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)

<table>
<thead>
<tr>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Semester</strong></td>
</tr>
<tr>
<td>Credits</td>
</tr>
<tr>
<td>R120 101</td>
</tr>
<tr>
<td>MATH 138</td>
</tr>
<tr>
<td>or MATH 135</td>
</tr>
<tr>
<td>CS 106</td>
</tr>
<tr>
<td>or CS 100</td>
</tr>
<tr>
<td>IT 120</td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>ET 101</td>
</tr>
<tr>
<td>FYS SEM</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 111</td>
</tr>
<tr>
<td>CS 113</td>
</tr>
<tr>
<td>or CS 115</td>
</tr>
<tr>
<td>ENGL 102</td>
</tr>
<tr>
<td>EPS 202</td>
</tr>
<tr>
<td>Technical Elective 1</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Semester</strong></td>
</tr>
<tr>
<td>Credits</td>
</tr>
<tr>
<td>CS 114</td>
</tr>
<tr>
<td>or CS 116</td>
</tr>
<tr>
<td>IT 201</td>
</tr>
<tr>
<td>IT 220</td>
</tr>
<tr>
<td>COM 200</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 202</td>
</tr>
<tr>
<td>Technical Elective 2</td>
</tr>
<tr>
<td>MATH 305</td>
</tr>
<tr>
<td>or MNET 315</td>
</tr>
<tr>
<td>R920 201</td>
</tr>
<tr>
<td>or R830 101</td>
</tr>
<tr>
<td>Select one of the following:</td>
</tr>
<tr>
<td>HUM 211</td>
</tr>
<tr>
<td>HUM 212</td>
</tr>
</tbody>
</table>
HIST 213  The Twentieth-Century World

| Term Credits | 15 |

**Third Year**

**1st Semester**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT 325</td>
<td>Medical Informatics Technology</td>
<td>3</td>
</tr>
<tr>
<td>CPT 310</td>
<td>Computer Design Fundamentals for Computer Technology</td>
<td>3</td>
</tr>
<tr>
<td>CPT 330</td>
<td>Software Web Applications for Engineering Technology I</td>
<td>3</td>
</tr>
<tr>
<td>COM 313</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)

| Term Credits | 15 |

**2nd Semester**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT 425</td>
<td>Medical Informatics Technology II</td>
<td>3</td>
</tr>
<tr>
<td>CPT 341</td>
<td>Visual Basic.NET for Engineering Technology</td>
<td>3</td>
</tr>
<tr>
<td>CPT 335</td>
<td>Networks Applications for Computer Technology I</td>
<td>3</td>
</tr>
<tr>
<td>MIT 326</td>
<td>Electronic Medical Record Design</td>
<td>3</td>
</tr>
<tr>
<td>IT 230</td>
<td>Computer and Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

| Term Credits | 15 |

**Fourth Year**

**1st Semester**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT 401</td>
<td>Senior Project</td>
<td>2</td>
</tr>
<tr>
<td>CS 331</td>
<td>Database System Design &amp; Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>MIT 360</td>
<td>Introduction to Gerontology</td>
<td>3</td>
</tr>
<tr>
<td>IT 330</td>
<td>Computer Forensic</td>
<td>3</td>
</tr>
<tr>
<td>or IT 430</td>
<td>Ethical Hacking for System Administrators</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective 3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Credits | 14 |

**2nd Semester**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIT 362</td>
<td>Geriatric Engineering I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective 4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>CPT 373</td>
<td>Web App Development for Mobile</td>
<td>3</td>
</tr>
</tbody>
</table>

Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)

| Technical Elective 5                         | 3       |

| Term Credits | 18 |

**Ger Electives**

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

**Technical Electives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 220</td>
<td>Wireless Networks</td>
<td>3</td>
</tr>
<tr>
<td>IT 330</td>
<td>Computer Forensic</td>
<td>3</td>
</tr>
<tr>
<td>IT 331</td>
<td>Privacy and Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>IT 332</td>
<td>Digital Crime</td>
<td>3</td>
</tr>
<tr>
<td>IT 430</td>
<td>Ethical Hacking for System Administrators</td>
<td>3</td>
</tr>
<tr>
<td>CS 434</td>
<td>Advanced Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 608</td>
<td>Cryptography and Security</td>
<td>3</td>
</tr>
<tr>
<td>CS 639</td>
<td>Elec. Medical Records: Med Terminologies and Comp. Imp.</td>
<td>3</td>
</tr>
<tr>
<td>MIT 440</td>
<td>Clinical Internship</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>R120 102</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>R120 142</td>
<td>Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>