1982

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

Nova Southeastern University

NOVA UNIVERSITY
CENTER FOR SCIENCE AND ENGINEERING

BACHELOR DEGREE PROGRAMS
For Students Working In Business And Industry

- **ELECTRICAL ENGINEERING**
- **COMPUTER SCIENCE**
- **COMPUTER SYSTEMS**

8205 / 8206 (handwritten)

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

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.

ADMISSION REQUIREMENTS

Students must be high school graduates (or equivalent), and take the Corporate Division Placement Test, which will evaluate ability to read, write, and perform mathematical calculations (hand calculator permitted) on the level needed for college work. College Board or Miller Analogy scores may be substituted by students in lieu of Placement Test. 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 $15.00 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?

	handwritten	printed
Application fee (non-refundable):	20.00	$5.00
Registration fee:	10.00	$15.00
Tuition (per credit)	85.00	$75.00
Late registration fee (after April 30)		$10.00

WHAT CREDIT CARDS CAN I USE?

Master Charge
VISA
Hollywood Buy-O-Matic

FOR INFORMATION CALL:

BROWARD COUNTY: 475-7650

DADE COUNTY: 940-6644, 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 & Schools

COURSES BEGINNING MAY 10, 1982

COURSE NO.	DESCRIPTION	DAY	SECTION	TIME	PLACE
CS-160 ✓	Fundamentals of Logic Design	M	A	6:00-10:30 pm	P106
CS-340 ✓	Data Structures	M	A	6:00-10:30 pm	P208
EE-225 ✓ *ETR*	Electricity Laboratory	M	A	6:00-10:30 pm	P107
EE-335 ✓ *ETR*	Electronics Laboratory I	M	A	6:00-10:30 pm	P146
MAT-310 ✓	Differential Equations	T	A	6:00-10:30 pm	P209
CS-170 ✓	Computer Programming I	T	A	6:00-10:30 pm	P146
CS-350	Computer Circuit Design	T	A	6:00-10:30 pm	P106
MAT-150 ✓	Pre-Calculus (College Mathematics)	W	A	6:00-10:30 pm	P209
CS-200 ✓	Computer Programming II	W	A	6:00-10:30 pm	P208
EE-210 ✓ *ETR*	Networks I	W	A	6:00-10:30 pm	P240
EE-340 ✓ *ETR*	Electronics II	W	A	6:00-10:30 pm	P107
MAT-220 ✓	Calculus II	TH	A	6:00-10:30 pm	P240
CS-410	System Design and Analysis	TH	A	6:00-10:30 pm	P208
CS-210	Fortran	TH	A	6:00-10:30 pm	P209

SUMMER SESSION/JUNE 14—AUGUST 14, 1982

COURSE NO.	DESCRIPTION	DAY	SECTION	TIME
MAT-220	Calculus II	M	A	6:00-10:30 pm
CS-170	Computer Programming I	M	B	6:00-10:30 pm
MAT-210	Calculus I	T	A	6:00-10:30 pm
MAT-150	Precalculus	T	A	6:00-10:30 pm
PHY-140	Physics I	T	A	6:00-10:30 pm
CS-210	Fortran	T	A	6:00-10:30 pm
CS-330	Structured Programming (Pascal)	W	A	6:00-10:30 pm
CS-150	Introduction to Computer Organization	W	A	6:00-10:30 pm
PHY-150	Physics II	W	A	6:00-10:30 pm
CS-200	Computer Programming II	TH	A	6:00-10:30 pm
CS-170	Computer Programming I	TH	A	8:30 am-1:00 pm

Course Descriptions

CS-150 Introduction to Computer Organization
An Introduction to principles of digital computer 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-160 Fundamentals of Logic Design (Formerly called Digital Systems)
An introduction to elementary digital logic circuits, Boolean algebra, Karnaugh maps, digital counters, other basic circuit elements. Number set modules, binary, octal and hexadecimal number systems are investigated and related to digital computing structures. **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-210 FORTRAN
Introduction to the language FORTRAN with reference to the latest standards, special techniques for programming in FORTRAN. **Prerequisite: Computer Programming II, demonstrated competency equivalent to MAT 102.**

