1982

Bachelor Degree Programs For Students Working in Business and Industry August 1982

Nova Southeastern University

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BACHELOR DEGREE PROGRAMS
For Students Working In Business And Industry

- ELECTRICAL ENGINEERING
- COMPUTER SCIENCE
- COMPUTER SYSTEMS

Develop Your Technical Potential
Part Time and Full Time Degree Programs
Designed for the Working Adult in Cooperation with Industry
"Second Bachelor" Programs for those who now need a Technical Degree

WHAT IS THE PROGRAM FORMAT?
Classes will meet for 4.5 hours for 9 sessions either in the evening from 6-10:30 PM or on Saturday from 8:30 AM-1:00 PM at the main Nova campus, or at industrial sites.

WHAT ARE THE ADMISSION REQUIREMENTS?
Students must be high school graduates (or equivalent), and take the Nova College Placement Test, which will evaluate ability to read, write, and perform mathematical calculations on the level needed for college work. A student may take up to 2 courses as a Special Student or while in the process of applying before taking the Placement Test.

CAN I TAKE A COURSE OR TWO WITHOUT ENROLLING IN A DEGREE PROGRAM?
YES. In this case, you check "Special Student" on the application form. You do not have to take the Placement Test to take one or two courses as a "special student."

HOW DO I APPLY FOR ADMISSION?
Complete the application forms and return with a non-refundable $20.00 application fee by mail or in person. All checks should be made payable to NOVA UNIVERSITY. All materials should be sent to Nova College, Registrar's Office, Nova University, 3301 College Avenue, Fort Lauderdale, FL 33314.

HOW DO I REGISTER?
Discuss your needs with the counselor by phone or in person, complete the registration form. It should be returned with a check in the appropriate amount made out to NOVA UNIVERSITY, and sent to the same address as indicated in the admission question above.

WHAT IS THE COST OF ATTENDING?
Application fee (non-refundable): $20.00
Registration fee: $10.00
Tuition (per credit): $110.00
Late registration fee (after Aug. 23): $10.00

WHAT CREDIT CARDS CAN I USE?
Master Charge
VISA
Hollywood Buy-O-Matic

FOR INFORMATION CALL:
BROWARD COUNTY: 475-7650
DADE COUNTY: 940-6447, Ext. 7649/50 (toll free)
PALM BEACH COUNTY: 732-6600, Ext. 7649/50 (toll free)

Nova University / College Avenue / Fort Lauderdale, Florida 33314
Nova University is fully accredited by the Southern Association of Colleges and Schools. Nova University accepts students of any race, color, and national or ethnic origin.
# Course Descriptions

**CS-150 Introduction to Computer Organization**
An introduction to principles of digital computer organization and operation, and organization, data representation, the central processing unit, memory, input/output devices, number systems, logic systems. **Prerequisite:** demonstrated competency equivalent to MAT 102.

**CS-170 Computer Programming I**
An introduction to good programming techniques including flowcharting, code design, debugging techniques and documentation, problem-solving methods and algorithm development to be used in the design of computer programs. The language, BASIC, will be taught as part of this course. An introduction to the use of microcomputers and computer terminals. **Prerequisite:** demonstrated competency equivalent to MAT 102.

**CS-200 Computer Programming II**
Continuation of Computer Programming I including introduction to random and sequential files, program design, modular design, structured programming, large programming design, documentation. **Prerequisite:** Computer Programming I.

**CS-220 Business Oriented Language (COBOL)**
A study of the COBOL programming language with emphasis on business applications. Topics covered will include program structure and breakdown, report generation and file handling. **Prerequisite:** Computer Programming II.

**CS-240 Digital Design**
Application of the principles of logic design in digital systems. Arithmetic logic units, parallel and serial interfaces, information transfer in a digital system, major hardware components and peripheral devices, digital computers. **Prerequisite:** Fundamentals of Logic Design.

