"Flavors" of Master’s Programs

Heikki Topi, Bentley University
Molly Wasko, University of Alabama, Birmingham
Prabhudev Konana, University of Texas at Austin
MSIS Revision Process

Heikki Topi, Bentley University

Co-chair; Joint ACM/AIS MSIS 2016 Task Force
Task Force for Revising the Model Curriculum for Master of Science in Information Systems (MSIS) Degree

AIS
Eija Helena Karsten  Åbo Akademi, Finland  (co-chair)
Bernard C.Y. Tan  National University of Singapore
Susan Brown  University of Arizona, USA
João Alvaro Carvalho  Universidade do Minho, Portugal

ACM
Heikki Topi  Bentley University, USA  (co-chair)
Brian Donnellan  National University of Ireland, Ireland
Mark Thouin  University of Texas at Dallas, USA
Jun Shen  University of Wollongong, Australia
## Task Force Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>April</td>
<td>Task force F2F in Amsterdam</td>
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<tr>
<td></td>
<td>June</td>
<td>ECIS panel for feedback</td>
</tr>
<tr>
<td></td>
<td>June 30</td>
<td>First draft for comments (by August)</td>
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<td></td>
<td>July</td>
<td>PACIS panel for feedback</td>
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<td></td>
<td>August</td>
<td>AMCIS panel for feedback</td>
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<td></td>
<td>November</td>
<td>MIS Academic Leadership Conference</td>
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<tr>
<td></td>
<td>Fall</td>
<td>Survey data collection</td>
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<td></td>
<td>December</td>
<td>Task force F2F in Fort Worth; AIS SIG-ED panel</td>
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<tr>
<td>2016</td>
<td>Jan-Feb</td>
<td>Second draft for comments</td>
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<tr>
<td></td>
<td>Summer</td>
<td>Conference presentations, panels</td>
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<tr>
<td></td>
<td>August</td>
<td>Task force F2F – writing final draft</td>
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<tr>
<td></td>
<td>September</td>
<td>Submitting to AIS and ACM for approval</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>MSIS 2016 launched at ICIS Dublin</td>
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</table>
Elements of a Master’s Level Degree Program in IS

- Computing/ICT
- Domain of Practice
- IS Management
- Generic Individual Skills

[Not only business]
Why a Model Curriculum?

- Means to communicate
- Branding degree concept
- Source of ideas
- End product based on well-defined competences
- Basis for comparison and benchmarking
- Providing guidance on innovation in programs
- Understanding resource requirements
- Understanding identity of the discipline

Model Curriculum
Core Assumptions Underlying the MSIS 2016 Initiative

• Global focus
• Recognition of variations due to local contingencies (e.g. governmental digitalization strategies; differences in educational systems) – curriculum flexibility is essential
• Building a profession – not just occupations
• Broadly specified continuing education and professional development not included (MBA, eMBA, certificates, short courses)
• A general MSIS degree continues to have value and can form a foundation for a specialized MS
Key Questions Being Addressed by the Task Force

• Entry requirements to the programs
• Outcome expectations for the graduates
• Structure of the curriculum
  • Program length, IS courses, domain courses, industry projects, thesis, internships, exchange periods, student work required, ...
• Body of knowledge vs. competences – focus on the latter
• Short-term realities vs. long-term needs
You Can Support the MSIS 2016 Revision Project

• Take the faculty survey (goo.gl/6f9dsN)
• Encourage your industry affiliates to take the industry survey (goo.gl/HMaaIJ)
• Give us feedback (see msis2016.org or e-mail htopi@bentley.edu)

Thank you!
MS in Computer Forensics and Security Management

Molly Wasko

University of Alabama at Birmingham
UAB – Why a Specialized MS? Politics…..

• MIS Programs Shrinking; no support for MS in MIS
• Security is Hot; Cross-disciplinary is encouraged
• Opened Center for Information Assurance and Joint Forensic Sciences
• Joint effort driven by MIS, CIS, and Justice Science
• MS program to feed graduate students into research projects and get NSA certification
  • Information Assurance
  • Computer Security

Key decisions:
• Full-time face to face International students; very limited enrollments
• Managed jointly across all 3 departments course scheduling, advising
• Bundled existing offerings in a new way efficient, but no clear value proposition
Curriculum

- MBA 613 Information Security Management
- JS 530 Ethics and Computer Forensics
- JS 502 Introduction to Computer Forensics
- JS 675 Law Evidence and Procedure
- CS 534 Networking
- CS 536 Network Security
- CS 636 Computer Security
- CS 514 Digital Documents, Security and IP
- Tracks: 3 courses and practicum
  - Cybercrime
  - IT Audit/Fraud Examination
State of the Market 2010 - 2014

