

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 <u>ISM</u> COURSE NUMBER <u>6140</u> LAB CODE (L or C) _____ COMPLETE COURSE TITLE: INFORMATION TECHNOLOGY FUNDAMENTALS EFFECTIVE DATE (first term course will be offered): FALL 2012			INSTRUCTIONAL METHOD (V, BB, IC, EC, ETC.):
CREDITS: 3	LAB/DISCUSSION:	TEXTBOOK INFORMATION:	SEE ATTACHED SAMPLE SYLLABUS
LECTURE: Y	FIELD WORK:		
GRADING: REGULAR <u>X</u> PASS/FAIL _____ SATISFACTORY/UNSATISFACTORY _____			
COURSE DESCRIPTION, NO MORE THAN 3 LINES: PROVIDES AN EXAMINATION OF INFORMATION TECHNOLOGY CONCEPTS, SUCH AS COMPUTER ARCHITECTURE AND HARDWARE, PROGRAMMING LOGIC, ALGORITHMS AND DATABASES, COMMUNICATIONS, AND WEB TECHNOLOGIES AND SOCIAL MEDIA. AVAILABLE ONLY TO GRADUATE STUDENTS LACKING AN UNDERGRADUATE COURSE IN INFORMATION TECHNOLOGY FUNDAMENTALS.			
PREREQUISITES: FULLY ADMITTED GRADUATE STUDENTS <input type="checkbox"/> Check box to enforce*	COREQUISITES: <input type="checkbox"/> Check box to enforce*	OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL): <input type="checkbox"/> Check box to enforce*	
MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: TERMINAL DEGREE IN APPROPRIATE FIELD			
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. DEPARTMENT OF COMPUTER & ELECTRICAL ENGINEERING AND COMPUTER SCIENCE – SEE ATTACHED EMAIL			
Faculty Contact, Email, Complete Phone Number Caryn Conley cconley8@fau.edu 561-297-2707			

SIGNATURES

SUPPORTING MATERIALS

Approved by: Department Chair: <u>C. Conley on behalf of Tamara Diney</u> College Curriculum Chair: <u>[Signature]</u> College Dean: <u>[Signature]</u> UGPC Chair: _____ Dean, Graduate Studies _____	Date: <u>9/27/11</u> <u>9/27/11</u> <u>9-27-11</u> _____ _____	Syllabus—must include course objectives. Written Consent—required from all departments affected. Go to: http://graduate.fau.edu/gpc/ to download this form
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* "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 GraduateStudies@fau.edu 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 6140, 3 credit hours
Information Technology Fundamentals
Syllabus
Term

Instructor *Dr. Caryn Conley*
cconley8@fau.edu (see section regarding communication)
(561) 297-2707
Fleming 212, Boca campus
Office hours: TBA

Class TBA

PREREQUISITES

Fully admitted graduate students.

COURSE DESCRIPTION

This course is part of the Foundation Courses of the MSITM program. Provides an examination of information technology concepts, such as computer architecture and hardware, programming logic, algorithms and databases, communications, and web technologies and social media. Available only to graduate students lacking an undergraduate course in information technology fundamentals. Prior course work or professional experience may be considered in lieu of this course, with departmental approval.

COURSE OBJECTIVES

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.

Students will be introduced to techniques (flow charts and pseudocode) to solve problems using algorithms. Students will also be introduced to 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 pseudocode 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, 6th ed.*, Thompson Course Technology, ISBN-13: 978-0538475334
- 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 10-15 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 is comprehensive and will include 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*.

ASSIGNMENTS

Homework assignments will be assigned throughout the semester. It is absolutely essential for you to do all the homework and understand what you did. You will typically have one to two weeks to complete each assignment. Many test questions are based on the homework problems. 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. 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).

RESEARCH PAPER

Students are required to research case studies and scholarly articles on topics chosen by the students and approved by the professor.

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	10%
Assignments	15%
Research Paper	20%
Midterm	20%
Final	30%

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

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, a letter of fact on your student record, and a notation on your transcript 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/chapter4/4.001_Code_of_Academic_Integrity.pdf.

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

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 to properly execute coursework must register with the Office for Students with Disabilities (OSD) – in Boca Raton, SU133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – 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.

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 coursework, class activities or examinations must notify the instructor in advance of their intention to participate in religious observance 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."

From <http://www.fau.edu/academic/registrar/catalog/academics.php>, under "Policies for all students"

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

COURSE TOPICAL OUTLINE

Week	Topic	Textbook	Homework
1	Logic - The beginning	None	
2	Introduction; Computer Technology; Intro to Systems Architecture; Data Representation; Data Storage Technology	SA - Chap 1, 2, 3, 5	HW #1 due
3	System Integration and Performance; Data and Network Communication Technology; Computer Networks; Application Development	SA - Chap 6, 8, 9, 10	
4	Operating Systems; File and Secondary Storage Management; Internet and Distributed Application Services; System Administration	SA - Chap 11, 12, 13, 14	HW #2 due

5	Overview of Computers and Programming Languages	CP - Chap 0	
6	>>> Midterm Exam <<<		
7	Basic Elements of C++	CP - Chap 1	HW #3 due
8	Input/Output	CP - Chap 2	PA #1 Part 1 due
9	Control Structures I (Selection)	CP - Chap 3	PA #1 Part 2 due
10	Control Structures II (Repetition)	CP - Chap 4	PA #2 Part 1 due
11	User Defined Functions	CP - Chap 5	PA #2 Part 2 due
12	User Defined Functions (cont)	CP - Chap 5	PA #3 Part 1 due
13	Arrays	CP - Chap 6	PA #3 Part 2 due
14	User Defined Simple Data Types/Pointers	CP - Chap 8, 9	PA #4 due
15	>>> Final Exam <<<		

SA = Systems Architecture

CP = C++ Programming