



DEPARTMENT OF COMPUTER & ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

College of Engineering & Computer Science Florida Atlantic University

Bachelor of Information Engineering Technology Program (BIET)

The Computer & Electrical Engineering and Computer Science department at Florida Atlantic University (FAU) offers a Bachelor of Information Engineering Technology (BIET) degree program that provides more hands-on, practical skills with advanced concepts to increase productivity than the computer science or computer engineering programs. This program also provides a consistent path from the Associate of Science (AS) degree to a bachelor's degree emphasizing practical skills in programming, database, networking, web-based applications, and computer security as well as technical communications and project management. It has less mathematics and natural science than programs in Computer Science or Computer Engineering.

Graduates of the BIET program are prepared for careers in business, industry, and government, in which engineering principles are applied to the management of various sorts of information. Such positions include computer and information system managers, medical information specialists, computer systems administrators, systems analysts, network managers, and multimedia

developers. FAU's BIET degree is designed in compliance with the accreditation criteria. Classes for this new degree program are currently offered at FAU's Boca Raton and Treasure Coast, Port St. Lucie campuses.

Admission Requirements

The BIET program is designed to articulate with AS degree programs offered by community colleges in areas such as Computer Programming and Analysis, Network Services Technology, Computer Information Technology, Computer Engineering Technology, and Computer Science (Networks or Programming). Specific local articulation agreements are being developed with



Indian River State College, Broward College, and Miami-Dade College. Students transferring from a Florida community college should normally have completed an articulated AS program. Students who have completed at least 60 lower-division credits toward an AS degree program, including at least 30 credits of approved technical coursework, and who commit to complete their AS degree, may also be admitted to the program.

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Degree Requirements

The minimum number of credits required for the BIET degree is 124 credits, but the program will typically require up to 136 credits. The difference depends on the number of applicable general education, mathematics, and science courses included in the AS degree program. The degree will be awarded to students who:

1. Meet all University general requirements for transfer students, including the general education requirements and foreign language admission requirement.
2. Satisfy all degree requirements for the department.
3. Hold an AS degree in an appropriate area of computing technology or hold an AA degree or equivalent at the time of admission to the program. Students who have been in an AS program must complete the AS degree.

Transfer Credits

Credit will be given for all courses designated by the community college as meeting the requirements for transfer to a four-year university degree program. Block credit will be given for up to 30 credits of transferable computing technology courses including a course in C or C++ programming. In addition, students are expected to have completed the following general education, mathematics, and science courses or an equivalent number of credits in comparable courses.

College Writing I	ENC 1101	3
College Algebra	MAC 1105	3
Introductory Statistics	STA 2023	3
Social Science course		3
Humanities course		3
Free Electives		6

Note: It is desirable for the social science and humanities courses to carry Gordon Rule writing credit.

Other required courses listed below may also be included in the transfer program.

Additional General Education Courses

Students must take the following courses to complete the general education requirement.

Writing for Tech Professions	ENC 2210	3
Social Science course		3
Humanities course		3

Note: ENC 2210 at FAU is an honors course. It must be taken instead at the community college. The writing, social science, and humanities courses must be Gordon Rule writing courses.

Mathematics and Science Courses

The following mathematics and science courses are required in addition to those listed above under the Transfer Credits paragraph.

Trigonometry	MAC 1114	3
Methods of Calculus	MAC 2233	3
Discrete Structures	COT 3100	3
College Physics I*	PHY 2053	3
College Physics I Lab	PHY 2053L**	1
College Physics II*	PHY 2054	3
College Physics II Lab	PHY 2054L**	1

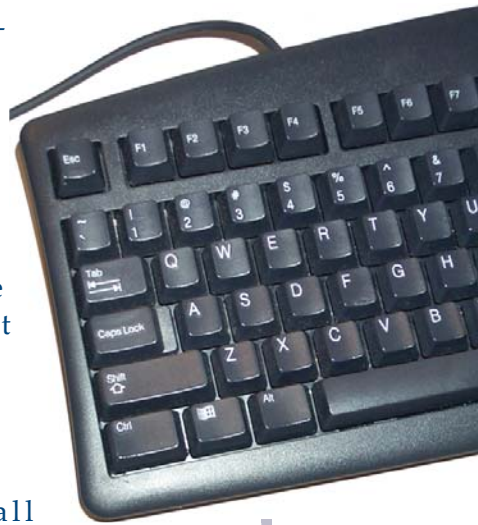
* College Physics is 3 credits at BC, MDC, and IRSC; 4 credits at FAU and PBCC

** Physics lab is General Physics Lab, PHY 2048L and 2049L, at FAU and PBCC.

Professional Courses

In order to enhance their professional skills, students must complete the following courses.

