FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—NEW COURSE PROPOSAL

UUPC APPROVAL _____
SCNS SUBMITTAL _____
CONFIRMED _____
BANNER POSTED _____
CATALOG POSTED _____
WEB POSTED _____

DEPARTMENT NAME: ITOM | COLLEGE OF: BUSINESS

RECOMMENDED COURSE IDENTIFICATION:
PREFIX __ISM_____ COURSE NUMBER ____6230_____ LAB CODE (L or C) _ ___
COMPLETE COURSE TITLE: INTRODUCTION TO COMPUTER SYSTEMS AND SOFTWARE DEVELOPMENT
EFFECTIVE DATE (first term course will be offered): FALL 2011

INSTRUCTIONAL METHOD (V, BB, IC, EC, ETC.):

CREDITS: 3 | LAB/DISCUSSION: | TEXTBOOK INFORMATION: SEE ATTACHED SAMPLE SYLLABUS
LECTURE: Y | FIELD WORK:

GRADING: REGULAR __X____ PASS/FAIL _____ SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN 3 LINES: AN EXAMINATION OF THE UNDERLYING STRUCTURE OF COMPUTER HARDWARE AND OPERATING SYSTEMS, PROGRAMMING LOGIC, AND ALGORITHMS, AND AN INTRODUCTION TO STRUCTURED PROGRAMMING FOR BUSINESS SOFTWARE DEVELOPMENT USING C++. PRIOR PROGRAMMING EXPERIENCE OR COURSE WORK MAY BE CONSIDERED IN LIEU OF THIS COURSE, WITH DEPARTMENTAL APPROVAL.

PREREQUISITES:	COREQUISITES:	OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL):
GRADUATE STANDING O *Check box to enforce**	O *Check box to enforce**	O *Check box to enforce**

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: TERMINAL DEGREE IN RELATED FIELDS

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each.
NONE

Faculty Contact, Email, Complete Phone Number
Caryn Conley cconley8@fau.edu **561-297-2707**

SIGNATURES

Approved by:	*Date:*
Department Chair:	3/23/11
College Curriculum Chair:	3-24-2011
College Dean: Paul Hsu	3.28.11
UGPC Chair:	
Dean, Graduate Studies	

SUPPORTING MATERIALS

Syllabus—must include course objectives.

Written Consent—required from all departments affected.

Go to: *http://graduate.fau.edu/gpc/* to download this form

* "Enforce" prerequisites or other registration controls adds these restrictions to the course schedule; students whose academic careers do not show these prerequisites or other details will not be able to register. When box is not checked, restrictions show in catalog description only.

Email this form and syllabus to Graduate Studies one week ***before*** the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

ISM 6230
Introduction to Computer Systems and Software Development
Syllabus

Instructor *Dr. Caryn Conley*
cconley8@fau.edu (see section regarding communication)
(561) 297-2707
Fleming 212, Boca campus
Office hours: Monday 3:00pm-5:00pm
Thursday 11:45am-1:45pm, or by appointment

Class Monday, 7:10pm-10:00pm, FL 411

PREREQUISITE

ISM 2000, Information System Fundamentals, or accepted equivalence. Students are expected to be familiar with the following:

- Using Windows—to create and navigate through directories; copy files with drives, directories, and file names specified; understand the purpose of directories; and understand the distinction between drives, directories, and files.

COURSE OBJECTIVES

The purpose of this course is to introduce students to the fundamental features of computer system components and the C++ Programming language.

This course will prepare those students who wish to continue along the Information Technology tracks.

This course will teach students a general understanding of computer systems, applications, architecture, and programming concepts. Students will learn the basic skills of structured programming using C++, including arrays and file handling, algorithm implementation, and libraries.

LEARNING GOALS

Content Knowledge (Technical). Students will be introduced to the fundamental features of computer system components, applications, architecture and general programming concepts. Students will also be introduced to the C++ programming language, and will learn the basic skills of structured programming, including arrays and file handling, algorithm implementation, and libraries.

Critical Thinking and Problem Solving. Students will be introduced to techniques (flow charts and pseoducode) to solve problems using algorithms, various programming constructs in the C++ programming language, and will be challenged to determine when to apply these techniques to different problems. Students will learn how to apply problem solving techniques to develop algorithms using flow charts and pseudocde to solve several problems throughout

the semester. Students will also be introduced to writing their own computer programs using the C++ programming language. Students will be challenged to implement the algorithms they design using the C++ programming language.

