Undergraduate IS Curriculum Revision Process: Status Review

Panel at AMCIS 2008 (8/15/2008)

Panelists:
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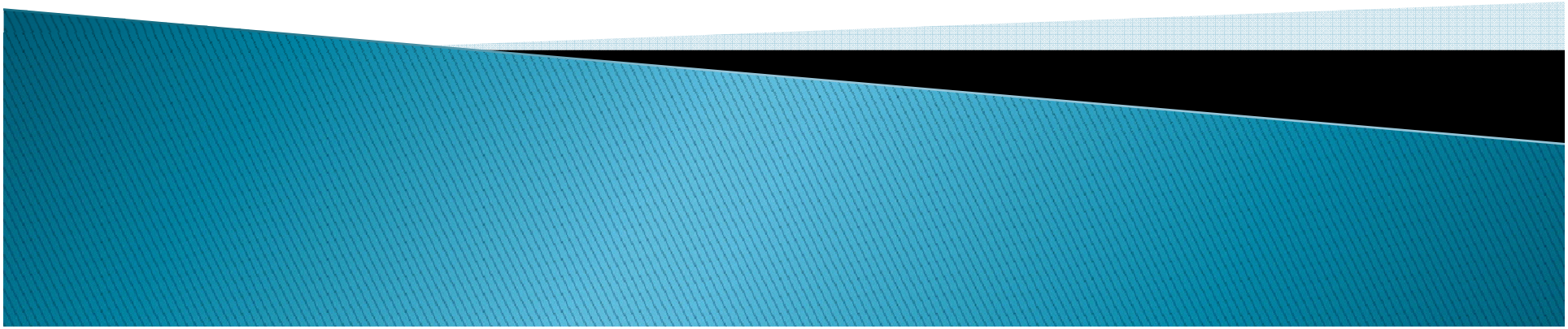
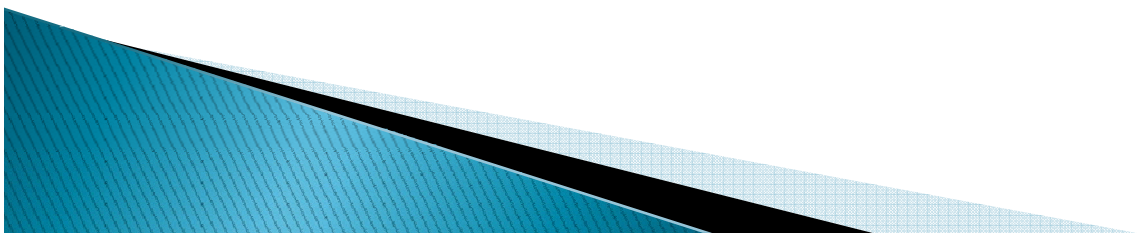


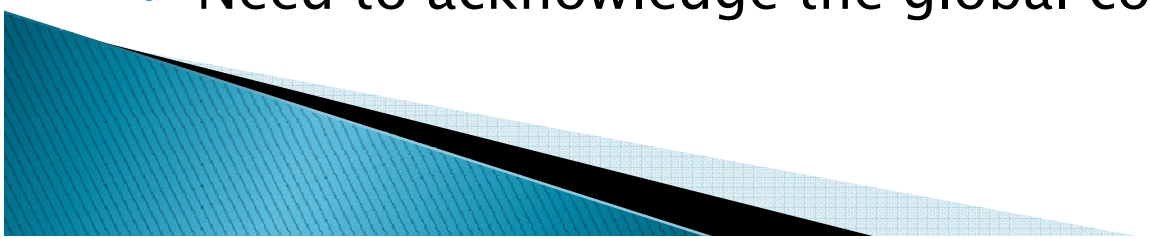
Agenda

- Introductions
- Status update
- Curriculum foundations
- What processes will allow us to stay current, flexible, and relevant?
- Process schedule
- Conclusions and call to participate



