Indiana State University — More. From day one.

BS in Information Technology Cirriculum map

Courses and Activities Mapped to BS in Information Technology Outcome Set

Courses and Learning Activities	1: Apply general knowledge to IT issues — An ability to apply knowledge of computing and mathematics appropriate to the discipline (Apply general knowledge to IT issues)			2: Analyze and solve problems — An ability to analyze a problem, and identify and define the computing requirements appropriate to the solution (Analyze and solve problems)			3: Design and implement computer-based solutions — An ability to design, implement and evaluate a computer-based system, process, component or program to meet desired needs (Design and implement computer-based solutions)			4: Function effectively in the team environment — An ability to function effectively on teams to accomplish a common goal (Function effectively in the team environment)			5: Understand professional and ethical responsibilities — An understanding of professional, ethical, legal, security and social issues and responsibilities (Understand professional and ethical responsibilities)			6: Effective communication — An ability to communicate effectively with a range of audiences (Effective communication)			7: Respect diversity — The ability to analyze the local and global impact of computing on individuals, organizations, and society (Respect diversity)			8: Professional development — Recognition of the need for and the ability to engage in continuous professional development (Professional development)	9: Mastery of IT tools — An ability to use current techniques, skills, and tools necessary for computing practice (Mastery of IT tools)								
	1: Use mathematics — Use mathematics to solve IT issues and problems (Use mathematics)	2:Modeling for analysis — Model IT systems for design and analysis (Modeling for analysis)	3: System design — Design IT systems (System design)	1: Problem definition — Use analytical tools and experiences to understand and define problems (Problem definition)	2: Problem solution development — Use accepted problem solving techniques and tools to develop solutions (Problem solution development)	3: Apply solutions and monitor progress — Select appropriate solutions, implement and monitor progress (Apply solutions and monitor progress)	1: Computer-based system design — Develop system designs (Computer-based system design)	2: Apply designs and test — Apply designs and use experiments to evaluate performance (Apply designs and test)	3: Install systems and monitor performance — Commissioning designs and monitor performance (Install systems and monitor performance)	1: Effective team member — Functions as an effective team member (Effective team member)	2: Understands the purpose of teams — Assumes responsibility as a team member, respects chain of command and understands why teams exist (Understands the purpose of teams)	3: Works and communicates well in the team setting — Recognizes the need for good interpersonal skills and practices quality in communication in the team setting (Works and communicates well in the team setting)	1: Demonstrates professionalism — Understands the role of the professional and aspires to become a respected member of an organization (Demonstrates professionalism)	2: Understands and exhibits ethics — Is knowledgeable on issues involving social and ethical responsibilities (Understands and exhibits ethics)	3: Understands the role of the IT professional — Understands the role the IT professional has in developing and delivering responsible and secure solutions (Understands the role of the IT professional)	1: Exhibits good verbal communications — Can verbally present and describe technical information and issues in a clear manner (Exhibits good verbal communications)	2: Possesses good written communications skills — Can develop well written e-mails, letters, technical documents, test plans and PowerPoint presentations (Possesses good written communications skills)	3: Understands the need for formality and respect — Differentiates between formal, semi-formal and informal situations involving verbal and written protocols, including meeting (Understands the need for formality and respect in communication)	1: Understands the IT marketplace — Exhibits some knowledge of the global nature of IT system use (Understands the IT marketplace)	2: Understands social responsibility — Understand the importance of the social issues involved with business and industry (Understands social responsibility)	3: Understands the responsibility of safe design practices — Understand the importance and responsibility of safety in design and operations as a social issue (Understands the responsibility of safe design practices and operations)	1: Demonstrates a desire to learn — Demonstrates the desire to learn and respects those who possess knowledge (Demonstrates a desire to learn)	1: Demonstrates IT technical competence — Demonstrates an ability to use and apply current technical concepts and practices in the core information technologies (Demonstrates IT technical competence)	2: Understand and support user needs — Demonstrates an ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems (Understand and support user needs)	3: Transfer technologies & solutions to the user environment — Demonstrate an ability to effectively integrate IT-based solutions into the user environment (Transfer technologies and solutions to the user environment)	4: Utilize practices and standards — Demonstrate an understanding of best practices and standards and their application (Utilize practices and standards)	5: Understand project planning tools — Demonstrate an ability to assist in the creation of an effective project plan (Understand project planning tools)	6: Understand fundamental technologies — Understand the fundamtals of the core information technologies of human computer interaction, informatiuon management, programming, networking, web systems and technologies (Understand fundamental HCI, infromation management, programming, networking and web technologies)	7: Understand information security — Understand the fundamtals of information assurance and security (Understand information security)	8: Understand system administration and maintenance — Understand the fundamtals of system administration and maintenance (Understand system administration and maintenance)	9: Understand system integration and architecture — Understand the fundamtals of system integration and architecture (Understand system integration and architecture)
ECT 160 Electronic Fundamentals	I		I	I	I	I		I	I														I									
ECT 170 Introduction to Information Technology		I	I	I	I	I	I						I	I	I								I	I	I	I	I	I	I	I	I	I
ECT 172 Computer Components Essentials		P	P	I	I	I	I	I	I		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I		I	I	I	I
ECT 175 ECT 175		I			I	I						I			I		I						I	I	I	I	I		I	I	I	I
ECT 372 Advanced Computer Components	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	I	P	P	P	P	P	P	P	P	P	P
ECT 373 Introduction to Data Communications and Networking		P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	I	P	P	P	P	P	P	P	P	P	P
ECT 431 ECT 431	R			R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R	R	R	R	R	R	R
ECT 437 Industrial Computer Systems Management										R	R	R	R	R	R	R	R	R	R	R	R	R	I										
CS 151 Introduction to Computer Science	I				I	I	I	I	I				I	I	I	R	R	R	R	R	R	I	R	R	R	R	R	R	R	R	R	R
CS 170 Web Programming	P			P	P	P	P	P	P				I	I	I				I	I	I	I	I	I	I	I	I		I	I	I	I
CS 256 Principles of Structured Design	P	P	P	P	P	P	P	P	P				P	P	P	P	P	P	P	P	P	I	P	P	P	P		P	P	P	P	P
CS 260 Object Oriented Programming	R	R	R	R	R	R	R	R	R				P	P	P	P	P	P	P	P	P	I	P	P	P	P		P	P	P	P	P
MATH 102 Quantitative Literacy	I			I	I	I																I	R	R	R	R	R	R	R	R	R	R
MIS 301 Systems Analysis for Information Technology							P	P					P	P	P	P	P	P	P	P	P	I	P	P	P	P	P	P	P	P	P	P

Legend: I Introduced | P Practiced | R Reinforced

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