ethics	1	T	Commitment to Safety	1	T, U	Internet ethics, Privacy Issues and Intellectual Property Rights	1	T, U	Environmental ethics Sustainable engineering	1	T	Review	1	T
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Examination forms	Constructed-response test																																				
Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed based on their class participation. Questions and comments are																																				



	<p>strongly encouraged.</p> <p>Assignments/Examination: Students must have more than 50/100 points overall to pass this module.</p>
Reading list	<p>Textbook:</p> <p>[1] M. W. Martin and R. Schinzinger (2010). <i>Introduction to engineering ethics</i> McGraw-Hill Education 2nd edition</p> <p>[2] C. B. Fleddermann. (2011). <i>Engineering Ethics</i>, Pearson 4th edition</p>