

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| Module Information | | | |
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| معلومات المادة الدراسية | | | |
| Module Title | Engineering Ethics | | Module Delivery |
| Module Type | Support | | <input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar |
| Module Code | ENG125 | | |
| ECTS Credits | 4 | | |
| SWL (hr/sem) | 100 | | |
| Module Level | UGI | Semester of Delivery | |
| Administering Department | OGE | College | Engineering |
| Module Leader | Ali Khayoun Khalaf | e-mail | ali.kh@uowa.edu.iq |
| Module Leader's Acad. Title | Asst.Lect. | Module Leader's Qualification | Ph.D |
| Module Tutor | NA | e-mail | E-mail |
| Peer Reviewer Name | Name | e-mail | E-mail |
| Scientific Committee Approval Date | 01/11/2023 | Version Number | 1.0 |

| Relation with other Modules | | | |
|-----------------------------------|------|----------|--|
| العلاقة مع المواد الدراسية الأخرى | | | |
| Prerequisite module | None | Semester | |
| Co-requisites module | None | Semester | |

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

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| Module Aims أهداف المادة الدراسية | This course deals with the understanding and importance of integrity and responsible, ethical and scientific behavior towards engineering work and the most important associations concerned with these important topics and their impact on the future of engineering work |
| Module Learning Outcomes مخرجات التعلم للمادة الدراسية | <ol style="list-style-type: none">1- Develop the student's professional history and engineering development2- Develop the student's the importance of professional behavior and a sense of responsibility3- The most important professional associations and codes of ethics |
| Indicative Contents المحتويات الإرشادية | <p>Indicative content includes the following:</p> <p>Part I: Introduction</p> <ul style="list-style-type: none">• Know why it is important to study engineering ethics• Understand the distinction between professional and personal ethics• See how ethical problem solving and engineering design are similar. <p>Part II : Professionalism and Codes of Ethics</p> <ul style="list-style-type: none">• Determine whether engineering is a profession• Understand what codes of ethics are, and• Examine some codes of ethics of professional engineering societies. <p>Part III: Understanding Ethical Problems</p> <ul style="list-style-type: none">• Discuss several ethical theories• See how these theories can be applied to engineering situations. <p>Part IV: Ethical Problem Solving Techniques</p> <ul style="list-style-type: none">• Apply ethical problem solving methods to hypothetical and real cases• See how flow charting can be used to solve ethical problems• Learn what bribery is and how to avoid it. |

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| | <p>Part V: Risk, Safety, and Accidents</p> <ul style="list-style-type: none"> • Know the definitions of risk and safety • Discover different factors that affect the perception of risk • Study the nature of accidents • Know how to ensure that your designs will be as safe as possible. |
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| <p>Learning and Teaching Strategies</p> <p>استراتيجيات التعلم والتعليم</p> | |
| <p>Strategies</p> | <p>Teaching and learning strategies can include a range of whole class, group and individual activities to accommodate different abilities, skills, learning rates and styles that allow every student to participate and to achieve some degree of success.</p> |

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| <p>Student Workload (SWL)</p> <p>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا</p> | | | |
| <p>Structured SWL (h/sem)</p> <p>الحمل الدراسي المنتظم للطالب خلال الفصل</p> | 45 | <p>Structured SWL (h/w)</p> <p>الحمل الدراسي المنتظم للطالب أسبوعيا</p> | 3 |
| <p>Unstructured SWL (h/sem)</p> <p>الحمل الدراسي غير المنتظم للطالب خلال الفصل</p> | 52 | <p>Unstructured SWL (h/w)</p> <p>الحمل الدراسي غير المنتظم للطالب أسبوعيا</p> | 3.5 |
| <p>Total SWL (h/sem)</p> <p>الحمل الدراسي الكلي للطالب خلال الفصل</p> | 100 | | |

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| <p>Module Evaluation</p> <p>تقييم المادة الدراسية</p> | |
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| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|----------------------|--------------|-------------|------------------|------------|---------------------------|
| Formative assessment | Quizzes | 2 | 10% (10) | 5, 10 | LO #1, 2, 10 and 11 |
| | Assignments | 2 | 10% (10) | 2, 12 | LO # 3, 4, 6 and 7 |
| | Projects / | 1 | 10% (10) | Continuous | All |
| | Report | 1 | 10% (10) | 13 | LO # 5, 8 and 10 |
| Summative assessment | Midterm Exam | 2 hr | 10% (10) | 7 | LO # 1-7 |
| | Final Exam | 2hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

| | Material Covered |
|---------|--|
| Week 1 | The Profession of Engineering |
| Week 2 | Professionalism and Codes of Ethics |
| Week 3 | Personal VS. Professional Ethics |
| Week 4 | Understanding Ethical Problems |
| Week 5 | Ethical Theories |
| Week 6 | Utilitarianism |
| Week 7 | Types of Issues in Ethical Problem Solving |
| Week 8 | Line Drawing |
| Week 9 | Flow Charts |
| Week 10 | Ethical Problem-Solving Techniques |
| Week 11 | Risk, Safety, and Accidents. |

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| Week 12 | The Rights and Responsibilities of Engineers |
| Week 13 | Ethics in Research and Experimentation |
| Week 14 | Global Issues. |
| Week 15 | Preparatory week before the final Exam |
| Week 16 | Preparatory week before the final Exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|-----------------------|--|---------------------------|
| Required Texts | <p>1- Michael E. Gorman, Matthew M. Mehalik, and Patricia H. Werhane, Ethical and Environmental Challenges to Engineering, Prentice Hall, Englewood Cliffs, NJ, 2000.</p> <p>2- Kenneth K. Humphreys, What Every Engineering Student Should Know About Ethics, Marcel Dekker, Inc., New York, 1999.</p> <p>3- John D. Kemper and Billy R. Sanders, Engineers and Their Profession, 5th ed., Oxford University Press, New York, 2001.</p> <p>4- Edmund G. Seebauer and Robert L. Barry, Fundamentals of Ethics for Scientists and Engineers, Oxford University Press, New York, 2001.</p> | |

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| Recommended Texts | <p>1- Joe Morgenstern, "The Fifty-nine Story Crisis," The New Yorker Magazine, May 29, 1995, p. 45.</p> <p>2- Kenneth R. Foster and John E. Moulder, "Are Mobile Phones Safe?" IEEE Spectrum, August 2000, pp.23–28.</p> |
| Websites | <p>5- http://radburn.rutgers.edu/andrews/projects/ssit/default.htm</p> <p>6- http://www.nspe.org/Ethics/EthicsResources/BER/index.html#2009</p> |

| Grading Scheme مخطط الدرجات | | | | |
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| Group | Grade | التقدير | Marks (%) | Definition |
| Success Group (50 - 100) | A - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | B - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | C - Good | جيد | 70 - 79 | Sound work with notable errors |
| | D - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | E - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| Fail Group (0 – 49) | FX – Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | F – Fail | راسب | (0-44) | Considerable amount of work required |
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| <p>Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p> | | | | |