CS-330 Structured Programming (Pascal)
Basic principles of structured programming and language foundation. PASCAL will be taught as an example of a structured programming language. **Prerequisite: Computer Programming II and 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-350 Computer Circuit Design
Design of combinational and sequential digital circuits, programmable logic design, and firmware design. **Prerequisite: Digital Design.**

CS-410 System Design & Analysis
Advanced topics in design of digital computer systems and components. **Prerequisite: Computer Architecture.**

EE-210 Networks I
Definitions of charge, current voltage, energy, Ohm's Law, Kirchoff's Law, networks, resistance, voltage, power, nodal analysis, mesh analysis, principle of superposition, power transfer, Thevenin and power theorems. Two port networks. **Prerequisite: Calculus I**

SUMMARY OF PROGRAM REQUIREMENTS

All courses are 3 semester hours of credit unless otherwise indicated.

EE	CS	MATH	SYS	SYS/TC	Course	Title
x	x	x	x	x		Communications (3 cr.) (Lan. 111)
x	x	x	x	x		Communications (3 cr.) (Lan. 112 or Tec.330)
x	x	x	x	x		Social Science/Behavioral Science (12 cr.)
x	x	x	x	x		Humanities (6 cr.)
	x		x	x	MAT-150	Precalculus
x	x	x	x	x	MAT-210	Calculus I
x	x	x			MAT-220	Calculus II
x	x				MAT-305	Calculus III
x	x				MAT-310	Differential Equations
	x				MAT-320	Advanced Calculus
a	a				MAT-360	Matrices & Statistics
a	a	x			MAT-420	Linear Algebra
	x				MAT-430	Fns. of a Complex Variable
x	x	x			MAT-440	Numerical Analysis
a	a	x			MAT-450	Probability & Statistics
x	x	x			PHY-140	Physics I
x	x	x			PHY-150	Physics II
x	x	x			PHY-160	Physics III
x	x	x			PHY-212	Science of Matter or Chemistry
x	x				PHY-310	Modern Physics
			x	x		Physical or/Life Science (9 cr.)
			x	x	CS-150	Introduction to Computer Organization
x	x	x			CS-160	Fundamentals of Logic Design
x	x	x	x	x	CS-170	Computer Programming I
x	x	x	x	x	CS-200	Computer Programming II
x	x	x	x	x	CS-210	Fortran
	x	x	x	x	CS-220	Business Oriented Language (COBOL)
x	x	x			CS-240	Digital Design
	x	x	x	x	CS-320	Organization of Programming Languages
	x	x	x	x	CS-330	Structured Programming (PASCAL)
	x	x	x	x	CS-335	Assemblers & Assembly Language Programming
	x	x	x	x	CS-340	Data Structures
x	x				CS-350	Computer Circuit Design
x	x				CS-360	Computer Architecture
	x	x	x	x	CS-370	Software Design
					CS-401	Organization of the Computer Environment
x	x				CS-410	System Design & Analysis
	b		a		CS-420	Operating System Concepts
					CS-430	Simulation & Modeling
					CS-440	Microcomputers
	b		x		CS-450	Data Base Management Systems Design
			x	x	CS-460	System Programming
			a		CS-470	Information Systems Analysis and Design

EE	CS	MATH	SYS	SYS/TC	Course	Title
	b		a		CS-480	Introduction to Compilers & Interpreters
					CS-485	Theory of Computation
					CS-490	Directed Project in Computer Science
x	x				EE-210	Networks I
x					EE-255	Electricity Laboratory (1 cr.)
x					EE-310	Networks II
x	x				EE-330	Electronics I
x					EE-335	Electronics Lab I (1 cr.)
x					EE-340	Electronics II
x					EE-345	Electronics Lab II (1 cr.)
x					EE-400	Electronics III
x					EE-405	Networks III
x					EE-410	Electromagnetic Theory
x					EE-420	Field Transmission Lines
x					EE-430	Fund. of Communication Systems
x					EE-440	Energy Systems
x					EE-450	Control Systems
x					EE-460	Micro-electronics
x					EE-470	Elect. Eng. Design
x	x				ES-220	Engineering Drawing
x					ES-310	Engineering Applications of Materials
					ES-320	Industrial Planning
					ES-330	Statics
					ES-340	Dynamics
					ES-390	Thermodynamics
				x	TEC-320	Technical Communication
				x	TEC-330	Technical Writing
				x	TEC-350	Production of Technical Communication Materials
				x	TEC-370	Technical Documentation I
				x	TEC-380	Technical Documentation II
				x	TEC-450	Legal Aspects of Technical Communication
				x	TEC-460	Technical Communication Project Management
				x	TEC-470	Seminar in Technical Communication
9	12	15	12	12		Electives (in credits)
	x					30 credits in Approved Discipline
6	9					Electives in CS and EE

