

B.S. in Engineering Technology, Medical Informatics Technology

Medical Informatics is an interdisciplinary program which combines courses from Information Systems, Biology and Management. The program also provides a background in mathematics and science which is sufficient to allow students to go onto graduate school. It is the study of how health data is collected, stored and communicated, how data is used for administration and clinical decision making and how computers and telecommunications can be applied to support those processes.

The areas of study in Medical Informatics are; Medical Records, Tele-monitoring, Expert Systems, Security, CT-MRI & PET scan data analysis and storage and Medical Sensors. The full four-year curriculum for the program is shown below. Students who wish to enter the program as a transfer student are typically students with an A.S. degree Computer Science or Medical Informatics, and should have completed most or all of the courses, or their equivalents, in the first two years of the program as shown below. In the case of all students, both four-year and transfer, a minimum of 120 credits is required for graduation.

(120 credits minimum)

First Year

1st Semester

		Credits
R120 101	General Biology	4
MATH 138 or MATH 135	General Calculus I or Calculus for Business	3
CS 106 or CS 100	Roadmap to Computing for Engineers or Roadmap to Computing	3
IT 120	Introduction to Network Technology	3
ENGL 101	English Composition: Introduction to Academic Writing	3
ET 101	Introduction to Engineering Technology	0
FYS SEM	First-Year Student Seminar	0
Term Credits		16

2nd Semester

BME 111	Introduction to Physiology	3
CS 113 or CS 115	Introduction to Computer Science or Introduction to Computer Science in C++	3
ENGL 102	English Composition: Introduction to Writing for Research	3
EPS 202	Society, Technology, and the Environment	3
Technical Elective 1		3
Term Credits		15

Second Year

1st Semester

CS 114 or CS 116	Introduction to Computer Science II or Introduction to Computer Science II in C++.	3
IT 201	Information Design Techniques	3
IT 220	Wireless Networks	3
COM 200	Communicating in Organizations	3
Term Credits		12

2nd Semester

IT 202	Internet Applications	3
Technical Elective 2		3
MATH 305 or MNET 315	Statistics for Technology or Industrial Statistics	3
R920 201 or R830 101	Intro Sociology I or Principles Of Psychology I	3
Select one of the following:		3
HUM 211	The Pre-Modern World	
HUM 212	The Modern World	

HIST 213	The Twentieth-Century World	
Term Credits		15
Third Year		
1st Semester		
CPT 325	Medical Informatics Technology	3
CPT 310	Computer Design Fundamentals for Computer Technology	3
CPT 330	Software Web Applications for Engineering Technology I	3
COM 313	Technical Writing	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
2nd Semester		
CPT 425	Medical Informatics Technology II	3
CPT 341	Visual Basic.NET for Engineering Technology	3
CPT 335	Networks Applications for Computer Technology I	3
MIT 326	Electronic Medical Record Design	3
IT 230	Computer and Network Security	3
Term Credits		15
Fourth Year		
1st Semester		
CPT 401	Senior Project	2
CS 331	Database System Design & Mgmt	3
MIT 360	Introduction to Gerontology	3
IT 330 or IT 430	Computer Forensic or Ethical Hacking for System Administrators	3
Technical Elective 3		3
Term Credits		14
2nd Semester		
MIT 362	Geriatric Engineering I	3
Technical Elective 4		6
CPT 373	Web App Development for Mobile	3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
Technical Elective 5		3
Term Credits		18
Total Credits		120

GER Electives

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

Technical Electives

Code	Title	Credits
IT 220	Wireless Networks	3
IT 330	Computer Forensic	3
IT 331	Privacy and Information Technology	3
IT 332	Digital Crime	3
IT 430	Ethical Hacking for System Administrators	3
CS 434	Advanced Database Systems	3
CS 608	Cryptography and Security	3
CS 639	Elec. Medical Records: Med Terminologies and Comp. Imp.	3
MIT 440	Clinical Internship	3

R120 102	General Biology II	4
R120 142	Anatomy & Physiology	4