

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST</b> <b>Undergraduate Programs</b>		UUPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Comp. and Electrical Eng. and Comp. Sci. College Engineering and Computer Science		
<b>Current Course Prefix and Number</b> CAP 4630		<b>Current Course Title</b> Introduction to Artificial Intelligence	
<i>Syllabus must be attached for ANY changes to current course details. See <a href="#">Checklist</a>. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
<b>Change title to:</b>  <b>Change prefix</b> From: _____ To: _____ <b>Change course number</b> From: _____ To: _____ <b>Change credits*</b> From: _____ To: _____ <b>Change grading</b> From: _____ To: _____ <b>Change WAC/Gordon Rule status**</b> Add <input type="checkbox"/> Remove <input type="checkbox"/> <b>Change General Education Requirements***</b> Add <input type="checkbox"/> Remove <input type="checkbox"/> <small>*Review <a href="#">Provost Memorandum</a></small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <a href="#">WAC Guidelines</a>.</small> <small>***General Education criteria must be indicated in syllabus and approval attached to this form. See <a href="#">GE Guidelines</a>.</small>		<b>Change description to:</b> A broad introduction to foundations, concepts, and techniques of artificial intelligence, including intelligent agents; problem-solving; knowledge representation, reasoning and planning; machine learning and implications of AI. Hands-on programming assignments in contemporary software environments  <b>Change prerequisites/minimum grades to:</b> COP 3530 or COP 3043 with minimum grade of "C" or permission of the instructor  <b>Change corequisites to:</b>  <b>Change registration controls to:</b>  Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
<b>Effective Term/Year for Changes:</b> Spring 2021		<b>Terminate course? Effective Term/Year for Termination:</b>	
<b>Faculty Contact/Email/Phone</b> Dr. Hanqi Zhuang, zhuang@fau.edu, 561-297-3413			
<b>Approved by</b> Department Chair _____ Hanqi Zhuang <small>Digitally signed by Hanqi Zhuang Date: 2020.08.17 13:37:07 -04'00'</small> College Curriculum Chair <u>Dan Meeroff</u> College Dean _____ UUPC Chair <u>Jerry Haky</u> Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____		<b>Date</b> _____ <u>9-3-20</u> <u>9/17/20</u> _____ 9-15-20 _____ 9-15-20 _____ _____	

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.

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<b>1. Course title/number, number of credit hours</b>	
CAP 4630 Introduction to Artificial Intelligence	3 credits
<b>2. Course prerequisites, corequisites, and where the course fits in the program of study</b>	
<i>Prerequisite: COP 3530 or COP3043 or permission of the instructor</i>	
<b>3. Course logistics</b>	
<p><i>Term:</i> Spring 2021</p> <p><i>Class location and time:</i> TBA</p> <p>Webex Link for Live Virtual Lecture: <a href="https://fau.webex.com/meet/xzhu3">https://fau.webex.com/meet/xzhu3</a></p> <p>Course Delivery Mode: This is a classroom lecture course. Live virtual lectures will be held via Cisco Webex.</p> <p>Exams will be given only at the scheduled times. No make-ups, except in documented emergencies.</p> <p>Other logistics are as follows:</p> <ol style="list-style-type: none"> <li>1. Canvas registration is required.</li> <li>2. The instructor will regularly post materials/announcements on Canvas. It is student's responsibility to regularly check Canvas and their FAU email for the most recent information.</li> <li>3. No hard-copy handouts will be provided. Copies will be posted in files on Canvas</li> <li>4. All classes will be virtual via webex. You are expected to participate in all sessions and keep up with the material. You are not expected to be a distraction in class. Final grades will be reduced by one full letter for class disruption or lack of participation (as determined by the instructor).</li> <li>5. Participation in University-approved activities or religious observances, with prior notice, will not be penalized.</li> <li>6. Students need a reliable internet condition capable of streaming Webex lectures, taking exams on Canvas, etc. Recommended: Broadband Internet connection with a speed of 4 Mbps or higher. To function properly, Canvas requires a high-speed Internet connection (cable modem, DSL, satellite broadband, T1, etc.). The minimum Internet connection speed to access Canvas is a consistent 1.5 Mbps (megabits per second) or higher. Check your Internet speed <a href="#">here</a>.</li> <li>7. Students should have an operational computer system equipped with Windows 10 or macOS Sierra (or higher), Microsoft Office, web browser, a webcam, speakers, and microphone, which should be compatible with the most recent version of Cisco Webex, etc.</li> </ol>	

