Course Description.

Introduces students to the concepts and applications of gaming and simulation through the use of gaming and simulation tools, as well as through basic programming skills. Lecture 4 hours. Total 4 hours per week.

General Course Purpose

This is a major course in the A.A.S. in Technical Studies: Modeling and Simulation.

Course Prerequisites/Co-requisites

Prerequisite is MTH 158 and co-requisite is ITP 100.

Course Objectives

Upon completion of the course, the student will be able to:

- Describe basic gaming and simulation terminology
- Analyze a given simulation problem and communicate its solution
- Examine uncertainty in gaming and simulation
- Model physical models to real world specifications
- Use discrete event simulation
- Implement basic simulations and games using a variety of software tools and programming skills.
- Explain object-oriented design

Major Topics to be Included

a. Gaming Concepts and Terminology
b. Problem Solving Logic using M&S
c. Object Oriented Design
d. Uncertainty in Simulation
e. Monte Carlo Simulation
f. Discrete Event Simulation
g. Gaming and Simulation Tools
h. Physical Modeling
i. Behavioral Modeling
j. Distributed Simulation Exploration
k. Exploration of Career Opportunities and Skills Sets