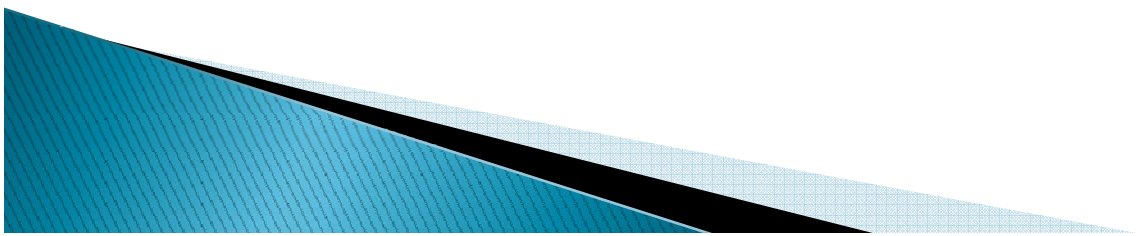
Motivation for Curriculum Revision

- Time: IS'97 was the latest significant undergraduate IS curriculum revision
  - Work done mostly in mid-1990s
- Major contextual changes
  - Globally distributed development sourced through complex arrangements
  - Web technologies and approaches
  - Service-oriented architecture; web services; cloud computing
  - Packaged software/ERP
  - Ubiquitous, mobile computing
  - Standardized approach to IT service management; ITIL/COBIT, etc.
- Enrollment crisis in IS and computing in general
- Need to clarify the identity of IS; emergence of the IT discipline
- Need to get the broader community involved
- Need to acknowledge the global context



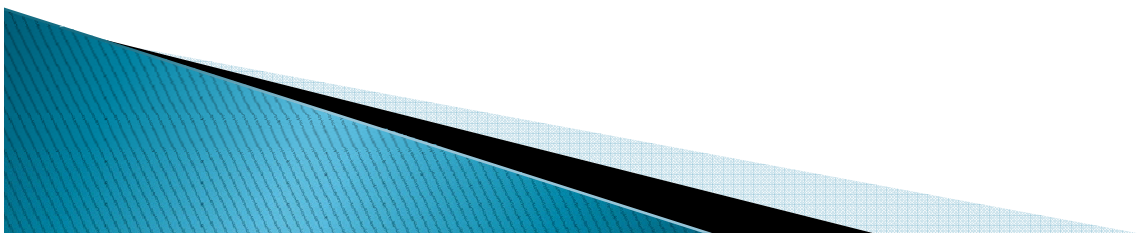
Project History

- Launched in Spring 2007
- Early realization that broad community involvement is both highly desirable and technically possible
- Development of a wiki environment designed for IS curriculum work
- Significant design changes proposed
- Major presentations at AMCIS 2007, AIS-SIGED 2007, and ECIS 2008
- Report to the IS community in Fall 2007 published in Communications of the AIS



Key Elements of the Revision

- Reaching beyond business schools
- Curriculum structure: core vs. career track electives
- Using Web 2.0 technologies for curriculum work; community-driven curriculum development
- Encompassing the global perspective and encouraging global participation

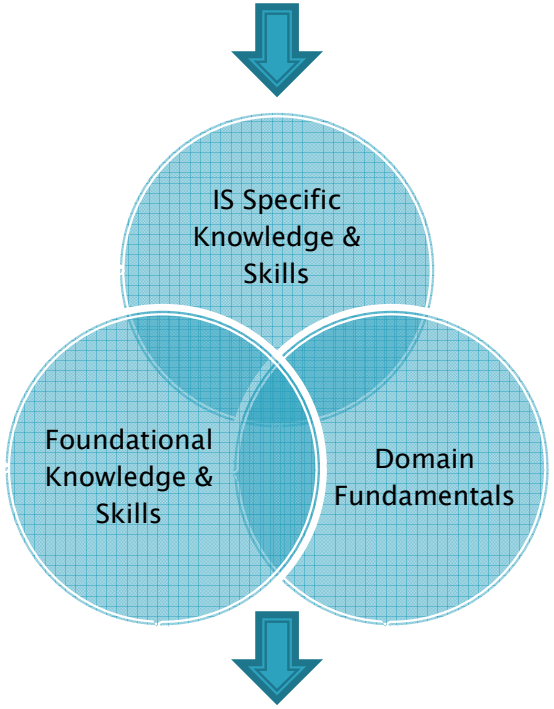


Recent Actions

- Restructuring the work so that the curriculum is clearly derived from high-level organizational needs and graduate capabilities
- Explicitly separating *IS-specific Knowledge & Skills* from *Foundational Knowledge & Skills* and *Domain Fundamentals*
- Link the curriculum content and structure to graduate capabilities in a well-defined and transparent way
- Recognize the importance of jumpstarting the wiki with a significant amount of content

Overall Structure of the Basic Concepts

High-level IS Capabilities



Curriculum topics selected from a body of knowledge and delivered through courses

