

	<p><b>Expert Systems and Heuristic Programming</b> <b>CS 530 Summer 2007</b> Dan Rochowiak TR 12:30PM 02:30PM</p> <p><a href="mailto:drochowi@cs.uah.edu">drochowi@cs.uah.edu</a></p> <p><a href="http://wwwdev.uah.edu/dmr/cs530/">http://wwwdev.uah.edu/dmr/cs530/</a></p>
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The field of artificial intelligence crosses many traditional disciplines. Researchers from computer science, linguistics, philosophy, engineering, and many other disciplines are engaged in the effort to make computational systems behave in an intelligent manner. In this course, we will focus on the concepts and architectures of expert systems and their extension to intelligent agents

### **Topics**

Definition, Ontology, Problem Solving Using Search, Knowledge Representation, Reasoning Systems, Learning Systems, Agents and Multiagent Systems. Java-Based Tools.

### **Text**

Jess in Action: Java Rule-Based Systems by Ernest Friedman-Hill, Manning Publications, ISBN: 1930110898 Notes will be provided on the web site. <http://wwwdev.uah.edu/dmr/cs530/>

### **Software**

See the document on the website.

### **Requirements**

There will be a mid term and final examination. These will account for 40% of the final grade. There will be two individual assignments (20%) and one semester assignment (20%). You may work together for the individual assignments but each of these must be submitted as an individual effort. The semester assignment can be done either as an individual or group project.

### **Additional Texts:**

The following texts may prove helpful.

Owl: Representing Information Using the Web Ontology Language by Lee Lacey, Trafford Publishing, ISBN: 1412034485

Russell, Norvig, AI: A Modern Approach (2nd ed.) 2002 <http://aima.cs.berkeley.edu/>

Winston, AI (3rd ed.) 1992 <http://people.csail.mit.edu/phw/Books/AIBACK.HTML>

Nilsson, AI: A New Synthesis 1998 <http://books.elsevier.com/mk/default.asp?ISBN=1-55860-467-7>

Luger, AI: Structures and Strategies (5th ed.) 2005 <http://www.aw-bc.com/catalog/academic/product/0,1144,0321263189,00.html>

## **OFFICIAL UAH COMPUTER SCIENCE DEPARTMENT POLICIES AND PROCEDURES**

*This document should be handed out with the syllabus and discussed on the first day of classes.*

### **1. Responsibilities of the teacher**

- 1) Provide a detailed syllabus. This syllabus should list office hours, course objectives, textbooks, references, prerequisites, and grading policy/method of assessment.
- 2) Come to class well prepared, on time, and make full use of the class time.
- 3) Provide timely and adequate feedback on grades. Return graded material promptly.
- 4) Conduct final exam at the time designated in the class schedule. Never post grades.
- 5) Not assign **new** work (i.e. not listed on syllabus) that is due in last two weeks of classes.
- 6) Avoid leaving the examination room without a proctor. Provide paper for exams.
- 7) Make reasonable use of the assigned textbook.
- 8) Check students have proper prerequisites. Instructor does not waive assigned prerequisites.

### **2. Responsibilities of the student (see also, Student Handbook Article II)**

- 1) Come to class with the proper prerequisites, well prepared, on time, and make full use of the class time.
- 2) Provide adequate notice of anticipated absences and take full responsibility for finding out about missed work, announcements, and assignments.
- 3) Submit assessment material on time and submit **only your own work**. (see integrity)
- 4) Do not allow other students to copy your work.
- 5) Read and understand the syllabus and follow announced policies.

### **3. Complaint Procedure**

If you have difficulties or complaints related to this course, your first action should be to discuss them with your instructor. If such a discussion would be uncomfortable for you or fails to resolve your difficulties, you should contact Professor Ranganath, Chair of the Computer Science Department. His office is in Technology Hall N-300, telephone 824-6088. If you are still unsatisfied, you should discuss the matter with Dr. Dan Rochowiak, Associate Dean of the College of Science, drochowi@cs.uah.edu. Dr. Rochowiak's office is C 207 Materials Science Building.

### **4. Students with disabilities**

Your instructor would like to hear from anyone who has a disability that may require a modification of seating, testing, or other class procedures. Please see instructor after class or during office hours to discuss appropriate modifications. You should also contact Student Development Services in UC 113 (Ph. 824 6203) for further assistance.

### **5. Student computer account**

Students enrolled in any CS course are entitled to an account on the departmental computer network. Use of such an account is subject to departmental and university policies. To apply for an account, and see the current policies, go to the departmental web site at <http://www.cs.uah.edu/account/>

### **6. Examination policy**

In response to past student complaints about problems during examinations, the Computer Science Department has developed the following guidelines for in-class examinations in all courses.

1. Come to the exam prepared to complete it without a break. If you think you will need a break, please inform the proctor before the exam if possible.
2. Do not communicate with other students. Talk only to the instructor.
3. Whenever you leave the exam room turn in your exam.
4. Use only the paper provided by the instructor for all writing.
5. If assigned a specific seat, remain in that seat.
6. Unless specifically permitted by the instructor, use no books or other reference materials. Do not bring calculators, computers, pocket-organizers, cell phones, pagers, or other electronic devices to the exam.

### **7. Integrity**

We expect CS instructors and students to conduct themselves in a professional manner. Students are subject to all the provisions in the UAH Code of Student Conduct, which is available free from the Office of Admissions and Records. Information on plagiarism and other forms of misconduct is presented in the **Student Handbook Article III**. *Departments are obliged to report all student misconduct to the Office of Student Affairs.*