



**Career Cluster Connections Cover Page
Information Technology**

Career Cluster: Information Technology

Postsecondary Education Partnerships

Existing Postsecondary Education Partners:

Augustana University (www.augie.edu) – Computer Information Systems (BS); Computer Science (BS)

Dakota State University (www.dsu.edu) – Computer Game Design (BS); Computer Science (BS); Application Programming (AS); Cyber Operation (BS); Information Systems (BS)

Lake Area Technical Institute (www.lakeareatech.edu) – Computer Information Systems: Networking Specialist Option; Programming Specialist Option, Security Specialist Option; Visual Communications Specialist (AS)

Mount Marty (www.mtmc.edu) – Information Technology (BA), Computer Information Systems, Computer Science (minors only)

National American University (www.national.edu) – Computer & Network Security (AAS); Information Technology (AAS); Information Technology (BS), emphasis in: Computer Security & Forensics, Internet Systems Development, Management Information Systems, Network Management/Microsoft

South Dakota School of Mines & Technology (www.sdsmt.edu) – Computer Engineering (BS); Computer Science (BS)

South Dakota State University (www.sdstate.edu) – Computer Science (BS)

Southeast Technical Institute (www.southeasttech.edu) – Computer Network Administration (AAS); Computer Network Security (AAS); Computer Programming (AAS); Computer System Administrator (AAS); Computer Technician (Diploma); Software Support Specialist (Diploma)

University of Sioux Falls (www.usiouxfalls.edu) – Computer Information Systems (BS); Computer Science (BS)

University of South Dakota (www.usd.edu) – Computer Science (BS)

Western Dakota Tech (www.wdt.edu) – Computer Science – Network Administration and Security (AAS)

Dual Credit Opportunities:

Prefix	Number	Institution	Course Name
DSU			
CSC	105	DSU	Introduction to Computers
CSC	150	DSU	Computer Science I
LATI			
CIS	100	LATI	PC Maintenance
CIS	102	LATI	Windows Applications for Technician
CIS	105	LATI	Computer Software Applications
CIS	125	LATI	Adv Computer Software Applications
CIS	132	LATI	Intro to Computer Programming
CIS	140	LATI	Database Design and SQL
CIS	141	LATI	Web Design and Maintenance
CIS	160	LATI	UNIX Operating System



CIS	170	LATI	Web 2.0
CIS	200	LATI	A Certification
CIS	232	LATI	Advanced Visual Basic
CIS	235	LATI	Computer Crime Investigation
CIS	236	LATI	Object Oriented Programming
CIS	238	LATI	Adv Object Oriented Programming
CIS	240	LATI	Mobile App Development
CIS	241	LATI	Advanced Web Design
CIS	245	LATI	Advanced Security Topics
CIS	247	LATI	COBOL Programming
CIS	255	LATI	Application Security
CIS	265	LATI	Virtualization
CIS	270	LATI	Intro to Database Programming
CIS	272	LATI	Client/Server Programming
CIS	273	LATI	Web Applications-ASP
CIS	276	LATI	Web Applications-PHP
CIS	280	LATI	Windows Server Administration
CIS	285	LATI	Server Security
CIS	290	LATI	Systems Analysis and Design
CSC	100	LATI	Computer Concepts
NET	101	LATI	Network Cabling
NET	111	LATI	Networking for Home/Small Business
NET	115	LATI	Introduction to Networks
NET	215	LATI	CCNA Security
NET	251	LATI	Implementing IP Routing
MTI			
CIS	105	MTI	Complete Computer Concepts
IST	105	MTI	SQL Database Management
IST	120	MTI	A Hardware/Operating Systems
IST	140	MTI	Cisco CCNA I
NSU			
MIS	150	NSU	Computer Science I
SDSU			
INFO	101	SDSU	Introduction to Informatics
STI			
CIS	100	STI	Keyboarding
CIS	101	STI	Computer Essentials
CIS	105	STI	Introduction to Computers
CIS	106	STI	Introduction to Computers CIS
CIS	107	STI	Intro to Computers MAC
CIS	112	STI	Networking Electronics
CIS	125	STI	Advanced Computer Applications



CIS	130	STI	Introduction to Programming
CIS	131	STI	C# Programming
CIS	149	STI	Introduction to JAVA
CIS	151	STI	Microcomputer Hardware DOS
CIS	169	STI	Network and OS Fundamentals
CIS	171	STI	Introduction to Networking
CIS	180	STI	Windows Server OS
CIS	187	STI	Routers WANS I
CIS	194	STI	Introduction to Databases
CIS	195	STI	Internet Programming Essentials
CIS	207	STI	eBusiness
CIS	236	STI	Intro to MS Web Development
CIS	241	STI	Dynamic Web Development
CIS	248	STI	Advanced Application Development
CIS	249	STI	Advanced Object Oriented Programming
CIS	259	STI	Server Virtualization
CIS	260	STI	Advanced LINUX
CIS	266	STI	Web Services
CIS	273	STI	Network Services and Security
CIS	277	STI	Computer Systems Security
CIS	278	STI	Operations Security
CIS	279	STI	Advanced Databases
CIS	279	STI	Advanced Databases
CIS	281	STI	Network Troubleshooting
CIS	283	STI	Internet Systems Scripting
CIS	285	STI	Wireless Data Communication
CIS	286	STI	Information Security
CIS	288	STI	Routers and WANS II
CIS	293	STI	Advanced Technologies
CIS	296	STI	Adv MS Web Dev
CIS	296	STI	Adv MS Web Dev
WDT			
CIS	105	WDT	Microcomputer Software Applications
CIS	127	WDT	CISCO Academy/Networking Technology
CIS	216	WDT	Introduction to Programming

Work-Based Learning

Career Exploration:

Youth Internship/Job Shadow – working at school help desk; shadowing school technology coordinator



<p>Intermediate Experiences: Employment – part time or full time summer position with school technology coordinator assistant</p>
<p>Capstone Experiences: Entrepreneurship Experience: Development and sales of computer application; computer repair business Senior Experience: Design and Development of program or application related to field of interest</p>

Experiential Learning

<p>Career and Technical Student Organizations and Key Activities (competitions, events, etc.): Skills USA Competitions Action Skills: Career Pathways Showcase: Computer Programming Customer Service Entrepreneurship Information Technology Services Interactive Application & Game Development Internetworking Job Skill Demonstration A Technical Computer Applications Web Design</p> <p>FBLA Computer Problem Solving Cybersecurity Introduction to Information Technology Networking Concepts Computer Applications Client Service Entrepreneurship Network Design Computer Game and Simulation Programming</p>	<p>Course and CTE Standards Supported: All courses included in the Information Technology Career Cluster are applicable to these competitions.</p>
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Desktop Application Programming Mobile Application Development Website Design Help Desk	
Service Learning Opportunities/Organizations: Service Learning: Computer repair, software development, or programming for community based non-profit organization	Course and CTE Standards Supported:
Additional Experiential Learning Opportunities: Youth Internship: volunteer or paid internship for local technology company	Course and CTE Standards Supported:

Certification and Credentials

Certification/Credential	Recommended Prerequisite Courses	Pertinent Details (location of assessment, cost, test prep, etc.)
Individual Certifications in IT		See website for complete list of options: http://www.brainbench.com/
Entry- level computer service technician (A+® certification)		http://www.comptia.org/certifications/listed.aspx
Oracle Certifications		See website for complete list of options: http://education.oracle.com
Cisco Certifications		See website for complete list of options: www.cisco.com

Key Resources: List any key resources that teachers, administrators, and program coordinators would find useful as they plan to implement this career cluster.