<table>
<thead>
<tr>
<th>IPEDS Categories - Master's Degrees</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>Management Information Systems, General</td>
<td>4,119</td>
<td>3,608</td>
<td>3,316</td>
<td>3,324</td>
<td>2,958</td>
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<tr>
<td>Computer/Information Technology Administration and Management</td>
<td>870</td>
<td>1,093</td>
<td>1,324</td>
<td>1,989</td>
<td>2,369</td>
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<tr>
<td>TOTAL</td>
<td>4,989</td>
<td>4,701</td>
<td>4,640</td>
<td>5,313</td>
<td>5,327</td>
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## Competitive Set

<table>
<thead>
<tr>
<th>Management Information Systems, General</th>
<th>2014</th>
<th>Computer/Information Technology Administration and Management</th>
<th>2014</th>
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<tbody>
<tr>
<td>University of Phoenix-Arizona (1274 in 2010)</td>
<td>581</td>
<td>University of Maryland-University College</td>
<td>510</td>
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<tr>
<td>Webster University</td>
<td>323</td>
<td>Western Governors University</td>
<td>337</td>
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<tr>
<td>DeVry University-Illinois</td>
<td>421</td>
<td>Capella University</td>
<td>125</td>
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<tr>
<td>Florida Institute of Technology-Online</td>
<td>133</td>
<td>Carnegie Mellon University</td>
<td>81</td>
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<tr>
<td>Bellevue University</td>
<td>93</td>
<td>American Public University System</td>
<td>62</td>
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<tr>
<td>University of Virginia-Main Campus</td>
<td>90</td>
<td>DePaul University</td>
<td>62</td>
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<tr>
<td>University at Buffalo</td>
<td>84</td>
<td>National University</td>
<td>58</td>
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<tr>
<td>Benedictine University</td>
<td>72</td>
<td>Colorado Technical University-Online</td>
<td>50</td>
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<tr>
<td>Grantham University</td>
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<td>Georgetown University</td>
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<tr>
<td>Florida International University</td>
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<td>Lewis University</td>
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<td>Wilmington University</td>
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<td>University of Washington-Seattle Campus</td>
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<td>Robert Morris University Illinois</td>
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<td>Capella University</td>
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<td>Central Michigan University</td>
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<td>Colorado Technical University-Online</td>
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<tr>
<td>National University</td>
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<td>Johns Hopkins University</td>
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<tr>
<td>Minot State University</td>
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<td>New York University</td>
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<tr>
<td>Walden University</td>
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<td>Naval Postgraduate School</td>
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<tr>
<td>Eastern Michigan University</td>
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<td>North Carolina A &amp; T State University</td>
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<tr>
<td>Baker College Center for Graduate Studies</td>
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<td>Bellevue University</td>
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<tr>
<td>Auburn University</td>
<td>25</td>
<td>University of Washington-Tacoma Campus</td>
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## Degrees and Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>Computer Information Systems</td>
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<td>Management Information Systems</td>
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<td>Computer Information Systems</td>
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<tr>
<td>Information Management</td>
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<tr>
<td>Information Systems Management</td>
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<tr>
<td>Information Security</td>
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<tr>
<td>Information Systems and Technology</td>
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<td>Information Technology</td>
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<tr>
<td>Information Technology Management</td>
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<tr>
<td>Management Management and Systems</td>
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</tbody>
</table>
UAB MS in MIS

- MS in Management Information Systems – Business/MIS only
  - IT Leadership
  - Information Security Management
  - Web and Mobile Development
- Custom Designed with input of CIO’s
- Fully online for working professionals in US
- Dedicated recruiting and advising staff
- Streamlined course curriculum: 6 core (3 semester) 4 specializations (2 semester)
- Standardized class design: live kick-off, weekly assignments, instructional designers
- 70 students in 2 years
MS in Business Analytics

Prabhudev Konana

University of Texas at Austin
Major Differences

Content
• Business analytics versus data scientist
• Interdisciplinary versus IS specific
• Programmer with analytics skills OR analytics person some programming background
• Specialization – marketing, supply chain, finance, healthcare

Target market
• Placement in IT organization versus functional areas
• Placement in mature organization versus start-up
• Incoming students – technical versus quantitative emphasis
• Lots of outside class activities – workshops, guest speakers, orientation
**MSBA Curriculum**

**Required**
- Database system (could be waived)
- Programming for Analytics (Python)
- Finance and accounting (could be waived)
- Statistics
- Advanced predictive modeling
- Stochastic control and optimization
- Decision analysis
- Capstone
- Text analytics

**Electives - Marketing**
- Marketing analytics I and II
- Pricing and revenue optimization
- Social media analytics

**Electives – Supply chain**

**Electives – financial analytics**

**Electives – healthcare analytics**
Discussion
What are the "Flavors" of the Future?
Thank you