Associate-Level Curricular Guidelines

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Two-Year College Education Committee

Proposed Guidelines for Associate-Degree Transfer Curriculum in Computer Science

- **Computer Science** … involves design and innovation developed from computing principles. This curriculum focuses on the theoretical foundations of computing, algorithms, and programming techniques, as applied to operating systems, artificial intelligence, informatics and the like.
- Developed in parallel with the five-year *Interim Review* of the baccalaureate volume.
- Includes learning outcomes assessment for CS I, CS II, CS III, and Discrete Structures.
- Reviewers needed.

Under Development:
Guidelines for Associate-Degree Career Curriculum in Information Technology

- **Information Technology …** involves the design, implementation and maintenance of technology solutions and support for users of such systems. This curriculum focuses on crafting hardware and software solutions for networks, security, client-server and mobile computing, web applications, multimedia resources, communications systems, and the planning and management of the technology lifecycle.
- Will revise Guidelines for Associate-Degree Programs to Support Computing in a Networked Environment published in 2000.
- Will include both IST and ICT curricula.

Guidelines for Associate-Degree Transfer Curriculum in Computer Engineering *(published 2007)*

- **Computer Engineering ...** involves the design and construction of processor-based systems comprised of hardware, software, and communications components. This curriculum focuses on the synthesis of electrical engineering and computer science as applied to the design of systems such as cellular communications, consumer electronics, medical imaging and devices, alarm systems and military technologies.
- Collaborative effort with the ACM and IEEE-CS Joint Task Force on Computing Curricula.

Guidelines for Associate-Degree Transfer Curriculum in Software Engineering *(published 2005)*

- **Software Engineering ...** involves the design, development and testing of large, complex, and safety-critical software applications. This curriculum focuses on the integration of computer science principles with engineering practices as applied to constructing software systems for avionics, healthcare applications, cryptography, traffic control, meteorological systems and the like.
- Collaborative effort with the ACM and IEEE-CS Joint Task Force on Computing Curricula.

Guidelines for Associate-Degree Curriculum in Computer Engineering

- **Computer Engineering ...** involves the design and construction of processor-based systems comprised of hardware, software, and communications components. This curriculum focuses on the synthesis of electrical engineering and computer science as applied to the design of systems such as cellular communications, consumer electronics, medical imaging and devices, alarm systems and military technologies.

Guidelines for Associate-Degree Curriculum in Software Engineering

- **Software Engineering ...** involves the design, development and testing of large, complex, and safety-critical software applications. This curriculum focuses on the integration of computer science principles with engineering practices as applied to constructing software systems for avionics, healthcare applications, cryptography, traffic control, meteorological systems and the like.

Guidelines for Associate-Degree Curriculum in Information Systems

- **Information Systems ...** involves the application of computing principles to business processes, bridging the technical and management fields. This curriculum focuses on the design, implementation and testing of information systems as applied to business processes such as payroll, human resources, corporate databases, ecommerce, finance, customer relations management and decision support.

COMPUTING DISCIPLINES

ASSOCIATE-DEGREE CURRICULAR GUIDELINES

Proposed Guidelines for Associate-Degree Transfer Curriculum in Computer Science	Guidelines for Associate-Degree Transfer Curriculum in Computer Engineering	Guidelines for Associate-Degree Transfer Curriculum in Software Engineering	Guidelines for Associate-Degree Programs in Information Systems	Under Revision Guidelines for Associate-Degree Programs to Support Computing in a Networked Environment (Information Technology)
Emphasis on **Theory**	⟷			Emphasis on **Application**

Associate Degrees **in the United States are completion points after the first two years of a four-year college program of study intended**

for transfer into the upper division ***(AA or AS degree)***
or
for entry into immediate employment ***(AAS degree)***