Shawnee State University
College of Professional Studies
Department of Engineering Technologies

Spring 2020
ETGG 4803: Artificial Intelligence
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Instructor: R. Duane Skaggs, PhD **Phone:** 1.740.351.3466
Email: *dskaggs@shawnee.edu* **Office:** ATC 309
Office Hours: MW 8.00 - 9.00, TR 11.15 - 11.45, TR 2.15 - 2.45, plus appointments. Most office hours will be held in ATC 255.

Catalogue Description
This course provides an introduction to the fundamental concepts and techniques underlying the construction of artificially intelligent computer systems. Topics covered may include: problem-solving and search; logic and knowledge representation; planning; reasoning and decision-making in the presence of uncertainty; machine learning; natural language processing; neural networks; and other topics. Lab activities will focus on the design and implementation of working AI systems.

Texts
Russell and Norvig, *Artificial Intelligence: A Modern Approach* Third Edition, Prentice Hall, 2010.
This is an extremely large book with lots of material so we will clearly not be able to cover everything. Fundamentals of each of the seven main parts of the text will be discussed. Additional resources will be provided in class and on Blackboard.

Student Learning Outcomes
Students who successfully complete this course will:

- understand different, possibly conflicting, definitions of AI
- understand possibilities and applications of AI
- understand limitations of AI
- be able to decide appropriate methods for a particular problem
- design and implement basic neural nets
- design and implement genetic algorithms
- work with a group to create a working AI system to solve a realistic problem
- be able to understand current advances in AI research

Attendance and Grading Policy
Attendance is expected in all classes. Late work will not be accepted once the corresponding assignment has been returned to other students or if solutions have been posted. Missed quizzes/exams can be made up only in the case of documented and excused absences.

The grade will be distributed amongst homework, in-class assignments, and approximately ten labs (50%), a group project (20%), and four quizzes/exams (30%). There will a quiz/exam the last class period in January, February, March, and April. Presentations of group projects will take place during the final exam period. Details of the group project will be provided in class and on Blackboard.

94% or higher	A
90% to less than 94%	A-
88% to less than 90%	B+
84% to less than 88%	B
80% to less than 84%	B-
78% to less than 80%	C+
74% to less than 78%	C
70% to less than 74%	C-
68% to less than 70%	D+
64% to less than 68%	D
60% to less than 64%	D-
Less than 60%	F

University ADA Statement
Any student who desires an accommodation based on the impact of a documented disability should first contact a Coordinator in the Office of Accessibility Services, Hatcher Hall, 740.351.3106 to schedule a meeting to identify potential reasonable accommodation(s). Students are strongly encouraged to initiate the accommodation process in the early part of the semester or as soon as the need is recognised. After meeting with the Coordinator, students are then required to meet with their instructors during the instructor's office hours to discuss their specific needs related to their disability. The accommodation letter will be sent to the instructor and student via email prior to the semester start date. Any questions regarding the accommodations on the letter should be addressed to the Coordinator of Accessibility Services. If a student does not make a timely request for disability accommodations and/or fails to meet with the Coordinator of Accessibility Services and the instructor, a reasonable accommodation might not be able to be provided.

Academic Integrity
Unless otherwise specified, you are encouraged to discuss questions with other students in the class. However, all write-ups and programs handed in must reflect your own work and are not to be shown to anyone else. If you discuss questions with others, be sure to properly cite their assistance. You know what cheating and plagiarism are, so avoid any situation that could be perceived as such. Violations will result in a failing grade.

Important Dates
20 January: Martin Luther King, Jr Day
31 January - 2 February: Global Game Jam
2 - 8 March: Spring Break
18 March: Last day to drop a class
29 April (Wednesday): Group Presentations
ETGG4803-01 8.00 - 9.50 ETGG4803-02 10.00 - 11.50
2 May: Commencement