High-Level IS Capabilities

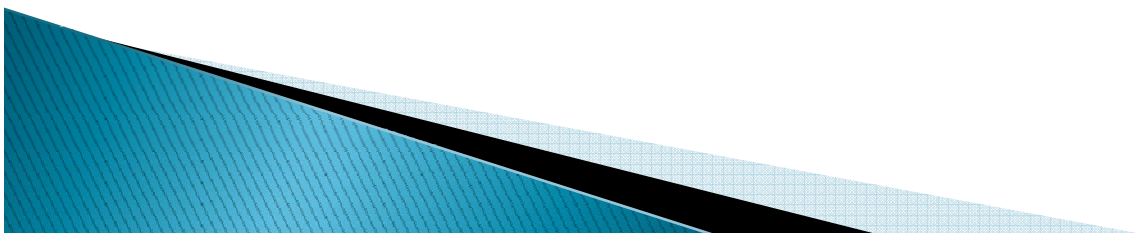
- Driven by organizational needs
- More abstract and stable than knowledge and skills
- Specify the general level expectations set for IS graduates
- List of capabilities:
  - Improving organizational processes
  - Exploiting opportunities created by technology innovations
  - Understanding and addressing information requirements
  - Designing and managing enterprise architecture
  - Identifying and evaluating solution and sourcing alternatives
  - Securing data and infrastructure

Knowledge and Skills of IS Graduates

- Information Systems specific Knowledge & Skills
  - Identifying and designing opportunities for organizational improvement
  - Analyzing trade-offs
  - Designing and implementing information systems solutions
  - Managing ongoing information technology operations
- Foundational Knowledge & Skills
  - Leadership and collaboration
  - Communication
  - Analytical and critical thinking
- Domain Fundamentals
  - Depends on the domain context chosen for a program
  - Could be general business, a business specialty (such as finance), health care, government, non-profits, etc.

Discussion Questions

- Do the new outcome expectations adequately reflect your understanding of the needs of businesses?
- Are these expectations globally valid?
- This structure, in practice, suggests that Information Systems as a discipline can be associated with multiple domains. Is this acceptable?

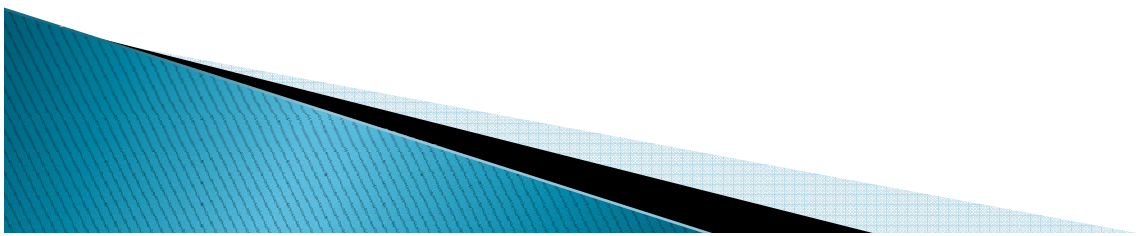


Global Participation

- Benefits:
  - Wider range of individual perspectives
  - Curriculum that represents a broader range of regional and national interests
- Challenges:
  - Possible incompatibility of expectations
  - Cultural differences in working styles
  - Language (both specialized terminology and general communication)
  - Cost of participation (some face-to-face meetings are necessary)
  - Coordination costs of a larger group

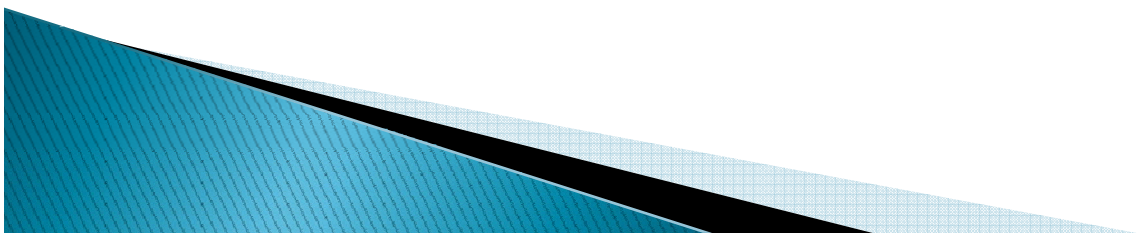
Discussion Questions

- What incentives can and should we create to encourage the best topic area experts to participate in the curriculum development process?
- Do the benefits outweigh the seemingly significant disadvantages?
- Will the necessary compromises lead to mediocrity?