TEXTBOOKS AND MATERIALS

- Stephen D. Burd, *Systems Architecture, 5th ed.,* Thompson Course Technology, ISBN-10: 0-619-21692-1
- D. S. Malik, *Introduction to C++ Programming,* Thompson Course Technology, ISBN-10: 1423902467

These textbooks have been widely acclaimed by professional information technology professionals as premier reference books. Additional materials may be assigned and distributed via Blackboard or in class throughout this course that will include several examples of system configuration, terminologies, Operating Systems commands, and basic programming constructs using the C++ language. If you find that you are struggling with basic programming fundamentals (if/else statements, loops, arrays, functions) you may want to use a search engine.

- USB key/flash drive (1GB or 2GB recommended)

COURSE WEB SITE

Blackboard is a web-based application that houses online materials for enrolled students across FAU. You can access our course by logging into http://blackboard.fau.edu (using your FAUNet ID/password), and choosing the course titled "Intro Comp Sys Softw Develop." We will be using Blackboard extensively for this course, so make sure that you log in and get familiar with the course web site as soon as possible.

COURSE COMPONENTS

QUIZZES AND CLASS PARTICIPATION

There will be several pop quizzes given over the course of the semester. You will have 15 minutes to answer 15-20 multiple-choice questions. Students are responsible for bringing **green** scantron sheets and #2 pencils to every class. You will receive a 10% penalty if you do not use a green scantron to complete the quiz. I will not provide make-ups for missed pop quizzes. If you miss a quiz for a legitimate reason (see Exams section), provide appropriate documentation AND contact me prior to the class you will miss, I will replace the missed quiz grade with the average quiz grade you receive on quizzes during the semester.

Due to the nature of this course, you are expected to attend class regularly. Participation in classroom and on-line discussions and hands-on labs are vital in developing professional-level skills. If you are absent from class, it is your responsibility to contact other students to obtain missed lecture notes and assignments.

EXAMS

The mid-term will cover the materials presented in class up to that point. The final will cover all programming and C++ materials covered throughout the semester. Both exams will be multiple-choice with some written responses, and students will be held responsible for coming to class with the appropriate scantron sheets and pencils.

If you are late to an exam, you will only be able to begin the exam if no students have yet submitted their exam and left the classroom. In addition, if you are late, you will not get extra time to finish the exam. I will NOT administer a make-up exam for students who are late and arrive after the first student has submitted the exam and left the classroom.

If you are unable to take an exam due to an emergency, you MUST inform me of that fact ***on or before*** the day of the exam (and before the exam is administered) and arrange for a make-up to be administered before the graded exam is returned to the class. With an approved excuse, a make-up mid-term exam may be taken before the next class with a 10% penalty to the score (except for illness). There will be no make-up opportunities for quizzes or the final exam. Any student requiring a make-up has to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead). If you miss an exam due to illness, you must present a physician's statement outlining the nature of the illness and specifically stating that the illness was **severe enough** to prevent your attendance (*and this must be specifically written by the physician*). Please note that ***in no event will a make-up test be given after the graded exam is returned to the class.***

HOMEWORK

Homework will be assigned throughout the semester. It is absolutely essential for you to do all the homework and understand what you did. Many test questions and programming assignments are based on the homework problems. If you have difficulties in doing or understanding the homework, **it is your responsibility** to make an appointment to come to see me or contact other students for help (refer to the section on Academic Irregularities if you are uncertain as to what is considered appropriate help from other students).

PROGRAMMING ASSIGNMENTS

You will be given several programming assignments during the semester. You will typically have one to two weeks to complete each assignment. All students **must work independently** unless otherwise indicated. Assignments will be due at midnight the night before class (i.e. 11:59pm on Sunday night). Late assignments will receive a 10% penalty and must be submitted within a week (i.e. the following Sunday night at 11:59pm). Students must become familiar with posting assignments to Blackboard and using ZIP files. Students will be required to send their source code, executable, and data file (if applicable).

GRADING

Your course grade is **based on your own individual work.** Everyone is given the same opportunity to achieve a high grade. The best way to end the semester well is to begin the semester well and follow through consistently. Please realize that you earn your grades and that

your actions alone determine your grade. I cannot arbitrarily move the grading scale to accommodate individuals' specific needs or desires.

Class Participation	5%
Quizzes	15%
Programming and Homework Assignments	20%
Midterm	25%
Final	35%

The grading scale:

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Cutoff	93	90	87	83	80	77	73	70	67	63	60	0

Please do not ask me for an unearned extra point or two at the end of the semester in order to move you into the next grade category. This is not only unfair to those who worked hard all semester to achieve their grades; it is also unfair to expect your instructor to do extra work to fix your mess-ups for you. In life, you reap the consequences of your actions, both positive and negative. We all mess up from time to time so you need to accept that and take responsibility. I will be happy to assist you in acquiring the knowledge and skills required to meet your goals, both within and outside of class. However, your grade itself is determined by you, and not by me.

