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| **Course Title: SWE/EDM1142 Introduction to Software Engineering**  **Year and Semester:** Year 2, Semester 1 |
| **Course Description**  This course provides a general introduction to software engineering. It introduces concepts such as software processes and agile methods, and essential software development activities, from initial specification through to system maintenance. Concepts and tools to assist in software development are also presented, including common design patterns and UML notation. There is a focus on software testing, from unit testing to the testing of software releases. Project management , software security, professional software engineering practice, and IT governance will also be covered. Case studies provide practical examples for many of these concepts. |
| **Prerequisite(s) or co-requisite(s)**  None |
| **Method of Instruction**   * Lecture * Laboratory |
| **Content Outline by Topic**   * SDLC * Quality * Specifications * Ergonomics * Tests * Management of Requirements * Control of Development * Writing of Specifications * Methods of estimating cost |
| **Actual Contact Hours/Week**  8 hours a week for 12 weeks |
| **Methods and Frequency of Evaluation of Student Performance**  Workshops (minimum 5) 9%  Assignments (minimum 2) 5%  Quizzes (minimum 10) 3%  Test(s) 3%  Final Exam 80% |
| **Resources to be Purchased/Provided by Students:** None |
| **Textbook Requirement:**  Essentials of Software Engineering  by [Frank F. Tsui](https://www.google.cm/search?hl=en&tbm=bks&tbm=bks&q=inauthor:"Frank+F.+Tsui"&sa=X&ved=2ahUKEwiV-a20-aPzAhXuA2MBHQ4QBAQQ9Ah6BAgDEAU), ‎[Orlando Karam](https://www.google.cm/search?hl=en&tbm=bks&tbm=bks&q=inauthor:"Orlando+Karam"&sa=X&ved=2ahUKEwiV-a20-aPzAhXuA2MBHQ4QBAQQ9Ah6BAgDEAY), ‎[Barbara Bernal](https://www.google.cm/search?hl=en&tbm=bks&tbm=bks&q=inauthor:"Barbara+Bernal"&sa=X&ved=2ahUKEwiV-a20-aPzAhXuA2MBHQ4QBAQQ9Ah6BAgDEAc)  Jones & Bartlett Publishers, 2014  ISBN: 9781449691998  What every Engineer should know about Software Engineering  by [Philip A. Laplante](https://www.google.cm/search?hl=fr&tbo=p&tbm=bks&q=inauthor:"Philip+A.+Laplante"&source=gbs_metadata_r&cad=7)  CRC Press, 2007  ISBN: 9781420006742  Beginning Software Engineering  by [Rod Stephens](https://www.google.cm/search?hl=fr&tbo=p&tbm=bks&q=inauthor:"Rod+Stephens"&source=gbs_metadata_r&cad=7)  John Wiley & Sons, 2015  ISBN: 9781118969168 |