Staying Flexible, Current, and Relevant

- The era of infrequent, very large scale curriculum development efforts seems to be over
- The need to maintain a strong, relatively constant conceptual foundation while responding quickly to needs that emerge
- An ongoing dilemma in our field: does staying current and relevant mean jumping from one technology to another?
- Maintaining research expertise vs. currency and relevancy in teaching subjects



Current Topic Matrix

article | discussion | view source | history

New Curriculum Structure and Content

As described in the guiding principles, all Information Systems curricula must offer coverage of seven core topics related to Information Systems Specific Knowledge and Skills. In addition, the curricula cover a selection of elective topics depending on the career tracks that an institution has decided to offer, together with topics related to the development of foundational knowledge and topics and domain knowledge. The career track list presented below is not intended to be exhaustive.

The matrix below represents the relative importance of each of the topics (both core and elective) and the career tracks. It does not, however, include topics related to the foundational and domain knowledge.

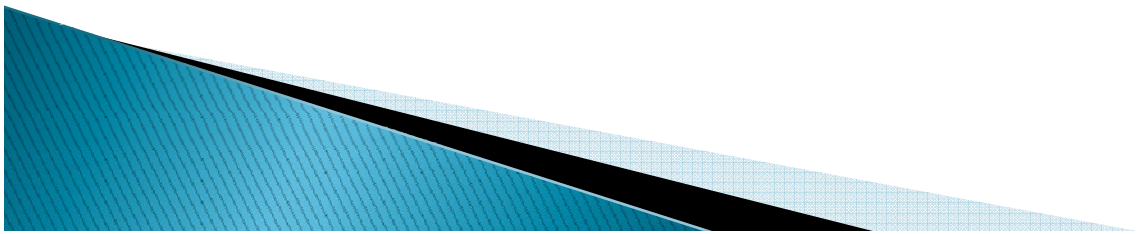
Structure of the IS Model Curriculum:Information Systems specific topics

Career Track:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Core IS Topics:																	
Foundations and Role of IS	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Enterprise Architecture	○	●	○	○	○	●	○	○	○	○	●	○	○	○	●	○	○
IS Strategy, Management and Acquisition	○	●	○	○	○	●	○	○	●	○	●	○	○	○	●	○	○
Data & Information	●	○	○	●	●	○	○	●	●	○	●	○	●	○	○	○	○
Systems Analysis & Design	●	●	●	○	○	○	○	○	○	○	○	○	○	○	●	●	●
IT Infrastructure	○	○	○	●	○	○	○	●	●	●	○	○	●	●	○	○	○
Project Management	●	○	○	○	○	●	○	○	○	○	●	○	○	○	●	●	●
Elective IS Topics:																	
Application Development	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●
Business Process Management		●	●			○	○	○		○	●				○		
Collaborative Computing						○								○			○
Data Mining / Business Intelligence		●		●	●	○	○	○	●		○	○	○	○	○		○
Enterprise Systems		●	●	○	○	○	●	●	○		●	●	○	○			
Human-Computer Interaction	●					○	○				○					●	
Information Search and Retrieval		○		○	●								○				●
IT Audit and Controls	○		●	○	○	○	○	●		●	○		○	○	○		○
IT Security and Risk Management	○			○	○	○	○	●	●	○	○		●	●	○		○
Knowledge Management		●		○		○	○			○							
Social Informatics													○		○		

A = Application Developer	
B = Business Analyst	
C = Business Process Analyst	
D = Database Administrator	
E = Database Analyst	
F = e-Business Manager	
G = ERP Specialist	
H = Information Auditing and Compliance Specialist	
I = IT Architect	
J = IT Asset Manager	
K = IT Consultant	
L = IT Operations Manager	
M = IT Security and Risk Manager	
N = Network Administrator	
O = Project Manager	
Q = Web Content Manager	

Discussion Questions

- What mechanisms do we need to establish to motivate members of the IS community to contribute continuously to the ongoing curriculum development process?
- Specifically, is there anything we can do to engage tenure-track faculty members?
- How specific should the model curriculum be in terms of the technologies included in the curriculum?

