MSIT - SEM
Master of Science in Information Technology - Software Engineering Management

http://www.mse.cs.cmu.edu/sem/

Philip Miller, PhD
Moderator: Phil Miller

2005 - Joined the SEI. Mexican TSP Initiative, MSIT-SEM, Secure Coding.


1975 - Ph.D. Ohio State University
Polling Question 1

How did you hear about this webinar?

1. Email invitation from the SEI
2. SEI Website
3. Website with webinar calendar (ie www.webinar-directory.com)
4. Social Media site (LinkedIn, Twitter)
5. SEI Member Bulletin
Polling Question 2

Where in the world are you right now?

1. Europe
2. Asia
3. South America
4. Africa
5. North America
A world-class degree program preparing tomorrow’s software engineering managers

Master of Science in Information Technology, Software Engineering Management (MSIT-SEM)

• ideal for working professionals who want to excel as managers responsible for acquiring, integrating, or developing software

• provides technical, business, and management training

• incorporates academic courses from Carnegie Mellon University’s Heinz College and School of Computer Science

• incorporates professional courses from the Carnegie Mellon Software Engineering Institute

• flexible part-time and distance format

• incorporates practicum for valuable experience through a real-world project

• ideal for acquisition programs within the US service branches
The program: Skills for the complete professional

- Technical, management, and business training through distance learning courses, in-person courses, and a practicum component

- 3-year program

- 4 - 9 weeks in attendance at Carnegie Mellon

- 150 units of Carnegie Mellon graduate credit

- 8 SEI professional courses resulting in 1 or 2 SEI certificates

- Practicum: 42 Carnegie Mellon units of guided application of MSIT principles in a real-world setting
The students

Diego Fontdevila

Educational background: Software Engineer

Professional experience: 13 years in software development. Entrepreneur. University Professor.

What you are looking for in the MSIT-SEM: Postgraduate education of excellence

How the program strikes you.

- Ways that it meets expectations: Administratively well organized
- Ways that it disappoints you: Half a semester 24hs/week, half 12hs/week
- Ways that it delights you: Some professors, staff and readings

Advice to the potential student: Prepare to work hard
The students

Carmela Rice
B.S Computer Science, University of Alabama, Huntsville

- Professional experience
  - 16 years of software and systems engineering
  - C/C++ Development, Architecture, Systems Engineering
  - Currently serving as Deputy Associate Director for SoS Engineering and Integration for Program Executive Office Integration within the U.S. Army

- How the program strikes you.
  - Excellent Distance Program
  - Extremely challenging, tremendous workload
  - Very well rounded program

- Advice to the potential student.
  - Budget Time CAREFULLY
Polling Question 3

What is the biggest education need in your organization?

1. software architecture
2. project management
3. secure coding
4. technical training
5. software and systems acquisition / outsourcing
## Sample curriculum

<table>
<thead>
<tr>
<th>Year</th>
<th>Course Name</th>
<th>Delivery</th>
<th>Academic Credits</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Fall</td>
<td>Introduction to CMMI Version 1.2</td>
<td>Carnegie Mellon</td>
<td>Elect</td>
<td>Heinz</td>
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<td>Methods of Software Development: Deciding What to Design</td>
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<td>Mastering Process Improvement</td>
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<td>1: Spring</td>
<td>Managing Software Development</td>
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<tr>
<td>1: Summer</td>
<td>Architectures for Software Systems</td>
<td>distance</td>
<td>12</td>
<td></td>
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<tr>
<td>1: Summer</td>
<td>Statistics for IT Managers</td>
<td>distance</td>
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<td>2: Fall</td>
<td>One Year Reorientation—Practicum Initiation</td>
<td>Carnegie Mellon</td>
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<td>Economic Analysis</td>
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<td>2: Fall</td>
<td>Financial Accounting</td>
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<td>Understanding CMMI High Maturity Practices</td>
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<td>Software Product Lines</td>
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<tr>
<td>2: Spring</td>
<td>Negotiation</td>
<td>distance</td>
<td>6</td>
<td></td>
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<td>MSIT-SEM Practicum</td>
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<td></td>
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<tr>
<td>2: Summer</td>
<td>Distance Elective(s)</td>
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<tr>
<td>2: Summer</td>
<td>MSIT-SEM Practicum</td>
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<td>3</td>
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<tr>
<td>2: Summer</td>
<td>Adopting Software Product Lines</td>
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<td>2</td>
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<tr>
<td>3: Fall</td>
<td>Developing Software Product Lines</td>
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<td>3: Fall</td>
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### Program Totals:

- 150 academic credits from Heinz School, School of Computer Science, and practicum component
- 8 courses ranging from 20 to 40 professional course days
- minimum of 4 weeks at Carnegie Mellon for orientation and practicum presentations
Tuition for the MSIT-SEM program

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<th>College</th>
<th>Program</th>
<th>Units</th>
<th>Tuition PT</th>
<th>Tuition FT</th>
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<td>SCS</td>
<td>MSE</td>
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<td>CIT</td>
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<tr>
<td>Tepper</td>
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<td>$95,040</td>
<td>$91,000</td>
</tr>
</tbody>
</table>

- About the same as Computer Science and Engineering degrees
- More expensive than some Heinz degrees
- Less expensive than an MBA from Carnegie Mellon’s Tepper School
Polling Question 5

What career path do you want to pursue?

1. technical software development
2. software project management
3. executive management
4. software security specialist
5. other
Benefits for students and their organizations

Student

- World class master’s degree.
- Flexible learning options that allow for earning a degree from student’s location.

Student’s Organization

- Staff members with the skills and knowledge to lead their teams to achieving business goals.
- Students remain in their current jobs while earning a degree.
- Opportunity to develop deep expertise in SEI methodologies.
How the SEI is involved

The SEI collaborated on the conception of this program.

The SEI is leading publicity and recruitment efforts for this program.

The curriculum, while broad, is tied together through the SEI certificates, professional courses, and the practicum.
MSIT-SEM program contact information

MSIT-SEM Web Site
http://www.mse.cs.cmu.edu/sem/

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SEI Customer Relations (general inquiries)
412-268-5800
customer-relations@sei.cmu.edu
SEPG North America 2010
March 22–25, 2010
Savannah, Georgia

www.sei.cmu.edu/sepg/na/2010

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• CERT's Podcast Series: Security for Business Leaders

• www.cert.org/podcast/
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www.sei.cmu.edu/membership