Public Speaking	SPC 2601	3
Social and Ethical Issues in Computing	ISM 4042	3



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Core and Technical Courses

All students must take the following core courses, which total 29 credits, in addition to the 30 block credits from the AS degree program:

Block credit from AS		27
Introductory Programming in C or C++ from AS		3
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Foundations of Computer Science	COT 3002	3
Foundations of Computer Science Lab	COT 3002L	1
Introduction to Internet Computing	COP 3813	3
Applied Data Structures Database Application Development	CET 3350	3
Applied Operating Systems	CET 4427	3
Computer Organization and Design	CET 4505	3
Applied Software Engineering	CET 4333	3
Applied Project Management	CET 3383	3
Capstone Project	ETI 4448	3
	CET 4915	4

Information Engineering Technology Electives

To satisfy the elective requirement, all students must take 12 credits selected from the following courses.

Introduction to Local Area Network Technology	CET 4483	3
Introduction to Wide Area Network Technology	CET 4748	3
Internet Computing II	CET 4589	3
Introduction to Data and Network Security	CIS 4363	3
Web Services	COP 4814	3
Computer Networking Lab	CET 4741L	3
Co-operative Education – IET*	CET 3949	1
Topics in IET	CET 4930	1-3
Directed Independent Study**	COT 4900	1-3
Other CSE courses approved by advisor		

* Three semesters of Co-operative Education – IET at one credit each count as one three-credit elective.

** At most one Directed Independent Study course may be included in the program.

Sample Four-Year-Plus-One-Semester Program of Study for Bachelor of Information Engineering Technology

AS Program at Community College			
(63 credits total) AS credits in BIET			51
Semester Five (13 credits)			
Writing for Technical Professions	ENC 2210		3
Trigonometry	MAC 1114		3
Foundations of Computer Science	COT 3002		3
Foundations of Computer Science Lab	COT 3002L		1
Introduction to Internet Computing	COP 3813		3
Semester Six (15 credits)			
Public Speaking	SPC 2601		3
Methods of Calculus	MAC 2233		3
Applied Software Engineering	CET 3383		3
Computer Organization and Design	CET 4333		3
Applied Data Structures	CET 3350		3
Semester Seven (16 credits)			
Social Science*			3
Discrete Structures	COT 3100		3
College Physics I	PHY 2053		3
College Physics I Lab	PHY 2053L		1
Database Application Development	CET 4427		3
Technical Elective			3
Semester Eight (16 credits)			
Humanities*			3
College Physics II	PHY 2054		3
College Physics II Lab	PHY 2054L		1
Applied Project Management	ETI 4448		3
Technical Electives			6
Semester Nine (13 credits)			
Capstone Project	CET 4915		4
Social and Ethical Issues in Computing	ISM 4042		3
Applied Operating Systems	CET 4505		3
Technical Elective			3
Total			124-136***

* FAU Core: One of the humanities or social science courses listed elsewhere in the catalog that satisfy the FAU Core Curriculum requirements for all baccalaureate students. Gordon Rule Writing courses must be passed with a grade of "C" or better.

** Gordon Rule Writing course requires grade of "C" or better.

*** A minimum of 124 credits is required for the program. Additional A.S. credits may bring total to 136.

BIET Frequently Asked Questions

Q. What is Information Engineering Technology?

A. Information Engineering Technology is concerned with the applied skills necessary to install, maintain, and manage computer systems, networks, and applications.

Q. What are the differences between Computer Science, Computer Engineering, and Information Engineering Technology?

A. All three are branches of computing studies but each has a different focus. The Computer Science program emphasizes programming skills and formal foundations of computing. The Computer Engineering program includes in-depth knowledge of computer hardware design principles. The Information Engineering Technology focus on directly applicable skills required for employment in the computing professions including those required for project management.

