



COURSE DESCRIPTION

This course is designed to develop student's ability to model and analyze real systems using discrete event simulation. Through this course, the student will understand the power and characteristics of discrete event simulation modeling.

EXPECTED LEARNING OUTCOMES

- Formulating an appropriate simulation model for a system.
- Implementing the model as a computer program.
- Evaluating the output of the model.

COURSE FORMAT

- Highly interactive **asynchronous** delivery | **15-week** semester
- Tailored to your **professional needs**
- **Flipped Classroom Mode**
- **3-credit** hour | You may apply it towards SIE MS and PhD programs



PROGRAM DIRECTOR
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ENROLLMENT
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COURSE TOPICS

BASIC CONCEPTS OF SIMULATION

MECHANISM OF DISCRETE EVENT SIMULATION

STEADY STATE ANALYSIS: RATE DIAGRAM AND NON- TERMINATING SIMULATION SYSTEM

RANDOM NUMBER GENERATION

INPUT DATA ANALYSIS (INPUT DISTRIBUTION MODELING)

SIMULATION MODELING USING ARENA PACKAGE

REVIEW OF PROBABILITY AND STATISTICS

SIMULATION OUTPUT ANALYSIS

MONTE CARLO SIMULATION

VERIFICATION AND VALIDATION OF SIMULATION MODELS

OTHER SIMULATION APPROACHES (TIME DRIVEN SIMULATIONS)



Real-World
Application



Flexible/Interactive
Learning



Bridge Theory &
Practice



Innovative
Curriculum



Distinguished
Faculty

FROM EFFICIENCY TO INNOVATION—LEAD THE FUTURE OF INDUSTRIAL ENGINEERING.