PROGRAM REQUIREMENTS

PROGRAM REQUIREMENTS		DEGREE CODE
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

a = Choose 1 "a" Course
b = Choose 2 "b" Courses

NOVA UNIVERSITY
3301 College Avenue
Fort Lauderdale, FL 33314

ELECTRICAL ENGINEERING
ELECTRONIC TECHNOLOGY
COMPUTER SCIENCE
MATHEMATICS

EE-255 Electricity Laboratory
Basic laboratory to complement Networks theory courses.

EE-335 Electronics Lab I — (1 cr.)
Laboratory work to complement electronics theory course. **Prerequisite: Electronics I.**

EE-340 Electronics II
Multi-stage amplifiers, difference and Darlington amplifiers, properties of feedback, feedback amplifiers, integrated circuits, high-and-low frequency analysis of single and multi-stage amplifiers, frequency response of feedback amplifiers, analyze p-n diodes using transistor models for design and analysis. Basic concepts of electronic design. **Prerequisite: Electronics I, Networks 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-210 Calculus I
Functions, limits, derivatives of algebraic functions. Introduction to derivatives of trigonometric functions, logarithmic functions, application of derivatives to physics problems, related rates and maximum/minimum problems, definite and indefinite integrals with applications.

MAT-220 Calculus II
Riemann sums, the definite integral, methods of integration, continuation of exponential logarithmic functions, inverse trigonometric functions. L'Hopital's rule and improper integrals. **Prerequisite: Calculus I.**

MAT-310 Differential Equations
Solving first order ordinary differential equations, exact, separable and linear. Applications to rates and mechanics, theory of higher order linear differential equations. Methods of undetermined coefficients and variation of parameters, application to vibrating mass and electric curcuits, power series solutions. Partial differential equations, the methods of separation of variables, linear partial differential equations and their application to electronics and electrical engineering problems, solutions of initial boundary problems. Fourier series and Fourier transforms inhomogenous problems, introduction of numerical methods. Laplace transforms. **Prerequisite: Calculus III.**

PHY-140 Physics I
Basic principles of mechanics including vectors, force, equilibrium, displacement, velocity, acceleration, mass. Newton's Laws, work energy, gravitation momentum, rotational motion, mechanics of systems of particles and rigid bodies. **Prerequisite: Calculus I.**

PHY-150 Physics II
Electrostatics, electric currents, electric fields and electric potential. AC and DC circuits, magnetic fields, capacitance, inductance and electromagnetic waves. **Prerequisite: Calculus I.**

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 instructor or your counselor 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.

NOVA COLLEGE OFFERS A NUMBER OF ADDITIONAL DEGREE PROGRAMS IN BOTH DAY AND EVENING FORMAT.

For Information Call: 475-7340

After the third class meeting, a student may withdraw from a course by completing a "Withdrawal Form" available in the Registrar's Office. After one half of the course is completed, instructor's or counselor's approval is required to withdraw from a course.

How to Withdraw

If you wish to withdraw from a course after the refund period is over you must submit a completed withdrawal form to the registration office within the first half of the course. Between that time and the last class meeting before the final exam, you may withdraw and obtain a "W" only with the consent of the instructor or academic counselor on the withdrawal form. You are expected to attend all classes and may be administratively withdrawn if you fail to meet attendance requirements of the instructor.

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