IE 3331 Systems Engineering

1. **Course number and name:** IE 3331 Systems Engineering
2. **Credits and contact hours:** 3 SCH – 3 hours of lecture
3. **Instructor’s or course coordinator’s name:** Dr. Eric D. Smith
   a. **other supplemental materials:**
      reference books:
      - Systems Engineering: An Approach to Information-Based Design (Hazelrigg)
      - Fundamentals of Systems Engineering (Khisty and Mohammadi)
      - Systems Engineering Principles and Practice (Kossiakoff and Sweet)
      - Introduction to Systems Engineering (Sage and Armstrong)

   web resources:
   software: RiskSim (available free on the web)

5. **Specific course information**
   a. **brief description of the content of the course (catalog description):**
      This course covers all basic concepts of systems engineering. The objective is to provide the basic knowledge and tools for transforming an operational need into a well-defined system configuration, through an interactive design process of issue formulation, analysis, optimization, design synthesis, system integration, and testing.
   b. **prerequisites or co-requisites:** BE 3373 or IE 3373 with a grade of "C" or better.
   c. **indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program:** Required course.

6. **Specific goals for the course**
   a. **specific outcomes of instruction:**
      The student should:
      o Students will know the fundamentals of systems engineering
      o Students will know how to design a system with the systems engineering process
      o Students will be aware of the position and functions of a systems engineer
      o Students will be able to interface in a systems engineering environment
b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course:

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<th>Student Outcomes</th>
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7. Brief list of topics to be covered