FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Graduate Programs

Department CEECS

College Engineering and Computer Science

UGPC Approval _____
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner _____
Catalog _____

***Current* Course Prefix and Number**	***Current* Course Title**
COT 6405	Analysis of Algorithms

*Syllabus must be attached for **ANY** changes to current course details. See Guidelines. Please consult and list departments that may be affected by the changes; attach documentation.*

Change title to:

Change prefix

From: **To:**

Change course number

From: **To:**

Change credits*

From: **To:**

Change grading

From: **To:**

Academic Service Learning (ASL) **

Add ☐ **Remove** ☐

* Review Provost Memorandum
** Academic Service Learning statement must be indicated in syllabus and approval attached to this form.

Change description to:

Change prerequisites/minimum grades to:
None

Change corequisites to:

Change registration controls to:

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.

Effective Term/Year for Changes:	**Terminate course? Effective Term/Year for Termination:**
Spring 2021	

Faculty Contact/Email/Phone Hanqi Zhuang/zuang@fau.edu/ 297-3413

Approved by		***Date***
Department Chair	Hanqi Zhuang — Digitally signed by Hanqi Zhuang Date: 2020.10.21 15:48:05 -04'00'	
College Curriculum Chair	Francisco Presuel-Moreno — Digitally signed by Francisco Presuel-Moreno DN: cn=Francisco Presuel-Moreno, o=Florida Atlantic University, ou=Ocean and Mechanical Engineering, email=fpresuel@fau.edu, c=US Date: 2020.10.22 12:00:54 -04'00'	
College Dean	Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.10.25 19:46:11 -04'00'	10/25/2020
UGPC Chair	Christopher Beetle	Nov 17, 2020
UGC Chair	Paul R. Peluso (Nov 18, 2020 08:44 EST)	Nov 18, 2020
Graduate College Dean	Robert W. Stuckey	Nov 18, 2020
UFS President		
Provost		

Email this form and syllabus to UGPC@fau.edu 10 days before the UGPC meeting.

Department of Computer & Electrical Engineering
and Computer Science
Florida Atlantic University
Course Syllabus

1. Course title/number, number of credit hours	
Analysis of Algorithms – **COT 6405**	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: None	
3. Course logistics	
Term: *Class location and time:*	
4. Instructor contact information	
Instructor's name *Office address* *Office Hours* *Contact telephone number* *Email address*	
5. TA contact information	
TA's name *Office address* *Office Hours* *Contact telephone number* *Email address*	
6. Course description	
Design and analysis of algorithms from several areas of computer science. Topics include advanced data structures, dynamic programming, greedy algorithms, approximation algorithms, and probabilistic algorithms.	
7. Course objectives/student learning outcomes/program outcomes	
Course objectives	To acquire working knowledge of analysis and design techniques. To learn different methods for designing algorithms.
Student learning outcomes & relationship to ABET 1-7 outcomes	NA
8. Course evaluation method	
5 Quizzes (15% each) – 75% Class participation – 5% Programming Project – 20%	
9. Course grading scale	
Grading Scale:	

[90, 100] A, [85, 90) A –, [80, 85) B +, [75, 80) B, [70, 75) B –, [67, 70) C +, [63, 67) C, [60, 63) C –, [57, 60) D +, [53, 57) D, [50, 53) D –, [0 – 50) F.

10. Policy on makeup tests, late work, and incompletes

Makeup tests 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 will be administered and proctored by department personnel unless there are other pre-approved arrangements

Late work is not acceptable.

A grade of *incomplete* will be assigned only in the case of solid evidence of medical or otherwise serious emergency situation.

11. Special course requirements

None

12. Classroom etiquette policy

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.

13. Attendance policy statement

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.
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.

14. Disability policy statement

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 www.fau.edu/sas/.

15. Counseling and Psychological Services (CAPS) Center

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 http://www.fau.edu/counseling/

16. Code of Academic Integrity policy statement

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 University Regulation 4.001. 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.

17. Required texts/reading

To reduce costs for our students, we strongly encourage you to explore the adoption of open educational resources (OER), textbooks and other materials that are freely accessible. We also encourage you to clearly state in the syllabus if course materials are available on reserve in the Library.

No required textbooks.

18. Supplementary/recommended readings

- *Introduction to Algorithms*, 3rd edition, by T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein, The MIT Press, 2009, ISBN: 0262033844
- *Algorithm Design*, J. Kleinberg and E. Tardos, Addison Wesley, 2006.
- *The Design & Analysis of Algorithms*, 2nd edition, A. Levitin, Addison Wesley, 2007.
- *Algorithms,* R. Johnsonbaugh and M. Schaefer, Pearson Education 2004.
- *Fundamentals of Algorithms,* G. Brassard and P. Bratley, Prentice Hall 1996.

19. Course topical outline, including dates for exams/quizzes, papers, completion of reading

1. Introduction
2. Foundations of Algorithm Design and Analysis
3. Advanced Data Structure
4. Brute Force & Exhaustive Search
5. Backtracking
6. Branch and Bound
7. Divide and Conquer
8. Maximum Flow and Extensions
9. Greedy Algorithms
10. Dynamic Programming
11. NP-Completeness
12. Approximation Algorithms

Time Commitment
For a 3-credit course, students must commit to 6 - 9 hours of coursework per week.

Canvas
The course web site containing lecture notes, quizzes, project specifications, etc. is maintained on Canvas.
Dates for Quizzes and the Project

Quiz 1:
Quiz 2
Quiz 3:
Quiz 4:
Quiz 5:
Programming Project:

- Quizzes must be taken **online** on Canvas. They have a duration of 2 hours and unlimited attempts. Only the last attempt submitted on Canvas before the deadline will be graded. Submission deadline is at 11:59PM on the specified day. That means that the students have to press the SUBMIT button no later than 11:59 PM.
- The Programming Project must be submitted **online** on Canvas. It is due on the specified day at 11:59M.

Class Participation
Each of the 5 quizzes has a Discussion Board. You need to enter one comment and one reply to a comment posted by another student in the class. The comment/reply must be articulate, related to the quiz, but without revealing solutions to the problems. Just writing "Thank you" to someone's post will not receive the points for the "reply posting". To receive the points for the "reply posting", you need to contribute to a thread initiated by another colleague, and provide some useful info, such as providing useful help or technical clarifications.
Each Discussion Board participation has the same deadline as the corresponding quiz. Class participation is worth 5% in the final grade. It has a total of 5 Discussion Boards, each worth 1% in the final grade.

Orientation Quiz
To begin this course, the students must demonstrate that they have read the syllabus and course blueprint and have understood the expectations required of them. The students must pass the orientation quiz with 100% before they can start working on the course.

Communication Policy
For personal or confidential matters contact the instructor by email mcardei@fau.edu. Post your course-related questions on the "Class Q&A" discussion board on Canvas. Students are encouraged to participate in discussions by answering questions posted on the board by their colleagues. Except for Saturdays, Sundays, and holidays, the instructor will reply within 24 hours.

Announcements
Students are responsible to read all the announcements posted by the instructor on Canvas. Make sure you check the announcements each time you login the Canvas.

Faculty Rights and Responsibilities
Florida Atlantic University respects the right of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions which do not impede their exercise. To ensure these rights, faculty members have the prerogative:

- To establish and implement academic standards
- To establish and enforce reasonable behavior standards in each class
- To refer disciplinary action to those students whose behavior may be judged to be disruptive under the Student Code of Conduct.

Instructor reserves the right to adjust this syllabus as necessary.