Students enrolled in the graduate level (ISM 6230) are required to do more challenging problems on homework assignments and on the final exam, in addition to those assigned to students who enrolled in ISM 3230. These students are also required to research case studies and scholarly articles on topics chosen by the students and approved by the professor.

COMMUNICATING WITH ME ELECTRONICALLY

BLACKBOARD

As far as is possible, rather than emailing me, you should post your questions on the relevant Blackboard discussion forum. This is far more efficient than individual back-and-forth email. There are two discussion forums currently active:

1. Administrative questions about the course
2. General questions and comments about what we cover in class

Before posting a question, make sure that you read through the course content on Blackboard and the questions other students have posted. Often, you will find the answer to your question here.

EMAIL

Students are required to have an email account for this course, and it is your responsibility to ensure that your email address listed on Blackboard is the one that you check regularly (you can always change it on Blackboard or set up auto-forward or POP download if not).

The best way to reach me is through sending an email message or visiting my office during my office hours. Phone calls or phone messages are recommended only during office hours and are not a useful tool if you need an urgent response.

ALL emails should:

- Have "ISM 6230" at the beginning of the subject line, so that I recognize that it is from one of you, and so that my spam filters do not accidentally delete your message.
- Contain your name in the body of the message, since email addresses do not always identify the sender.
- Use proper salutations and signatures
- Use the same type of language and manners that you would use in a formal, business setting.
- Ask specific questions which are not answered through the course Blackboard
- Avoid sending email attachments.
- Emails concerning **software issues:** List the complete sequence of procedures you followed. Most often, problems with software are procedural errors by the user. Phrases such as "it didn't let me" only convey that you have not understood computer concepts and/or that you are rushing and not willing to take responsibility for your actions

If you do not follow these guidelines, I reserve the right to request a revised email with appropriate changes before addressing your questions or issues.

ASSUMPTIONS I MAKE ABOUT YOU

- You have made an informed choice to be a member of this class. You have read the syllabus and know the workload required. On average, you should spend 10-15 hours each week outside of class working on your reading, programming assignments, and homework.
- You will do the required reading and assignments. This means that you will often have to read something more than once in order to fully understand it.
- You will share your personality, knowledge, skills, and special expertise with the rest of us throughout this semester.

ASSUMPTIONS YOU CAN MAKE ABOUT ME

- I will give you the respect that I ask you to give me and the other members of the class.
- I will do my best to help you, but I cannot learn the material for you.
- My perception of "fair" is in the context of the entire class, not just your individual needs or desires.
- My judgments are based on my knowledge and experience of what is pedagogically sound for your continuing education and learning.

ACADEMIC POLICIES

ACADEMIC IRREGULARITIES

It is valuable to work with a friend or classmate when learning a new application or working out a problem. However, the work that you perform for a grade **must be your own work** unless "working in groups" is explicitly allowed. Homework and programming assignments in this course are meant to be done by the individual. While I encourage you to help and teach each other, you must distinguish help from cheating. If you have trouble doing so, *ask yourself if both helper and helpee would be able to complete the assigned work independently when you submit the assignment. If either one of you is unable to do so, you have cheated.*

Cheating, plagiarism, copying, unauthorized collaboration, and hiring or soliciting another person to do your assignments are unacceptable, and are subject to disciplinary actions, including, but not limited to, an "F" in the course, and a letter of fact on your student record, in accordance with the policies of FAU and the College of Business. In cases where this has occurred, both the person who cheats/plagiarizes/copies/collaborates/hires another person AND the originator of the work will be punished.

"Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, 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 http://www.fau.edu/regulations/chapter4/4.00_ Honor_Code.pdf."

Please note that none of the exams are collaborative, and any cheating attempts will be dealt with harshly and swiftly. Examinations are closed book/notes/computer/cell phone/PDA/iPod (the idea should be clear). Hats, cellphones, and any electronic device are disallowed in the exam, and things like clear water bottles or visible loose papers may be considered suspicious.

Code of Academic Integrity:
http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf

INCOMPLETE GRADE

University policy states that an incomplete grade "I" may be given only if a student currently has a passing grade on the course. An incomplete is meant only for students who are unable to complete the course due to severe hardships, beyond their control. It is not meant to accommodate students who decide that the workload is too heavy. Pay attention to the drop dates. If the course is too much for you, drop it. If an "I" is given, work must be completed within the time period specified by the instructor which is not to exceed 12 months from the time the incomplete is given.

