PANEL

Discrete Mathematics:
An Option for ABET Accreditation,
But Does it Make Sense as a Support Course
For an Information Systems Curriculum?

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It has always been argued that mathematics plays an important role in development of technical problem solving abilities of Information Systems (Gorgone et al, 2002) professionals. Certainly, algebra, calculus and statistics have been though to be relevant supporting disciplines for information systems programs. While computer science discipline has recognized the relevance of discrete mathematics, and in fact, requires competency in the discipline for accreditation.

ABET (2004) accreditation standards have acknowledged the potential relevance of discrete mathematics to the information systems discipline, and allows discrete mathematics to be counted among the three course requirement for mathematics and statistics needed for program accreditation. Yet, there is far less than acceptance of discrete mathematics among IS faculty as an acceptable requirement. Indeed, many faculty feel that the discipline is esoteric, and a playground for rogue mathematicians to terrorize unsuspecting IS students.

Roy Daigle, a former mathematician, and now a true IS faculty member will review the acceptability of the subject and discuss its implementation in a non-calculus based approach. He is well aware of the controversial nature of the course in an IS curriculum, but will share what he believes significant motivation for inclusion of a discrete mathematics course in an IS curriculum model.

Valerie Harvey teaches a discrete mathematics course in a strong IS program, but teaches it very definitely from an "IS perspective". She will argue the merits of this approach, and will discuss significant support she has had from her mathematics colleagues. She also will summarize course materials she has developed, and presented at this ISCEON workshop for those wishing to teach such a course. Valerie observes that here students respond well, if not enthusiastically to her approach. Valerie clearly feels that there is significant benefit in the problem solving capability of students who have been exposed to this exposure.

Bart Longenecker will moderate the discussion and relate curriculum design goals that can be enhanced by exposure to this field. The audience will be invited to take a position on the issues presented to express either support or disdain for the approach. Many of our students will benefit from exposure to dealing with these very significant issues.

ABET Computing Accreditation Commission, "Criteria for Accrediting Computing Programs," Approved Nov. 1, 2003, ABET, Inc., Baltimore, Maryland, URL: http://www.abet.org, accessed on September 9, 2004.

Gorgone, J., Davis, G., Valacich, J., Topi, H., Feinstein, D. Longenecker, H. (2002) IS 2002 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems," ACM, New York, NY, AIS, and AITP (formerly DPMA), Park Ridge, IL.