

# Curricular Resources from the ACM

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## Two-Year College Education Committee

**NOTE: “Associate Degrees” are completion points after the first two years of a four-year college program of study.**

## **Guidelines for Associate-Degree Programs 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.
- ✚ Contains curricula recommendations for three (3) teaching paradigms: Objects-First, Imperative-First, Breadth-First
- ✚ Collaborative effort with the ACM and IEEE-CS Joint Task Force on Computing Curricula.

## **Guidelines for Associate-Degree Transfer 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.
- ✚ Collaborative effort with the ACM and IEEE-CS Joint Task Force on Computing Curricula.

## Guidelines for Associate-Degree Transfer 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.
- ✚ Collaborative effort with the ACM and IEEE-CS Joint Task Force on Computing Curricula.

## Guidelines for Associate-Degree Programs 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.
- ✚ Contains career and transfer curricula recommendations

## Guidelines for Associate-Degree Programs to Support Computing in a Networked Environment (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 as applied to networks, security, client-server and mobile computing, web applications, multimedia resources, communications systems, and the planning and management of the technology lifecycle.
- ✚ Contains content areas, goals and topics for three (3) curricula: User Support Services, Networking Services, Internet/Web Services.
- ✚ In development: *new* guidelines for Information Technology curricula.

