C105 Brains & Minds, Robots & Computers
Fall 2011 Syllabus

Class Time and Place
Lecture:
Section 29413: Monday & Wednesday, 11:15A – 12:30P in room WH 111
Lab Sections:
Section 29414: Friday 9:05A – 9:55A
Section 29415: Friday 10:10A – 11:00A HP 155
Section 29427: Friday 11:15A – 12:05P

Instructor Information
Rick Hullinger
Office: PY 183E
Office Hours: Tue 2:00 – 4:00P, Thu 9:00 – 11:00A, or by appointment
Office Telephone: 856-6854
Email Address: rahullin@indiana.edu

Lab Instructor
Daryl Hansen
Office: I-261
Office Hours: By Appointment
Email Address: hansend@umail.iu.edu

Course Overview
This course will explore the main thrusts in cognitive science and robotics. The topics will include general questions about intelligence and artificial intelligence, as well as the mechanistic view of cognition. The course also touches on areas such as genetic algorithms, perception, concepts and categorization, logic, reasoning, and rationality. We will explore computational formalisms such as Turing machines, neural networks, and rule-based systems to illustrate possible principles and mechanisms of cognition. Hands-on experience in the laboratory section will allow students to get acquainted with computer simulations of artificial agents.

Readings
Weekly readings will be assigned on Oncourse. It is important that you complete all of these readings before class so that you can understand the lecture and participate in our discussions. Many of the readings will be posted with one or two "reaction questions" to gauge your understanding to shape my presentation of the material. You are expected to answer these questions and send your responses to me via e-mail by midnight before class so that I can compile the answers and tailor the class accordingly. Your answers to these questions will determine your “class participation” grade.
LABS
Lab projects will be posted on Oncourse each week. The labs are designed to be completed during your lab section, but you may start work on them early and continue to work on them after your lab section if needed. Lab assignments will be submitted via Oncourse and must be turned in no later than Midnight on the Sunday following the lab section. Many lab assignments will have additional tasks that can be completed for extra credit.

Because there is limited seating and resources in the lab, it is critical that you attend the lab section to which you have been assigned.

EXAMS
There will be a mid-term exam on Wednesday, Oct. 12th, and a cumulative final exam during finals week. With the exception of the final exam, the course schedule is tentative and subject to change. However, I will do my best to make sure that the exam is on the date listed. Both exams will be closed book and closed note.

According to the Final Exam Schedule from the Office of the Registrar, the final exam for this course will be given on Monday, December 12th at 10:15 AM in WH 111. The final exam will be a cumulative exam covering the full semester of material.

If you have a scheduling conflict or cannot take an exam at its appointed date and time, you must let me know as soon as possible. With the exception of extreme and unforeseen circumstances, contacting me the day of (or even worse, after) the exam will be considered an unexcused absence and will result in a 0 on the exam.

Grading
Your final grade is computed using the following formulas:
- Participation (reaction question answers): 15%
- Lab assignments & projects: 40%
- Mid-term exam: 20%
- Final exam: 25%
- 100%

Grading Scale
- A+: 97%-100%; A: 93%-96%; A-: 90%-92%
- B+: 87%-89%; B: 83%-86%; B-: 80%-82%
- C+: 77%-79%; C: 73%-76%; C-: 70%-72%
- D+: 67%-69%; D: 63%-66%; D-: 60%-62%
- F: Below 60%
**RESPECT**

In order for this class to work well, there must be a certain level of respect between you and me and between you and your fellow classmates. Please be smart with your in-class behavior. If you have to arrive late, enter quietly and sit in the back. If you believe that you may leave early, please sit in the back and slip out quietly. Please turn off your cell phones and do not text-message your friends while I’m teaching. If you are being disruptive to the class, I will ask you to leave.

**FEEDBACK**

Do not wait until the end of the semester course evaluations to let me know that I could be doing something better. Tell me as soon as possible so that I can make the class valuable and relevant as we go along.

If you have any feedback, good or bad, about the course or how it’s being taught, please feel free to send it to me *anonymously* using this link: [http://www.indiana.edu/~rahteach/feedback.html](http://www.indiana.edu/~rahteach/feedback.html)

**ACADEMIC HONESTY**

This course is conducted under the University's Ethics Code. Specifically, it is considered cheating if you obtain any kind of information about answers and solutions to the assignments in this course – exams, and reaction questions – from any non-intended source (including your peers) or conversely transfer such information to others. The punishment for academic dishonesty is **failure of the course**.

**STATEMENT FOR STUDENTS WITH DISABILITIES**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact IU Disability Services for Students.

**ANSWERS TO FREQUENTLY ASKED QUESTIONS**

-- I do not take attendance. While I expect students to attend and participate in class, I understand that there will be times when you cannot make it. Realize, however, that what we cover in class is important and that you will still be held responsible for any materials we cover.
-- There is no curve and in general I do not round up.

**DISCLAIMER**

This syllabus is an outline of the course and its policies, which may be changed for reasonable purposes during the semester at the instructor’s discretion. You will be notified in class and / or via email if any changes are made to this syllabus, and an updated syllabus will be provided on Oncourse.