



Information Technology Career Cluster

PLAN OF STUDY

<http://www.nd.gov/cte/services/career-clusters/>
<http://www.careerclusters.org>

(7/10/2010 CTE revision)

Name _____

School _____

Date _____



SAMPLE OCCUPATIONS RELATING TO THIS CAREER CLUSTER	
Pathway	Occupations (also - Information Technology Teacher)
NETWORK SYSTEMS	Computer Info Systems • Network Admin • Network Engineer • Network Tech • Network Security Analyst • Telecom Network Tech
INFORMATION SUPPORT & SERVICES	Data Administrator • Data Modeler • Help Desk Specialist • Computer Support Specialist • Computer Systems Analyst
WEB AND DIGITAL COMMUNICATIONS	Multimedia Specialist • Web Designer • Web Site Developer • Animator • Blog Developer • Streaming Media Specialist
PROGRAMMING AND SOFTWARE DEVELOPMENT	Computer Programmer • Software Applications Specialist • Computer Software Engineer • Software Applications Tester

SUGGESTED COURSE OF HIGH SCHOOL STUDY						
It is suggested that students consider appropriate units of dual credit, articulation, or advanced placement opportunities for postsecondary credit.						
English (*four units required to graduate; including literature, composition, and speech) Choices may include:	Math (*three units required to graduate) Choices may include:	Science (three units required to graduate) *Required units Choices may include:	Social Studies (three units required to graduate) *Required units Choices may include:	Physical Education (one unit required to graduate) *Required units	Career & Technical Education and Other Electives (three units of foreign or Native American language, fine arts, or career and technical education are required to graduate)	Additional Suggested Learning Opportunities
<input type="checkbox"/> English 9 <input type="checkbox"/> English 10 <input type="checkbox"/> English 11 <input type="checkbox"/> English 12 <input type="checkbox"/> Business English <input type="checkbox"/> Composition <input type="checkbox"/> Speech or Debate <input type="checkbox"/> Reading <input type="checkbox"/> College Composition <input type="checkbox"/> Dual Credit Courses	<input type="checkbox"/> Intro to Algebra College Prep: <input type="checkbox"/> Algebra <input type="checkbox"/> Geometry <input type="checkbox"/> Advanced Algebra <input type="checkbox"/> Advanced Math <input type="checkbox"/> Pre-Calculus <input type="checkbox"/> AP Calculus <input type="checkbox"/> College Algebra <input type="checkbox"/> Dual Credit Courses	<input type="checkbox"/> *Physical Science <input type="checkbox"/> * Biology <input type="checkbox"/> *1 additional unit <input type="checkbox"/> Principles of Technology <input type="checkbox"/> Physics <input type="checkbox"/> Advanced Physics <input type="checkbox"/> Dual Credit Courses	<input type="checkbox"/> *U.S. History <input type="checkbox"/> *American Gov 1/2 and <input type="checkbox"/> *Economics ½, or <input type="checkbox"/> *Problems of Democracy <input type="checkbox"/> *1 additional unit Choices may include: <input type="checkbox"/> Cooperative Marketing <input type="checkbox"/> ND History <input type="checkbox"/> Economics <input type="checkbox"/> Dual Credit Courses	<input type="checkbox"/> *Physical Education 1 unit or <input type="checkbox"/> *Physical Ed ½ unit and <input type="checkbox"/> *Health ½ unit	<input type="checkbox"/> Introduction to Programming <input type="checkbox"/> IT Essentials/A+ Industry Certification <input type="checkbox"/> Cisco Discovery I (Network Design and Basic Routing) <input type="checkbox"/> Cisco Discovery II (Switching and WAN Technologies) CCENT/CCNA Certification <input type="checkbox"/> Technological Issues <input type="checkbox"/> Communication Technology <input type="checkbox"/> Introduction to Computer Applications <input type="checkbox"/> Intro to Web Design <input type="checkbox"/> Desktop Publishing & Creative Design <input type="checkbox"/> Computer Applications – Word/Excel <input type="checkbox"/> Computer Applications – Access/PowerPoint <input type="checkbox"/> Electronics I,II,III <input type="checkbox"/> Database <input checked="" type="checkbox"/> Dual Credit IT Courses	School-Based: <input type="checkbox"/> SkillsUSA <input type="checkbox"/> FBLA <input type="checkbox"/> TSA <input type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input type="checkbox"/> Internship <input type="checkbox"/> Job Shadowing <input type="checkbox"/> Service Learning Projects Community-Based: <input type="checkbox"/> Mentorship <input type="checkbox"/> Volunteer <input type="checkbox"/> Part-time Employment

