COSC 681 FALL 2016
COSC 681-0, CRN: 17653

M W 530 - 645 pm 401 PH

Instructor: Professor Haynes, shaynes@emich.edu
511 E Pray Harrold
Office hours: See http://emunix.emich.edu/~haynes
Additional office hours: I will stay after class as needed.

Course Homepage: http://emunix.emich.edu/~haynes/681/fa16/
Course materials, including links, lecture notes, assignments, will be posted to the course website.

Any change of policy will be posted to the course website.

Textbook information:

- Andrei Borshchev, *The Big Book of Simulation Modeling: Multimethod Modeling with Anylogic 6*
  ISBN-10: 0989573176
  formats: hardback, kindle
- Hiroki Sayama, *Introduction to the Modeling and Analysis of Complex Systems*
  ISBN-10: 1942341083
  formats: paperback, or free pdf

Catalog description: This is a special topics course. The topic is of interest to me. I hope you also find it interesting.

Description: We start with an elementary overview of the different types of simulation modeling using the free version of AnyLogic. We will test and develop several different models using AnyLogic (I anticipate we will push AnyLogic to the breaking point).

After introduction and play-time using AnyLogic, we will move to my primary interest, which is modeling complex systems. We will use Python for development. Again, we will test several models (using the code given in the Sayama book), then develop models.

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Prerequisites: 12 hours of graduate computer science courses.
My expectation is that you:
will learn Python on your own,
will learn the basics of complex numbers on your own,

have satisfied the mathematics prerequisites for admission to COSC graduate program (integral calculus, differential calculus, transcendental functions, linear algebra, probability). Any mathematics beyond the admissions requirements, I will spend class time on as needed.

Important Dates

Date	*Item*
9/7	First day of class
11/23	No class, (Thanksgiving break, university is open)
12/13	Last day of class
12/19 (Mon)	Final exam, regular class time
12/22	Grade submission deadlines

Student work:

Student work will be a combination of model testing, model development, demonstrations to the class.
Regular homework will be distributed.

Most work will be individual. Model development work distributed after November 1 are more likely to be small group work (group size 2).

Assignment of grades:

91 -100%	A range
81 -90%	B range
71 -80%	C range

Academic Honesty:

I expect, and your fellow students expect, that every person in this class will adhere to the highest ethical standards. All work handed in to me must be your own independent work unless otherwise specified. If you act in an academically or ethically dishonest manner, you should expect an E for the final your name to be submitted to the dean of students for dismissal or academic sanction from this university.