Q. Why is it called "Engineering?"

A. Engineering involves the consistent application of a set of well understood principles to solving problems in a variety of fields. In this program you will learn to apply engineering principles to the management and maintenance of information technology resources.

Q. What job opportunities are available to graduates of the program?

A. There is a wide range of positions in computing technologies available to graduates of the program in computing networking, database administration, computer security, web development, and other areas, depending on the focus the student chooses in the program. Many students will already have positions in the field before graduation and will have new opportunities for professional advancement on completion of this baccalaureate program.

Q. Do I need an AS degree?

A. The program is designed for students who have an AS degree. Students who earn an AA degree may pursue the program by completing a

corresponding set of computing technology courses. Consult a BIET advisor for a list of approved courses.

Q. What courses should I take in my A.S. program?

A. AS programs in Computer Programming and Analysis, Network Services Technology, Database System Administration, Computer Information Technology, Computer Engineering Technology, and Computer Science (Networks or Programming) provide appropriate background for entry into the BIET. AS programs in PC Maintenance and in Microcomputer (PC) Applications do not provide appropriate preparation.

Q. What is the "Block Transfer Credit?"

A. Because students may take a number of different AS programs with different course requirements, we do not list a specific set of computing technology courses from that degree. Instead, we any accept 30 credits of computing technology courses from the degree.

Q. Do I need a foreign language?

A. You must satisfy the admission foreign language requirement set by the State of Florida. This requires that you either (a) have completed two years of study of a foreign language in high school, (b) are a native speaker of a language other than English, (c) complete a second semester college course in a foreign language, or (d) demonstrate corresponding proficiency in foreign language. See the FAU Catalog for details.

Q. Do I need to satisfy CLAS?

A. Yes, all students beyond 60 credits must satisfy CLAS.

Q. How much time to I have to satisfy CLAS?

A. Because AS students reach 60 credits without completing the usual writing and math courses for the CLAS alternative, we are working to establish an orderly procedure to satisfy the requirement.

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Q. Do I need to satisfy the Gordon Rule?

A. Yes, you need to take four Gordon Rule writing courses and two Gordon Rule Mathematics courses. The required writing courses count toward the Gordon Rule and two of the Social Science or Humanities courses should be chosen to complete the writing requirement. The math courses in the program satisfy the mathematics requirement of the Gordon Rule.

Q. What math do I have to take?

A. The required math courses are College Algebra, Trigonometry, Methods of Calculus, Statistics, and Discrete Structures.

Q. What science do I have to take?

A. College Physics I and II (without calculus) is required for the program. The specific title of the course may be different at different colleges. Check the BIET web site for details.

Q. Is there a GPA requirement?

A. Students must maintain good academic standing with a GPA of at least 2.0.

Q. Is the program accredited?

A. The program is designed to meet accreditation standards and we will seek accreditation at the earliest possible time.

Q. Where will courses for the BIET be available?

A. Courses will be available only on the Boca Raton and Treasure Coast (Port St. Lucie) Campuses of FAU.

Q. When are courses scheduled?

A. Courses in the program will be scheduled in the evening and on Saturdays to permit working students to participate in the program.

Q. Are all of the courses available at FAU?

A. FAU has an agreement with IRSC in Port St. Lucie that we do not duplicate courses they offer.

Therefore all of the 1000- and 2000- level courses in the program must be taken at the local community college. The breakdown is 26 credits beyond the AS at the community college and 47 credits at FAU.

Q. How will courses be offered?

A. All computing courses in the program emphasize hands-on work. Most courses involve a combination of lecture and formal or informal laboratory work. To make the best use of specialized faculty expertise, many lecture courses will be delivered from one campus to the other by live video teleconferencing. For such courses, where the primary instructor is on one campus, there will always be a local instructor available for assistance with course issues.

Q. Can I get Financial Aid?

A. Yes, students in the program are eligible for financial aid as for any other program at FAU. One area of special concern is the FAU requirement that students receiving financial aid from FAU take at least half of their credits at FAU each term during which they receive an award. This will require carefully scheduling and coordination with your advisor and the Student Financial Aid Office. We are working to see if we can obtain some additional flexibility for students in the program in view of the number of courses that must be taken at the community college.



For more information about the BIET degree program please call
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