

1981

# Master in Computer Science Course Listing

Nova Southeastern University

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# NOVA UNIVERSITY

## CENTER FOR SCIENCE AND ENGINEERING

### *Master of Science: Computer Science*

**Fall Term Registration:**  
**Mon., Aug. 31-Sept. 11, 1981**  
**Fall Term Classes:**  
**Mon.I, Sept. 21-Dec. 11, 1981**

**Hours:**  
**8:30 A.M. to 5:00 P.M.**

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

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## Courses Offered: Fall Session 1981

COURSE NUMBER	COURSE TITLE	CREDIT	DAY	TIME	ROOM	PROFESSOR
ICS 610	Computer Systems	3	Monday	6-10	M 212	K. Willberg
ICS 616	Theory and Principles of Programming	3	Wednesday	6-10	M 311	Staff
ICS 630	Programming Languages	3	Wednesday	6-10	M 212	P. Adams
ICS 650	Operating Systems	3	Thursday	6-10	M 311	P. Adams
ICS 658	Data Communications	3	Monday	6-10	M 311	J. Levin
ICS 660	Data Base Management	3	Tuesday	6-10	M 212	J. Levin

## COURSE DESCRIPTIONS

### ICS 610 COMPUTER SYSTEMS

Introduction to 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 616 THEORY AND PRINCIPLES OF PROGRAMMING

The mathematics of algorithm and programming construction. The art of structured programming. The dynamic environment of a program and its' record of execution. The theory of concurrent programming. PREREQUISITES: ICS 610, ICS 630.

### 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 650 OPERATING SYSTEMS THEORY AND DESIGN

Analysis of computer operating systems with emphasis on structured design. Multiprogramming and multiprocessing, real-time, time-sharing, networks, job control. Scheduling, synchronization and other forms of resource management: I/O programming, memory and file system management. PREREQUISITES: ICS 610, ICS 630.

### ICS 658 DATA COMMUNICATIONS

An introduction to basic data communication concepts, coding modes and types of transmissions, multiplexing, line protocols, switching techniques and communication satellite technology. PREREQUISITE: ICS 656.

### ICS 660 DATA BASE MANAGEMENT

Computer-oriented techniques for information storage and retrieval with emphasis on on-line capability. File structures, including data definition and manipulation languages. PREREQUISITES: ICS 610, ICS 630.

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