

B.S. in Engineering Technology, Computer Technology

Computer Technology (CMPT) is an interdisciplinary program which combines courses mainly in Engineering Technology, Computer Science and Management. The program also provides a background in mathematics and science which is sufficient to allow students to go on to graduate school. It is designed as a continuation of an associate's degree program in computer science, computer programming, computer networking, or computer software. This program prepares the student for careers as a computer application programmer, database administrator, computer system manager, computer network manager, software specialist, Management Information Systems (MIS) manager, customer support engineer, computer sales representative or educator and trainer in the field of computer applications.

Students who wish to enter the program as a transfer student are typically students with an associate's degree in a program of computer studies, such as computer science, computer technology, computer software or computer networking.

A maximum of 60 credit hours may be transferred into this program, and students need most of the following courses: Calculus I, Science such as biology, botany, chemistry, geology or physics, Communications, Economics / Accounting , Physical Education , Introduction to Programming, Data Structures / Advanced High Level Language Programming, Operating Systems (DOS, Windows, Unix) and Database Concepts with SQL (Access, dBase, Visual Basic). Students are expected to have some knowledge of C++ or another object oriented language. Students with less than 64 credits or with deficiencies in the above subject areas are considered on a case by case basis.

(120 credits minimum)

First Year

1st Semester		Credits
ENGL 101	English Composition: Introduction to Academic Writing	3
Science Literacy with Lab GER		4
MATH 138 or MATH 135	General Calculus I or Calculus for Business	3
FYS SEM	First-Year Student Seminar	0
CS 106	Roadmap to Computing for Engineers	3
Term Credits		13

2nd Semester

ENGL 102	English Composition: Introduction to Writing for Research	3
Science Literacy with Lab GER		4
CS 113 or CS 115	Introduction to Computer Science or Introduction to Computer Science in C++	3
IT 201	Information Design Techniques	3
Specialization/Technical Elective 1		3
ET 101	Introduction to Engineering Technology	0
Term Credits		16

Second Year

1st Semester

EPS 202	Society, Technology, and the Environment (or Rutgers Equivalent Elective)	3
Free Elective		3
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
IT 202	Internet Applications	3
IT 120	Introduction to Network Technology	3
Specialization/Technical Elective 2		3
Term Credits		18

2nd Semester

Free Elective		3
IS 331	Database Design Management and Applications	3
Specialization/Technical Elective 3		3
Specialization/Technical Elective 4		3

Specialization/Technical Elective 5		3
Term Credits		15
Third Year		
1st Semester		
CPT 310	Computer Design Fundamentals for Computer Technology	3
CPT 330	Software Web Applications for Engineering Technology I	3
CPT 341	Visual Basic.NET for Engineering Technology	3
COM 313	Technical Writing	3
Select one of the following:		2
CPT 492	Special Projects in Computer Technology	
MET 103	Engineering Graphics and Intro. to CAD	
Technical Elective		
MIS 245	Introduction to Management Information Systems	3
Term Credits		17
2nd Semester		
CPT 315	Computer Architecture for Computer Technology	3
CPT 335	Networks Applications for Computer Technology I	3
MATH 305	Statistics for Technology	3
MRKT 330	Principles of Marketing	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Term Credits		15
Fourth Year		
1st Semester		
CPT 430	Software Web Applications for Engineering Technology II	3
CPT 440	Visual Basic Applications for Engineering Technology	3
OM 375	Business Operations Management and Analytics	3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
Term Credits		12
2nd Semester		
CPT 401	Senior Project	2
CPT 435	Networks Applications for Computer Technology II	3
Science Elective Course in Physics or Chemistry		3
Free Elective		3
Technical Elective-Course in IT or CS		3
Term Credits		14
Total Credits		120

GER Electives

Refer to the **General Education Requirement** section of this catalog for further information on GER electives.

CMPT Specializations - Select one specialization from the list below. Students must complete a combination of 6 courses in specialization and technical electives.

IT Security Specialization:

Code	Title	Credits
Complete the following 2 courses:		
CPT 335	Networks Applications for Computer Technology I	
CPT 435	Networks Applications for Computer Technology II	

Technical Electives

Select four of the following:

IT 220	Wireless Networks	
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IT 330	Computer Forensic
IT 331	Privacy and Information Technology
IT 332	Digital Crime
IT 430	Ethical Hacking for System Administrators
CS 434	Advanced Database Systems
CS 608	Cryptography and Security
CS 639	Elec. Medical Records: Med Terminologies and Comp. Imp.
R120 102	General Biology II
R120 142	Anatomy & Physiology

Medical Informatics Specialization:

Code	Title	Credits
Complete the following 4 courses:		
CPT 325	Medical Informatics Technology	
CPT 425	Medical Informatics Technology II	
MIT 326	Electronic Medical Record Design	
R120 141	Anatomy & Physiology	

Technical Electives:

Select two of the following:

IT 220	Wireless Networks
IT 330	Computer Forensic
IT 331	Privacy and Information Technology
IT 332	Digital Crime
IT 430	Ethical Hacking for System Administrators
CS 434	Advanced Database Systems
CS 608	Cryptography and Security
CS 639	Elec. Medical Records: Med Terminologies and Comp. Imp.
R120 102	General Biology II
R120 142	Anatomy & Physiology

This curriculum represents the maximum number of credits per semester for which a student is advised to register. A full-time credit load is 12 credits.

First-year students are placed in a curriculum that positions them for success which may result in additional time needed to complete curriculum requirements. Continuing students should consult with their academic advisor to determine the appropriate credit load.