



UNIVERSITI TEKNOLOGI MARA

CHE680: LEADERSHIP AND PROFESSIONAL ETHICS FOR ENGINEERS

Course Name (English)	LEADERSHIP AND PROFESSIONAL ETHICS FOR ENGINEERS APPROVED
Course Code	CHE680
MQF Credit	3
Course Description	Leadership and Professional Ethics for Engineers is designed to introduce engineering students to the concepts, theory and practice of engineering leadership; engineering leadership characteristics, individual differences and self-awareness; developing and building teams; managing change, conflicts, and crises; and understanding real-world ethics and core values. This course is designed to contain two (2) parts. The first part concentrates on major theories of leadership and detailed study of the "Thoughts and Policies of Tun Dr. Mahathir Mohamed". The second part incorporates "Engineers in Society" syllabus of The Institute of Engineers (Malaysia). In addition, students will be exposed to the professional ethics concepts that can be applied in real engineering world.
Transferable Skills	n/a
Teaching Methodologies	Lectures, Blended Learning, Case Study, Discussion, Presentation, Debates
CLO	<p>CLO1 Discuss on the principles of leadership and professional</p> <p>CLO2 Analyze the characteristics and actions of great leaders as well as the policies and visions of Premiers in Malaysia (especially of Tun Dr. Mahathir Mohamed) in shaping current and future direction of Malaysia.</p> <p>CLO3 Evaluate and argue on various ethical issues/dilemmas by referring to professional codes of ethics, moral frameworks, methods of moral problem solving, etc.</p> <p>CLO4 Collaborate effectively with team members, drive change, and manage conflicts and crises.</p>
Pre-Requisite Courses	No course recommendations
Topics	<p>1. 1. Foundations of Engineering Leadership</p> <p>1.1) 1.1 Definition of leadership 1.2) 1.2 Characteristics of great engineering leaders 1.3) 1.3 Overview of leadership theory: Concepts of situational leadership and strategic leadership; 1.4) 1.4 Leadership vs. management: Vision and mission statements, delivering on the vision through effective oral and written communication and presentation skills.</p> <p>2. 2. Leadership and Organizations</p> <p>2.1) 2.1 Overview of motivational theory and applications 2.2) 2.2 Attitudes, perceptions, judgment: Personalities and their effects 2.3) 2.3 Individual differences and relationships 2.4) 2.4 Self-awareness and developing interpersonal skills 2.5) 2.5 Building and leading groups and teams; team behaviors, effectiveness and performance: Managing conflicts and managing change</p> <p>3. 3. Tun Dr. Mahathir's Premiership and Visions</p> <p>3.1) 3.1 Background 3.2) 3.2 Early years of Tun Dr. Mahathir 3.3) 3.3 Rise to leadership 3.4) 3.4 The Malay Dilemma 3.5) 3.5 The New Malays 3.6) 3.6 Vision 2020</p>

<p>4. 4. Tun Dr. Mahathir's Thoughts and Policies</p> <p>4.1) 4.1 Foreign policies 4.2) 4.2 Economic policies 4.3) 4.3 Caring society 4.4) 4.4 Meritocracy 4.5) 4.5 Nature of globalization 4.6) 4.6 Role of Asia 4.7) 4.7 Global partnership 4.8) 4.8 Tun Dr Mahathir's perspectives on Islam</p>
<p>5. 5. Special Topic on Industrial Leadership</p> <p>5.1) n/a</p>
<p>6. 6. Ethics and Professionalism</p> <p>6.1) 6.1 Scope 6.2) 6.2 Accepting and sharing responsibilities 6.3) 6.3 Responsible professionals and ethical corporations</p>
<p>7. 7. Morale Frameworks</p> <p>7.1) 7.1 Utilitarianism 7.2) 7.2 Right ethics and duty ethics 7.3) 7.3 Virtue ethics 7.4) 7.4 Self realization and self interest</p>
<p>8. 8. Methods for Moral Problem Solving</p> <p>8.1) 8.1 Line drawing 8.2) 8.2 Creative middle way</p>
<p>9. 9. Workplace Responsibilities and Rights</p> <p>9.1) 9.1 Teamwork 9.2) 9.2 Confidentiality and conflicts of interest 9.3) 9.3 Right of engineers 9.4) 9.4 Whistle-blowing</p>
<p>10. 10. Ethical Case Studies Based Around Chemical and Process Engineerin</p> <p>10.1) n/a</p>

Assessment Breakdown		%	
Continuous Assessment		100.00%	

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	3-4 assignments per semester	40%	CLO1 , CLO2 , CLO3 , CLO4
	Group Project	Community Project	20%	CLO4
	Quiz	2-3 quizzes per semester	40%	CLO1 , CLO2 , CLO3

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • Mahathir Mohamed, <i>Lingkaran Pasifik Dalam Abab ke- 21</i>, Percetakan Cergas • Harris Jr. C.E, Pritchard M.S, Rabin M.J 2000, <i>Engineering Ethics Concepts and Cases</i>, 2 Ed., Ontario: Wadsworth • Martin M.W., Schinziger R. 2005, <i>Ethics in Engineering</i>, 4 Ed., New York: McGraw-Hill • Mahathir Mohamed, <i>Politik, Demokrasi dan Asia Baru</i>, Percetakan Cergas • Mahathir Mohamed, <i>Kerjasama Serantau dan Ekonomi Digital</i>, Percetakan Cergas • Mahathir Mohamed, <i>Islam dan Umat Islam</i>, Percetakan Cergas • Institution of Engineer Malaysia 1995, <i>Engineering Professionalism and Ethics</i>, 4 Ed., Kuala Lumpur: IEM Publ

Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources