msit curriculum

The Information Networking Institute (INI) was established by Carnegie Mellon University in 1989 as the nation’s first research and education center devoted to information networking. As an integral department of the College of Engineering and a collaboration of the School of Computer Science, Tepper School of Business, and Heinz College, the INI’s professional graduate degree programs represent an exceptional fusion of technologies, economics and policies of secure communication networks, systems and services.

Pittsburgh-Silicon Valley Master of Science in Information Technology programs in Mobility (MOB) • Information Security (IS) • Software Management (SM)

The Master of Science in Information Technology (MSIT) programs provide students with an advanced, specialized curriculum combining computer science, electrical and computer engineering, software engineering, and information systems and exposes them to topics in business, management, and policy. The unique combination of rigorous technical topics, practical industry-oriented topics, and real-world project experience empowers students to be the movers and shakers of the tech industry, whether launching a tech start-up, joining an enterprise R&D team, or fighting cyber-crime.

Whether students choose a 16-month or 20-month program, the 144 total units required for an MSIT degree include the following main components:

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Shared Core Courses</td>
</tr>
<tr>
<td>48</td>
<td>Track Core Courses</td>
</tr>
<tr>
<td>36</td>
<td>Restricted Electives</td>
</tr>
<tr>
<td>24</td>
<td>Master’s Practicum</td>
</tr>
</tbody>
</table>

All students are required to fulfill a residency requirement at Carnegie Mellon’s Silicon Valley campus. The 20-month program requires an internship.

Students will increase their technical knowledge, complete a real-world project for a client, build their management capabilities and develop a strong network of contacts, all of which will have long-lasting benefits that broaden their career prospects at graduation and in the future.

Please see the reverse side for more details.

choose a 16-month or 20-month duration and one of three programs:

**MSIT-Mobility**
Prepares students to be at the forefront of the mobility field with a multidisciplinary curriculum spanning both technical and business topics in mobile applications, services and devices.

**MSIT-Information Security**
Prepares students to become industry leaders in information security by blending education in security technology with other topics essential for the effective development and management of secure information systems.

**MSIT-Software Management**
Prepares software engineers and project managers for leadership roles in software product management.

make a connection:
Kari Gazdich
Director of Admissions
(412) 268-9598
kgaz@cmu.edu

Go to www.ini.cmu.edu to see admission guidelines and apply online.
## MSIT-MOB, MSIT-IS, and MSIT-SM

### 36 units Shared Core Courses

Of the 36 units of core courses, 12 units are management courses.

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 units</td>
<td>14-740: Fundamentals of Telecommunications &amp; Computer Networks (FALL or SPRING). Limited enrollment. <strong>or</strong> 18-756: Packet Switching and Computer Networks (FALL). Prerequisite: either prior networking coursework or 18-345 Introduction to Telecommunications and Networks (SPRING)</td>
</tr>
<tr>
<td>12 units</td>
<td>14-741: Introduction to Information Security (FALL) <strong>or</strong> 18-730: Introduction to Computer Security (FALL)</td>
</tr>
<tr>
<td>6 units</td>
<td>14-774: Managerial Economics (FALL or SPRING)</td>
</tr>
<tr>
<td>6 units</td>
<td>14-775: Business Management (FALL or SPRING)</td>
</tr>
</tbody>
</table>

### 48 units Track Core Courses

Track courses allow students to specialize their degrees in Information Security, Mobility or Software Management.

48 units Please refer to the INI website for track course listings. While we created a list of possible courses, it is not exhaustive and students are allowed to select other track courses as long as they are relevant to their track. If a student wants to pursue a track course that is not included on the approved list, he or she should file a petition requesting permission to do so.

### 36 units Restricted Electives

Students have the opportunity to pursue a wide range of electives in which they have a special interest. Restricted electives may not be taken as pass/no pass/audit. Note, only up to 36 units of undergraduate courses (300-599) can be considered toward degree requirements (between Core Courses and Restricted Electives).

36 units Students can select any approved courses in the Heinz College or the Tepper School of Business --AND/OR-- any courses* in ECE, EPP, the School of Computer Science or INI that are numbered 300 and above. Visit the INI website for additional information. *Some exceptions apply.

### 24 units Master’s Practicum Course

The practicum is an opportunity to apply the team’s advanced engineering and management skills, including the specialized knowledge and skills needed to solve a real problem. In particular, team members must learn to work effectively with clients, quickly understand their problem, negotiate deliverables and then select, adapt and apply just the right amount of process and documentation to meet clients’ needs and effectively manage the project.

24 units 14-798 INI MSIT Project Practicum (FALL). The practicum provides the opportunity to consolidate and apply the skills and knowledge developed in previous coursework in a team-based approach to a project. A team of students works with an industry client on a real-world problem of value to the client.

### 0 units Residency Requirement and Internship

All students must fulfill a residency requirement. Residency is defined as being physically present on the Silicon Valley campus and physically attending classes. Courses taken virtually online will not fulfill the residency requirement. Those in the 20-month program must also complete an internship.

0 units The 16-month students must complete one semester of residency, and the 20-month students must complete two semesters of residency. The 20-month students must also complete an internship.

### 144 units Total

Disclaimer: Information and offerings are subject to change. Please refer to www.ini.cmu.edu.