EXAMPLES OF NORTH DAKOTA APPRENTICESHIP OPPORTUNITIES AND POSTSECONDARY PROGRAMS RELATED TO THIS CAREER CLUSTER				
Pathway	Apprenticeship Opportunities	Associate Degree or Less	Bachelors Degree	Masters Degree or More
NETWORK SYSTEMS	<input type="checkbox"/> Cable Splicer <input type="checkbox"/> Internetworking Technician <input type="checkbox"/> Line Installer/Repairer <input type="checkbox"/> Line Maintainer <input type="checkbox"/> Relay Tester	<input type="checkbox"/> Network Systems (DCB,NDSCS,WSC,FBCC) <input type="checkbox"/> Information Assurance/Network Security (BSC,NDSCS),WSC <input type="checkbox"/> Computer Information Systems (BSC, FBCC, LRSC, NDSCS) <input type="checkbox"/> Database Technology (DCB) <input type="checkbox"/> Information Technology (BSC, MaSU, DCB, LRSC, VCSU,UTTC)	<input type="checkbox"/> Information Technology (JC) <input type="checkbox"/> Computer Information Systems (MaSU, VCSU)	
INFORMATION SUPPORT & SERVICES	<input type="checkbox"/> Electric Meter Repairer <input type="checkbox"/> Electronics Mechanic <input type="checkbox"/> Instrument Technician <input type="checkbox"/> Line Installer/Repairer <input type="checkbox"/> Protective Signal Installer <input type="checkbox"/> Substation Operator	<input type="checkbox"/> Computer Support Specialist (BSC, BSC, DCB, NDSCS, WSC), (TMCC) <input type="checkbox"/> Computer Systems Technician (BSC, DCB, NDSCS, WSC) <input type="checkbox"/> Information Systems (BSC,DCB,LRSC,WSC,SBC) <input type="checkbox"/> Operating Systems Technician (DCB,WSC)	<input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Information Systems (MiSU, NDSU, UND, VCSU, MaSU, JC, UMary)	<input type="checkbox"/> +Computer Engineer (NDSU)
WEB AND DIGITAL COMMUNICATIONS		<input type="checkbox"/> +Webmaster/Web Designer (BSC, LRSC, DCB, NDSCS, TMCC, WSC)	<input type="checkbox"/> +Graphic Design Tech. (UND) <input type="checkbox"/> +Web Design (NDSU)	
PROGRAMMING & SOFTWARE DEV	For more about Apprenticeships: http://bat.doleta.gov/bat.cfm	<input type="checkbox"/> Computer Science Programming (BSC, LRSC, MiSU, NDSCS,FBCC,)	<input type="checkbox"/> Computer Science Programming (BSC, DSU, JC, MiSU, NDSU, UND)	<input type="checkbox"/> Software Engineer (NDSU) <input type="checkbox"/> Computer Science Programming (NDSU, UND)

+These major fields may also be found in related clusters including: Arts, AV Tech & Communications; STEM, and Manufacturing. BJCC – Burdick Job Corps Center, BSC – Bismarck State College, DCB – Dakota College at Bottineau, DSU – Dickinson State University, FBCC – Fort Berthold Community College, JC – Jamestown College, LRSC – Lake Region State College, MaSU – Mayville State University, MiSU – Minot State University, NDSCS – North Dakota State College of Science, NDSU – North Dakota State University, TMCC – Turtle Mountain Community College, UM – University of Mary, UND – University of North Dakota, VCSU – Valley City State University, WSC – Williston State College. (7/10/2010 CTE revision)