1982

Master of Science in Computer Science Course Descriptions

Nova Southeastern University

NOVA UNIVERSITY
CENTER FOR SCIENCE AND ENGINEERING
Master of Science: Computer Science

Registrar's Office
Parker Bldg.
Room 104

Winter Term Registration:
Mon. Dec. 7-Dec. 18, 1981
Winter Term Classes:
Mon. Jan. 4-March 26, 1982

Hours:
8:30 A.M. to 6:30 P.M.
Mon.-Thurs
8:30 A.M.-5 P.M. FRI

For further information:
Nova University
Center for Science and Engineering
3301 College Avenue
Fort Lauderdale, Florida 33314 475-7650

8201

Courses Offered: Winter Session 1982

COURSE NUMBER	COURSE TITLE	CREDIT	DAY	TIME	ROOM	PROFESSOR
ICS 610	Computer Systems	3	Monday	6-10	M 212	K. Willberg
ICS 630	Programming Languages	3	Wednesday	6-10	M 311	M. Ghanouni
ICS 634	Compiler Design Theory	3	Wednesday	6-10	M 212	M. Reynolds
ICS 645	Intergrated Computer Systems (VLSI)	3	Tuesday	6-10	M 212	J. Levin
ICS 680	Microprogramming and Microprocessing	3	Thursday	6-10	M 311	P. Adams
ICS 690	Software Engineering	3	Monday	6-10	M 311	J. Levin

COURSE DESCRIPTIONS

ICS 610 COMPUTER SYSTEMS
Introduction of digital computer design, peripheral devices, storage allocation, operating systems, compilers and assemblers. An understanding of the total operating environment will be developed. Investigation of the common programming techniques and their theory. Segmentation and overlays, recursion, dynamic storage processing, (stacks, queues, trees), macros.

ICS 630 PROGRAMMING LANGUAGES
Introduction to data structures and data types, and understanding of the modern approach to structured programming will be developed. A comparative study of several high-level programming languages. Emphasis will be placed on how concepts are expressed in each of the major languages, such as FORTRAN, COBOL, PL/1, PASCAL, and ALGOL.

ICS 634 COMPILER DESIGN THEORY
Language theory will be applied to the design of a compiler for a high-level language. Parsing, syntax analysis, interpretation phase and code generation. Other areas of the compilation process will be covered, such as storage allocation, symbol table management, searching and sorting, and recursion.
PREREQUISITES: ICS 610, ICS 630

ICS 645 INTEGRATED COMPUTER SYSTEMS (VLSI)
Introduction to MOS circuits. The technology of integrated systems. Design of elementary components and subsystems (shift registers, dynamic registers, stacks). Fabrication process and implementation procedures. The design of an Integrated Computer System (Data path, controller, microprogrammed control). System timing. Processor arrays. The physics of Integrated systems.
PREREQUISITE: CONSENT OF INSTRUCTOR

ICS 680 MICROPROGRAMMING AND MICROPROCESSORS
The past, present and future of Microprogramming will be discussed in detail with particular attention given to Processor Technology. An in-depth survey of commercially available microprogrammable microprocessors will be presented as well as monolithic microprogrammed devices. The students will implement a processor instruction set in both vertical and horizontal microcode utilizing a Simulator, Micro-assembler, and Register Transfer language. Advanced topics in special-purpose processor design and architecture redefinition (dynamic) will be presented.
PREREQUISITE: CONSENT OF INSTRUCTOR.

ICS 690 SOFTWARE ENGINEERING
This course offers a thorough analysis of the problems related to the design, development and implementation of Software Projects. First, the fundamentals of Software project management are presented, followed by a discussion of the techniques of Software development. A comprehensive, modern approach to structured programming, program modularization and program correctness is offered. Software Verification and Validation, Software security and Software protection will also be analyzed in detail. PREREQUISITE: CONSENT OF INSTRUCTOR

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The following is the schedule of fees and the university policy on tuition payment and refund.

Tuition fees at the rate of $100 per credit hour

Application fee, nonrefundable	$15
Registration fee, nonrefundable	$15 per term
Laboratory fee, where applicable	$30
Graduation fee	$15
Late Registration Fee (after Dec. 18)	$15

Students cannot re-register for additional courses if there is an outstanding balance against previous tuition for which no previous arrangement has been made with the Comptroller.

Returning students must call 475-7650 for registration approval. Registration forms may be mailed in only after approval by phone.

Tuition Refund Policy

The following refund policy will be computed based upon the date written notification of the drop is received by the Registrar's Office.

100% refund prior to the first class meeting.
75% refund prior to the second class meeting, regardless of class attendance.
50% refund prior to the third class meeting, regardless of class attendance.
Fees are non-refundable

Fri. Jan. 29 LAST DAY TO DROP COURSES.

Nova University is fully accredited by the Southern Association of Colleges and Schools and practices a policy of nondiscrimination in employment and in all its programs.

Nova University admits students of any race, color, and national or ethnic origin.