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<b>4. Instructor contact information</b>	
<i>Instructor's name</i>	Xingquan (Hill) Zhu
<i>Office address</i>	Engineering East (EE-96) Bldg., Room 503B
<i>Office Hours</i>	T,TR: 1:00 PM – 4:00 PM, and by apt.
<i>Contact telephone number</i>	561-297-3452
<i>Email address</i>	<a href="mailto:xzhu3@fau.edu">xzhu3@fau.edu</a> (please always include "CAP 4630" in your email subject)
<i>WebEx Link:</i>	<a href="https://fau.webex.com/meet/xzhu3">https://fau.webex.com/meet/xzhu3</a>
<b>5. TA contact information</b>	
<i>TA's name</i>	Grader: TBA
<i>Office address</i>	
<i>Office Hours</i>	None
<i>Contact telephone number</i>	
<i>Email address</i>	TBA
<b>6. Course description</b>	
A broad introduction to foundations, concepts, and techniques of artificial intelligence, including intelligent agents; problem-solving; knowledge representation, reasoning and planning; machine learning and implications of AI. Hands-on programming assignments in contemporary software environments.	
<b>7. Course objectives/student learning outcomes/program outcomes</b>	
<i>Course objectives</i>	<ol style="list-style-type: none"> <li>1. Learn fundamental concepts of artificial intelligence, knowledge representation, problem solving by search, and learning methodologies.</li> <li>2. Develop abilities to analyze artificial intelligence systems.</li> <li>3. Develop the basic understanding of knowledge reasoning.</li> <li>4. Develop the ability to design basic learning systems.</li> </ol>
<i>Student learning outcomes &amp; relationship to ABET 1-7 outcomes</i>	<ol style="list-style-type: none"> <li>1. An Ability to identify, formulate, and solve complex computing/engineering problems by applying principles of computing, engineering, science, and mathematics. (Problem solving)</li> <li>2. An ability to apply the computing/engineering design process to produce solutions that meet a given set of computing/engineering requirements with consideration for public health and safety, and global cultural, social, environmental, economic, and other factors as appropriate to the discipline. (Design)</li> <li>6. An ability to apply engineering/computer science theory and hardware/software development fundamentals to develop and conduct appropriate experimentation, analyze and interpret data, and use computing/engineering judgment produce engineering/computing-based solutions/conclusions. (Experimentation and/or simulation)</li> </ol>
<b>8. Course evaluation method</b>	
Homework/project -	45%
Quiz -	25%
Participation: -	5%
Final -	25%

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<b>9. Course grading scale</b>
Grading Scale: 90 and above: "A"; 85-90: "A-" 80 – 84: "B+"; 76-80: "B"; 70-75 : "B-" 55-69: "C" (including C-) 40-54: "D"(including D-) 39 and below: "F."
<b>10. Policy on makeup tests, late work, and incompletes</b>
<p><i>Makeup tests</i> are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student of participating in the exam. Makeup exam should be administered and proctored by department personnel unless there are other pre-approved arrangements</p> <p><i>Late work</i> is subject to late penalty.</p> <p><i>Incomplete grades</i> are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation and the student is currently passing the class, incomplete grades will not be given.</p>
<b>11. Special course requirements</b>
All homework assignments and all lab work in this course must be <b>INDIVIDUAL</b> effort. Please take the time to read the documentation. You are responsible for the information outlined in it. Please see the instructor, any teaching assistant, or Engineering Student Services tutoring for assistance.
<b>12. Classroom etiquette policy</b>
University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.
<b>13. Attendance policy statement</b>
<p>Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.</p> <p>Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.</p>

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<b>14. Disability policy statement</b>
In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at <a href="http://www.fau.edu/sas/">www.fau.edu/sas/</a> .
<b>15. Counseling and Psychological Services (CAPS) Center</b>
Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <a href="http://www.fau.edu/counseling/">http://www.fau.edu/counseling/</a>
<b>16. Code of Academic Integrity policy statement</b>
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see <a href="#">University Regulation 4.001</a> . If your college has particular policies relating to cheating and plagiarism, state so here or provide a link to the full policy—but be sure the college policy does not conflict with the University Regulation.
<b>17. Required texts/reading</b>
S. Russell and P. Norvig. "Artificial Intelligence: A Modern Approach". 4th edition, Pearson, 2020, ISBN-10: 0134610997
<b>18. Supplementary/recommended readings</b>
None
<b>19. Course topical outline, including dates for exams/quizzes, papers, completion of reading</b>
<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Problem Solving /Search             <ul style="list-style-type: none"> <li>o State Space Search</li> <li>o Blind Search</li> <li>o Heuristic Search</li> <li>o Constraint Satisfaction</li> <li>o Gaming Playing</li> </ul> </li> <li>3. Knowledge and Reasoning             <ul style="list-style-type: none"> <li>o Logic, Models, and entailment</li> <li>o Propositional Logic</li> <li>o Knowledge Representation</li> </ul> </li> </ol>

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- Knowledge Reasoning
- 4. Learning
  - Decision Trees
  - Neural Networks
  - Reinforcement Learning

**Tentative Schedule** for homework, exams, and quizzes (actual number of homework, quiz, and the due date may vary) .

Homework # 1: Early Sept., 2020

Homework # 2: Mid. Sept., 2020

Homework # 3: Late Sept., 2020

Quiz 1: Early Oct. 2020

Homework # 4: Mid. Oct., 2020

Homework # 5: Late Oct., 2020

Quiz 2: Early Nov. 2020

Homework #6: Mid Nov., 2020

Homework #7: Late Nov., 2020

Final Exam: Dec. xx, 2020 -