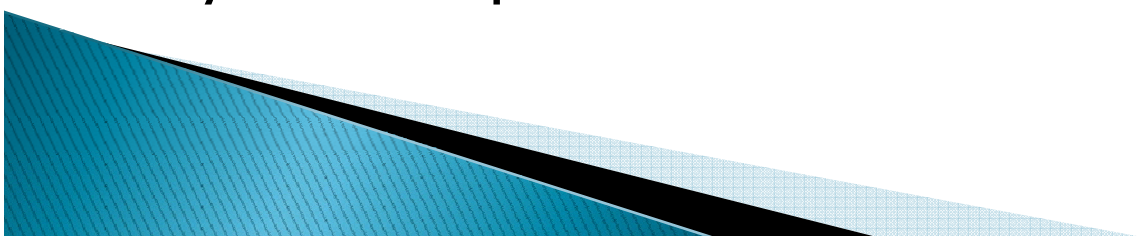


Process Schedule

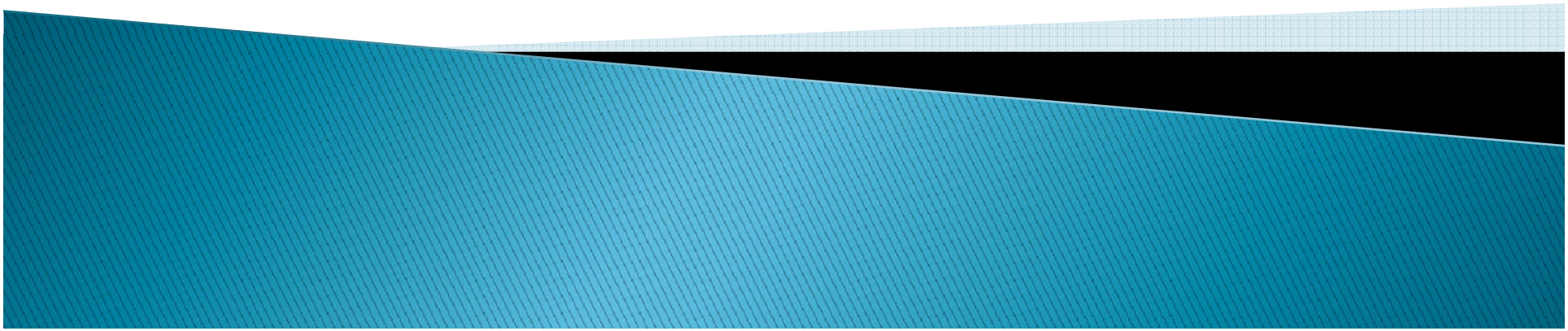
- 8/15 – 9/15/2008: Receive academic community and practitioner feedback on *High-Level IS Capabilities* and *Knowledge & Skills of IS Graduates*; Finalize the above
- 8/15 – 10/15/2008: Derive *Curriculum Topics* based on Knowledge & Skill requirements; Organize the topics into *Courses*
- 10/15 – 11/15/2008: Receive feedback on *Curriculum Topics* and *Courses*
- 11/15 – 12/15/2008: Finalize and release draft curriculum document; update body of knowledge
- 12/15/2008 – 2/28/2009: Receive feedback on the draft curriculum document
- 3/1/2008 – 4/30/2009: Revise the curriculum document and submit to ACM & AIS for approval

How Can You Contribute?

- All members of the IS community are encouraged to participate actively in the discussion on the wiki (http://blogsandwikis.bentley.edu/iscurriculum)
- You are able to review and comment on any aspect of the revised curriculum recommendation
- You can also contact the curriculum task force co-chairs Heikki Topi (htopi@bentley.edu) and Joe Valacich (jsv@wsu.edu) directly and give your feedback to them
- Tell about the project to as many colleagues of yours as possible and invite them to participate



Thank you!!



Information Systems Specific Knowledge and Skills

- Identifying and designing opportunities for IT-enabled organizational improvement
  - Ensuring alignment between IT strategy and organizational strategy
  - Improving organizational processes
  - Identifying and exploiting opportunities created by emerging technology innovations
  - Understanding and documenting information requirements
  - Improving various stakeholders' experience in interacting with the organization (user experience)
- Analyzing trade-offs
  - Designing and comparing high-level solution and sourcing options
  - Capital budgeting for IT-intensive projects; making a financial argument for choosing b/w alternatives

Information Systems Specific Knowledge and Skills

- Designing and implementing information systems solutions
  - Designing enterprise architectures
  - Identifying, evaluating, and procuring solution and sourcing options
  - Ensuring high-quality user experience
  - Securing data and systems
  - Designing, implementing, and configuring applications and integrated systems
  - Managing and exploiting organizational data and information
  - Managing information systems development/procurement resources
  - Managing information systems projects
- Managing ongoing information technology operations
  - Managing the use of enterprise technology resources
  - Maintaining existing information systems
  - Managing relationships with technology service providers
  - Securing data and systems infrastructure
  - Ensuring business continuance