**CS-320 Organization of Programming Languages**
Development of an understanding of the organization of programming languages, introduction to formal study of programming language specification and analysis, comparison of two or more high level modern programming languages. **Prerequisite:** FORTRAN, PASCAL, Data Structures.

**CS-335 Assemblers and Assembly Language Programming**
A detailed analysis of the operation of assemblers, assembler features, assembly language programming, macro facilities, Assembly language programs will be written as part of this course. **Prerequisite:** FORTRAN.

**CS-340 Data Structures (formerly Introduction to File Processing)**
An introduction to the concepts and techniques of structuring data on bulk storage devices; introduction to data structures and file processing including arrays, records, strings, lists, trees, stacks, queues, manipulation and limitations of files. **Prerequisite:** Computer Programming II, PASCAL.

**CS-360 Computer Architecture**
The analysis and design of computer systems; the interrelation of software and hardware design in the final computer system, interrelation between the operating system and the architecture of computer systems, concurrent processes and resource allocation. **Prerequisite:** Computer Circuit Design. Suggested prerequisite: Assemblers and Assembly Language Programming.

**CS-420 Operating System Concepts**
Methods in the analysis and design of large scale systems, including concepts of semaphores, processes, linear address space, resource allocation, protection and basic topics in operating system development. **Prerequisite:** Data Structures, Systems Programming.

**EE-310 Networks II**
A C circuit theory, capacitance, inductance, source free RL & RC circuits, application of unit step forcing function, RLC circuits, sinusoidal analysis, phasor sinusoidal steady state response. Polyphase circuits, average power and RMS power. **Prerequisite:** Calculus II, Networks I.
All courses are 3 semester hours of credit unless otherwise indicated.

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<tr>
<th>EE</th>
<th>CS</th>
<th>MATH</th>
<th>SYS/TC</th>
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<tr>
<td>x</td>
<td>x</td>
<td>MAT-310 Calculus III</td>
<td>EE-340 Electronics II</td>
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<td>MAT-320 Advanced Calculus</td>
<td>EE-345 Electronics Lab II (1 cr.)</td>
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<td>MAT-360 Matrices &amp; Statistics</td>
<td>EE-400 Electronics III</td>
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<td>MAT-420 Linear Algebra</td>
<td>EE-405 Networks III</td>
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<td>MAT-430 Fns. of a Complex Variable</td>
<td>EE-410 Electromagnetic Theory</td>
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<td>MAT-440 Numerical Analysis</td>
<td>EE-420 Field Transmission Lines</td>
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<td>x</td>
<td>MAT-450 Probability &amp; Statistics</td>
<td>EE-430 Fund. of Communication Systems</td>
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<td>x</td>
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<td>PHYS-140 Physics I</td>
<td>EE-440 Energy Systems</td>
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<td>PHYS-150 Physics II</td>
<td>EE-450 Control Systems</td>
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<td>PHYS-160 Physics III</td>
<td>EE-460 Micro-electronics</td>
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<td>PHYS-212 Science of Matter or Chemistry</td>
<td>EE-470 Elect. Eng. Design</td>
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<td>PHYS-310 Modern Physics</td>
<td>ES-220 Engineering Drawing</td>
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<td>Introduction to Computer Organization</td>
<td>ES-310 Engineering Applications of Materials</td>
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<td>Fundamentals of Logic Design</td>
<td>ES-320 Industrial Planning</td>
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<td>Computer Programming I</td>
<td>ES-330 Statics</td>
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<td>Computer Programming II</td>
<td>ES-340 Dynamics</td>
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<td>Fortran</td>
<td>ES-390 Thermodynamics</td>
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<td>Business Oriented Language (COBOL)</td>
<td>TEC-320 Technical Communication</td>
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<td>Digital Design</td>
<td>TEC-330 Technical Writing</td>
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<td>Organization of Programming Languages</td>
<td>TEC-350 Production of Technical Communication Materials</td>
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<td>Structured Programming (PASCAL)</td>
<td>TEC-370 Technical Documentation I</td>
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<td>Assemblers &amp; Assembly Language Programming</td>
<td>TEC-380 Technical Documentation II</td>
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<td>Data Structures</td>
<td>TEC-450 Legal Aspects of Technical Communication</td>
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<td>Computer Circuit Design</td>
<td>TEC-460 Technical Communication Project Management</td>
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<td>Computer Architecture</td>
<td>TEC-470 Seminar in Technical Communication</td>
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<td>Software Design</td>
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<td>Organization of the Computer Environment</td>
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<td>a</td>
<td>System Design &amp; Analysis</td>
<td>138 credits</td>
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<td>x</td>
<td>Operating System Concepts</td>
<td>120 credits</td>
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<td>Simulation &amp; Modeling</td>
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<td>Microcomputers</td>
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<td>Data Base Management Systems Design</td>
<td>120 credits</td>
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| a   | CS-470 Information Systems Analysis and Design | A

