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12-13-2021

TUTORIAL: MAPPING YOUR INSTITUTIONAL CURRICULUM TO THE IS2020 COMPETENCY MODEL

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Recommended Citation

Leidig, Paul M.; Salmela, Hannu; Anderson, Greg; Babb, Jeff; Shankararaman, Venky; Sooriamurthi, Raja; and Thourin, Mark, "TUTORIAL: MAPPING YOUR INSTITUTIONAL CURRICULUM TO THE IS2020 COMPETENCY MODEL" (2021). *Proceedings of the 2021 AIS SIGED International Conference on Information Systems Education and Research*. 22.

<https://aisel.aisnet.org/siged2021/22>

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Abstract:

The Association of Computing Machinery (ACM) and the Association for Information Systems (AIS), two global professional and academic societies with a stake in Information Systems (IS) education, engaged in a project to revise the Information Systems Curriculum for bachelor's degrees. This tutorial introduces the recently approved IS2020 competency guidelines, hence serving to disseminate the IS competency model and related guidelines within the SIGED community. This tutorial session should be of interest to all IS academics, especially faculty developing college-level curricula in Information Systems.

Keywords: IS2020, Competency Model, Mapping

I. INTRODUCTION

Curriculum guideline reports have a long history in providing guidance and advice on designing curriculum for IS programs. The IS2020 report is the latest iteration of model curriculum work. Before IS2020, the IS2010 report articulated guidelines as IS capabilities, knowledge and skill requirements, and characterized the core of the IS curriculum, electives, and career tracks [Topi et al. 2010]. The model curriculum report prior to IS2010, was IS2002 [Gorgone et al., 2003], which was a relatively minor update of IS'97 [Davis et al., 1997]. Both the IS2002 and IS'97 projects were a joint effort between the ACM, AIS, and DPMA/AITP (Data Processing Management Association/Association of Information Technology Professionals). The IS'97 project was preceded by DPMA'90 [Longenecker and Feinstein, 1991], the 1983 ACM Curriculum Recommendations [ACM 1983], and the 1973 ACM Curriculum Recommendations [Couger 1973].

The recommendations proffered in the IS2020 report [IS2020, 2020] articulate competencies that graduates should have upon completion of an IS undergraduate program. The specified competencies are divided into groupings of requisite competencies (that should be delivered in all IS programs) and elective competencies that students may receive depending on the specific profile and specialization within each program. By explicating associated pairings of knowledge elements, skill levels, and dispositions for both required and elective competencies, it is the belief that the recommendations of the IS2020 report will be conducive to the design of learning objectives for IS undergraduate programs and course design. As the focus is on competences, rather than on courses, the guidelines provide flexibility to customize curricula according to local institutional needs, and educational contexts, such as Computing Schools, Business Schools, and Information Schools.

This tutorial introduces the recently approved IS2020 competency guidelines, hence serving to disseminate the IS competency model and related guidelines within the SIGED community. The tutorial will use an interactive format where members of the task force will offer a hands-on experience by helping attendees align their institution IS undergraduate program's current or future academic curricula to the new competency-based structure. In addition, the tutorial seeks to

facilitate discussion on the feasibility of a more continuous community-based approach to sustaining the guidelines. The task force seeks broad engagement of the SIGED community in this continuous and open effort. This tutorial session should be of interest to all IS academics, especially faculty developing college-level curricula in Information Systems.

II. TUTORIAL STRUCTURE

Tutorial Duration: 90 min. Preferred Mode of Delivery: Virtual

This workshop offers a hands-on experience with presenters helping attendees align their institutional current and future academic curricula to the new competency-based structure, which defines competency expectations in making informed decisions for attendee's IS undergraduate programs. Specifically, attendees gain understanding of:

- Competency models: IS2020 Realms, Areas and Competencies; Knowledge/skill pairings and levels; Dispositions
- Curriculum course maps: Moving from competencies with knowledge/skills to course learning objectives; Cross-course mapping and planning
- Institutional mission and objective alignment

Presenters then work with attendees to align each attendee's curriculum to the IS2020 model using the following process adapted from Appendix 1 of IS2020 [IS2020, 2020].

Identify high level goals and choose specializations for a program

1. Define target competency levels for program
2. Select competencies, dispositions, knowledge skill pairings, and skill levels to support target program competency levels
3. Integrate chosen competencies, dispositions, knowledge skill pairings and skill levels to course design

The workshop will spend approximately 30% of the time on presenting the IS2020 model (i.e., competencies, knowledge areas/skills, dispositions, etc.) and 70% of the time with participants working on their course competency mappings and then sharing results with the group.

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