Information Technology Education

IT Across the Curriculum

From a 2005 Snowbird Conference presentation by
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History

- IT programs being created in 1990’s (RPI, Penn State, Indiana, ...)
- ITTF formed in 1998 by faculty and staff of the Amherst campus who were members of a President's office IT workforce development task force; expanded to include representatives from a number of academic units, including the social sciences, and the humanities and fine arts
- in parallel (98-99) -- "Review of Computer and Information Science/Technology (CIST) Programs for the Massachusetts Board of Higher Education"
Original ITTF

- W. Richards Adrion, Department of Computer Science
- Kevin Aiken, Division of Continuing Education
- Leslie Ball, Isenberg School of Management
- David Mix Barrington, Department of Computer Science
- Marc Cohen, Office of Information Technologies
- Wendy Cooper, Department of Computer Science
- Stephen Demski, University Outreach
- Sesu Desu, Department of Electrical and Computer Engineering
- Joseph Goldstein, College of Engineering
- James Kurose, Department of Computer Science
- Stephen Levey, Video Instructional Program
- Rachel Llewellyn, DuBois Library
- Marla Michael, Department of Computer Science
- Charles Schweik, Center for Public Policy and Administration
- Joseph Sardinas, Department of Accounting and Information Systems
- Alice Szlosek, Division of Continuing Education
- Joan Stoia, Campus Career Network
- Harlan Sturm, College of Humanities and Fine Arts
History

• 1999: Convened a 2-day conference of business, government, and academic leaders "Formulating a UMass Response to the Information Technology Labor Shortage”

• 2000: 120 UMass Amherst faculty and staff gathered to focus details of an IT curriculum IT across the curriculum concept

• 2000: Commonwealth Information Technology Initiative (CITI) funded by BHE to address issues in CIST report
  – upgrade IT curriculum, improve professional development opportunities, and encourage regional collaboration - CC/SC/UMass
  – a major focus of CITI was “Information Technology Across the Curriculum (ITAC)”
IT minor

• supported by the whole campus without a traditional home (college, department)

• enable any student to:
  – reach a comfort level with (fluency in) information technology in the context of her/his major
  – acquire a platform from which to innovate in any field
Requirements

Intro to IT
- Princ. OO Programming
- IT Tech or Multi-Med Sys

CS, Resource Econ., Management

CS, ECE, Management

English, Comm. & Journ., HTM, RE

Electives

Electives

Capstone

Minimum 2 of 3

Minimum 15 CR

20+ departments

CS, ECE, Management

English, Comm. & Journ., HTM, RE

AY 2005 -
New directions (circa 2005):

• curriculum
  – increasing course availability
  – five colleges (Amherst, Hampshire, Mount Holyoke, Smith, Umass Amherst) courses, minor
  – capstone course
  – seminar requirement based on IT lecture series?

• infrastructure
  – learning commons -- a gathering place in the UMass Amherst library with wireless connectivity, workstations, social structures and events
Other programs (circa 2005):

• IT Major
  – high demand -- students now craft an IT Major through the BDIC program
  – first step, however, is to **clearly define** what an IT major is on our campus (see Informatics program in SCS)
  – More technical IT minor ~2008

• IT Graduate Program
  – some (non CS/CE/MIS) departments are planning or offer IT-related graduate courses and programs
  – coordinate and support cross-program collaboration, much as we do with the IT minor.
State of the State (2013):

- K-12 computing programs
  - No standards, no licensure, spotty offerings
  - Reform effort lead by MassCAN, code.org, CiC, CSTA – Every MA K-12 student should have the opportunity to study computing; computer science should count for graduation
State of the State

a. Distribution of Computer and Math Occupations in MA, Total Employment = 130,740

b. Distribution of Total Computer and Math Occupations in MA by Industry Sector
State of the State (2013):

- HE computing programs
- 80+ institutions offer CS & IT degrees