PROGRAM REQUIREMENTS

B.S. Electrical Engineering (EE) 138 credits 460
B.S. Computer Science (CS) 120 credits 463
B.S. Computer Systems (SYS) 120 credits 464
B.S. Computer Systems/Technical Communications (SYS/TC) 120 credits 464
B.S. Mathematics 120 credits 462

Choose 1 "a" Course

Choose 2 "b" Courses
EE-430 Fundamentals of Communication Systems
Review of Fourier analysis, various methods for modulating and demodulating signals, calculating effects of noise on single transmissions, sampling theory and digital data transmission, design of various types of communication systems, transmission lines and micro-waves; mathematical description of noise, fundamentals of information theory as applied to communications. Prerequisite: Networks III, Electronics II.

MAT-150 Precalculus (Formerly called College Mathematics)
Review of algebra trigonometric functions, graphs of functions, logarithms, exponents, functions of the natural number. Introduction of calculus, concept of limits, integrals.

MAT-305 Calculus III
Sequences and series. Taylor series vector analysis functions of several variables, partial derivatives, total differential chain rule, multiple integral and application functions of a complex variable. Prerequisite: Calculus II.

PHY-212 Science of Matter
Introductory course in the science of materials, review of atomic theory, atomic bonding and periodic table, chemical equations, states of matter, structure of crystals, nature of crystal imperfections, and atom movements, metallic and ceramic materials and their properties, multiphase materials, equilibrium relationships. Prerequisite: Physics I, II, III.

TEC-330 Technical Writing
Basic techniques of technical writing, techniques for writing reports, description of processes, instructions, proposal and progress reports, and oral presentations. Prerequisite: Lan 311 Business Communication or demonstrated competency on Nova College examination.

SEE CATALOG FOR NOVEMBER COURSE DESCRIPTIONS

The Center also offers a Master of Science degree with a major in Computer Science.

WHAT ARE REGISTRATION POLICIES
How to Drop and Add Courses
The first week of classes is the Drop/Add Period. After a class has met once you must receive written permission from the program office to add the class. The normal refund policy applies to a course dropped during the drop and add period unless another course of equal credit, with the same term beginning date, is added in its place.

The Registrar's Office must be notified in writing of the course to be dropped. This may be done by completing a change of registration form available in the Registrar's Office or by mailing a simple written note to the Registrar's Office.

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.

How to Withdraw
After the third class meeting, a student may withdraw from a course by completing a "Withdrawal Form" available in the Registrar's Office. This form must be approved by the instructor and academic office. It is the student's responsibility to return the completed form to the Registrar's Office.

LAST DAY TO WITHDRAW: Oct. 11

How to Take an Incomplete
With the written approval of the course instructor, you may have up to one additional term to complete the course and receive a letter grade. An incomplete form must be completed and signed by the instructor in order to receive a grade of "I". The grade of "I" remains permanently on the record if the work is not completed within the extension period.

FINANCIAL AID
Nova University participates in various governmental financial aid programs for the benefit of its students.
For information call: 475-7410