OTHER REQUIREMENTS

COMPUTER AND INTERNET ACCESS

This course is Blackboard-assisted, and much course business, such as file distribution, emails, assignment submission, and announcements between classes, will occur exclusively through Blackboard. Therefore, students are expected to have access to a computer, the Internet, and Visual C++ for this course. If you do not have your own, computers are available to all FAU students in the FAU Open Labs (http://www.ecs.fau.edu/labs/open/). In addition, if you need to transfer files between your home computer and the lab, you should furnish your own means, such as a thumb drive (recommended), CD-ROM, or online storage.

ADA ACCOMODATIONS

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations to properly execute coursework due to a disability must register with the Office for Students with Disabilities (OSD) located in SU133 (297-3880) and follow all OSD procedures. It is your responsibility to notify me as soon as possible if you have a disability and need classroom accommodations. I will be glad to work with you and assist you.
ADA policy: http://www.fau.edu/eop/ada/ada_policy.php

RELIGIOUS ACCOMODATIONS

"In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs with regard to admissions, registration, class attendance, and the scheduling of examinations and work assignments. Students who wish to be excused from course work, class activities, or examinations must notify the instructor in advance of their intention to participate in religious observation and request an excused absence. The instructor will provide a reasonable opportunity to make up such excused absences. Any student who feels aggrieved regarding religious accommodations may present a grievance to the director of Equal Opportunity Programs. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination." Religious Accommodation: http://www.fau.edu/academic/registrar/catalog/academics.php (Listed under the "Policies for all students" section)

Date **TENTATIVE SCHEDULE**

Week	Mon	Topic	Textbook
1	1/10	**Logic - The beginning**	None
		1/14 - Last day to Drop without receiving a "W"	
	1/17	***>>> MLK Holiday - No Class <<<***	
2	1/24	**Introduction; Computer Technology; Intro to Systems Architecture; Data Representation; Data Storage Technology**	SA - Chap 1, 2, 3, 5
3	1/31	**System Integration and Performance; Data and Network Communication Technology; Computer Networks; Application Development**	SA - Chap 6, 8, 9, 10

4	**2/7**	**Operating Systems; File and Secondary Storage Management; Internet and Distributed Application Services; System Administration**	SA - Chap 11, 12, 13, 14
5	**2/14**	**Overview of Computers and Programming Languages**	CP - Chap 0
6	**2/21**	***>>> Midterm Exam <<<***	
7	**2/24**	**Basic Elements of C++**	CP - Chap 1
		3/4 - Last day to Drop without receiving an "F"	
	3/7	***>>> Spring Break - No Class <<<***	
8	**3/14**	**Input/Output**	CP - Chap 2
9	**3/21**	**Control Structures I (Selection)**	CP - Chap 3
10	**3/28**	**Control Structures II (Repetition)**	CP - Chap 4
11	**4/4**	**User Defined Functions**	CP - Chap 5
12	**4/11**	**User Defined Functions (cont)**	CP - Chap 5
13	**4/18**	**Arrays**	CP - Chap 6
14	**4/25**	**User Defined Simple Data Types/Pointers**	CP - Chap 8, 9
5/2		***>>> Final Exam <<<***	

SA = Systems Architecutre
CP = C++ Programming

Reading assignments for *Systems Architecture*

Chapter	*Pages*
1	p. skim 1-18
2	p. skim 21-36, skim 44-59
3	p. skim 65-75, 75-107
5	p. skim 167-184
6	p. 216-217, 223, skim 227-229, skim 231-237, skim 241-243
8	p. skim 302-314, 327-328, skim 336-340
9	p. 356-361, skim 370-375
10	p. 388-413
11	p. 430-434
12	p. 476-485, 492-503, 506-510
13	p. 516-519, skim 529-542
14	p. skim 556-587

Reading assignments for *C++ Programming*

Chapter	*Pages*
0	p. 1-20
1	p. 25-44, 47-55, 57-72
2	p. 85-104, 111, 119-126
3	p. 139-173, 180 (top)

4	p. 197-231, 233-239
5	p. 255-293
6	p. 337-358
8	p. 500-509
9	p. 517-532

REFERENCES

JOURNALS

ACM Transactions on Computer Systems
ACM Transactions on Software Engineering and Methodology
C++ Builder Developer's Journal
Communications of the ACM
IEEE Transactions on Computers
IEEE Transactions on Software Engineering
Science of Computer Programming

BOOKS

M. H. Boilloth, G. M. Gleason, and L. W. Horn, *Essentials of Flowcharting, 5th edition*, Business and Educational Technologies, ISBN-10: 0697254186

C. Dickerson and D. N. Mavris, *Architecture and Principles of Systems Engineering (CRC Complex and Enterprise Systems Engineering)*, Auerbach Publications, ISBN-10: 1420072536

S. Meyers, *Effective C++: 55 Specific Ways to Improve Your Programs and Designs (3rd Edition)*, Addison-Wesley Professional, ISBN-13: 978-0321334879