

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs		UUPC Approval <u>3-29-21</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Comp & Electrical Eng and Comp Science College Engineering and Comp Science		
Current Course Prefix and Number COP 3540		Current Course Title Introduction to Database Structures	
<i>Syllabus must be attached for ANY changes to current course details. See Checklist. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
Change title to: Change prefix From: _____ To: _____ Change course number From: _____ To: _____ Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/> Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/>		Change description to: Change prerequisites/minimum grades to: COP 3530 or COP 3410 Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
Effective Term/Year for Changes:		Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone			
Approved by Department Chair <u><i>Hay</i></u> College Curriculum Chair <u><i>Donna</i></u> College Dean _____ UUPC Chair <u><i>Jerry Hakey</i></u> Undergraduate Studies Dean <u><i>Edward Pratt</i></u> UFS President _____ Provost _____		Date <u>3-1-21</u> <u>3-10-21</u> <u>3/11</u> <u>3-29-21</u> <u>3-29-21</u> _____ _____	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

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

1. Course title/number, number of credit hours	
Introduction to Database Structures COP 3540	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: COP 3530 or COP 3410	
3. Course logistics	
<p><i>Term:</i> Spring 2012 This is a classroom lecture course. <i>Class location and time:</i> M,W, 11:00AM-12:20 PM, EE 106</p>	
4. Instructor contact information	
<i>Instructor's name</i> <i>Office address</i> <i>Office Hours</i> <i>Contact telephone number</i> <i>Email address</i>	Dr. M.K. Solomon, Professor Engineering East Bldg., Room 510 MW 2:00 – 5:00 PM 561-297-3228 solomon@fau.edu
5. TA contact information	
6. Course description	
An introduction to the design, implementation and use of file managers and relational data base systems. Topics include secondary storage devices, hash and indexed file structures, and the relational data base language SQL. Programming assignments will be done in the C language and in SQL.	
7. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives</i>	Study concepts that are central to the implementation and intelligent use of relational database management systems. Since a relational database is a collection of tables, in the first part of the course we will consider the implementation of tables, and in the second part of the course we will consider the processing of tables using a relational database system. Oracle 11g and, to a somewhat lesser extent Microsoft SQL Server 2008, will be used as vehicles.
<i>BSCS program outcomes</i>	1. Proficiency in the areas of software design and development, data structures, and operating systems.
8. Course evaluation method	
Midterm Exam 30%, Final Exam 30%, Four Assignments 10% each and a 10 POINT optional Bonus Assignment.	

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9. Course grading scale
Grading Scale: 90 and above: "A", above 85 but below 90: "B+", 80-85: "B", above 75 but below 80: "C+", 70-75: "C", above 65 but below 70: "D+", 60-65: "D", above 55 but below 60: D-, 55 and below: "F."
10. Policy on makeup tests, late work, and incompletes
<p><i>Makeup exams</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.</p> <p>Assignments are to be submitted on time, with possible point penalties for late submissions. In no case will an assignment be accepted after the graded papers for that assignment have been returned to the students. However, appropriate accommodations will be made for students having a valid medical excuse for being unable to work on an assignment during its two week period.</p> <p>Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.</p>
11. Special course requirements
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, are to be disabled in class sessions, and laptops are only to be used for note taking and related activities.
13. Disability policy statement
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton campus, SU 133 (561) 297-3880 and follow all OSD procedures.
14. Honor code policy
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 unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf
15. Required texts/reading
Detailed documents that are posted on Blackboard.

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16. Supplementary/recommended readings

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

Topics:

1. Basic file and database concepts.
 2. Files programming in C. No files programming in C background is assumed.
 3. Basic files related hardware concepts.
 4. Introduction to hash structured files.
 5. Hash structured files: buckets and external chaining.
 6. Hash structured files: linear hashing.
 7. Implementing a hash-based file manipulation system in C using Microsoft Visual Studio 2010.
 8. Heap and sequential files.
 9. Introduction to indexed sequential files (B+-trees).
 10. Secondary indexing and inverted file structures.
 11. Major deletion strategies.
 12. Introduction to relational DBMS.
 13. Oracle file structures. Microsoft SQL Server file structures.
 14. Stand-alone SQL using the Microsoft Visual Studio 2010 and the Oracle SQL Developer IDEs. No background in SQL is assumed.
 15. Embedded SQL (both static and dynamic).
 16. Web Programming with embedded SQL using CGI. No background in Web Programming or CGI is assumed.
 17. Implementing business rules with SQL declarative integrity constraints.
 18. Introduction to PL/SQL(Oracle's database programming language); coding stored procedures and triggers with PL/SQL; Web programming using PL/SQL procedures; Using triggers to implement business rules and to update views.
 19. On-Line Transaction processing (OLTP) with Oracle and Microsoft SQL Server.
 20. Data warehousing and SQL On-Line Analytical Processing (OLAP) queries
 21. Recursive queries with Oracle and Microsoft SQL Server.
- Comparison of PL/SQL with Microsoft SQL Server Transact- SQL as database programming languages

Midterm Exam: February 28, Final Exam: April 26, Assignment#1: January 31, Assignment #2: February 28, Assignment #3: March 20, Assignment #4: April 3.