



Networking Services Technology – Network Infrastructure

Associate in Science | Code: 25062 | 60 credits

CIP (1511100112)

Effective Term: Fall 2024 (2247)

The Networking Services Technology program provides an opportunity to establish a foundation in the field of network design and administration for employment in commercial, industrial and government institutions. The Network Infrastructure concentration offers the training needed to connect and secure multiple computing systems and software platforms. Students are additionally eligible to sit for the Cisco Certified Networking Associate (CCNA) certification exam. Graduates are prepared for positions as information technology specialists, help desk specialists, network specialists, entry level security specialists and network systems analysts.

Note: There is only one A.S. program in Networking Services Technology with three (3) track specializations—Network Infrastructure, Network Security, and Enterprise Cloud Computing. Students may select from one of the three options, but the A.S. in Networking Services Technology will be awarded to the student only once.

GENERAL EDUCATION REQUIREMENTS (15.00 Credits)

COMMUNICATIONS (3.00 credits)

ENC 1101	English Composition	(3 credits)	Prerequisite: Student must meet the Developmental Education reading and writing requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption).
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HUMANITIES (3.00 credits)

ARH 1000	Art Appreciation	(3 credits)	
HUM 1020	Introduction to Humanities	(3 credits)	
LIT 2000	Introduction to Literature	(3 credits)	Prerequisite: ENC 1101
MUL 1010	Music Appreciation	(3 credits)	
PHI 2010	Introduction to Philosophy	(3 credits)	
THE 2000	Theatre Appreciation	(3 credits)	

MATHEMATICS (3.00 credits)

MAC 1105	College Algebra	(3 credits)	Prerequisite: MAT 1033♦
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♦**Note:** Students must seek advisement for proper mathematics course from discipline chairperson.

NATURAL SCIENCE (3.00 credits)

AST 1002	Descriptive Astronomy	(3 credits)
BSC 1005	General Education Biology	(3 credits)
CHM 1020	General Education Chemistry	(3 credits)
ESC 1000	General Education Earth Science	(3 credits)
EVR 1001	Introduction to Environmental Science	(3 credits)
GLY 1010	Physical Geology	(3 credits)
OCE 1001	Introduction to Oceanography	(3 credits)
PHY 1020	General Education Physics	(3 credits)

SOCIAL SCIENCE (3.00 credits)

AMH 2010	History of the US to 1877	(3 credits)
AMH 2020	History of the US since 1877	(3 credits)
POS 2041	American Federal Government	(3 credits)

COMPUTER COMPETENCY

Test type(s) needed:

Computer Competency Test (CCT)

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CGS 1060C Introduction to Computer Technology & Application

MAJOR COURSE REQUIREMENTS (16.00 Credits)

CGS 1060C Intro to Computer Technology and Applications (4 credits)

CTS 1120 Cybersecurity Fundamentals (4 credits)

CTS 1134 Networking Technologies (4 credits)

CTS 2303 Windows Server Administration (4 credits)

Recommended preparation: prior knowledge of Networking Technologies

Recommended preparation: CGS 1060C and CTS 1134

PROGRAM CONCENTRATION CORE (24.00 Credits)

CTS 1111 Linux + (4 credits)

CTS 1650 CCNA 1: Cisco Fundamentals (4 credits)

CTS 1651 CCNA 2: Routing and Switching (4 credits)

CTS 2306 Windows Networking Services (4 credits)

CTS 2334 Windows Identity Services (4 credits)

CTS 2652 CCNA 3: Advanced Routing and Switching (4 credits)

Corequisite: CTS 1650

Recommended preparation: CTS 1145

or equivalent knowledge in Microsoft

Recommended preparation: CTS2303 and

CTS2306 or equivalent knowledge.

Prerequisite: CTS 1651

PROGRAM COURSE ELECTIVE (5.00 Credits)

CGS*; CIS*; COP*; CTS*

CGS 1560 A+ Computer Operating Systems (4 credits)

CIS 2900 Directed Information Technology Study (1-4 credits)

CTS 1145 Cloud Essentials (4 credits)

CTS 1328 Supporting Microsoft Clients (4 credits)

CTS 1437 Microsoft SQL Administration (4 credits)

CTS 2153 Supporting Windows Users & Applications (4 credits)

Prerequisite: CGS 1060C

Recommended preparation:

CGS 1540 or CGS 1541

Prerequisite: CTS 1328

* Any course with the listed prefixes satisfies this requirement.

Course Sequence Guide Full-Time Enrollment
Networking Services Technology - Network Infrastructure
 Associate in Science | Code: 25062 | 60 credits

Term	Course ID	Course Title	Credits	Pre/Co-requisites	Industry Certifications
1	CGS1060C	Intro to Computer Tech & Apps.	4		
	CTS1650	CCNA 1: Cisco Fundamentals	4		CCNA
	CTS1651	CCNA 2: Routing and Switching	4	Co-req: CTS1650	CCNA
	MAC1105	College Algebra	3	Pre-req: MAT1033*	
	*Note: Students must seek advisement for proper mathematics course from discipline chairperson.				
Total Credits			15		
2	CTS1120	Cybersecurity Fundamentals	4		CompTIA Security+
	CTS1134	Networking Technologies	4		CompTIA Network+
	CTS 2652	CCNA 3: Advanced Routing and Switching	4	Pre-req: CTS1651	CCNA
	Total Credits			12	
* 3	† AMH2020 --or-- POS2041	History of the US Since 1877 or American Federal Government	3		
	ENC1101	English Composition 1	3	Prerequisite: Student must meet the Developmental Education reading and writing requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption).	
	Total Credits			6	
4	CTS1111	Linux +	4		CompTIA Linux+
	CTS2303	Configuring Windows Servers	4	Recommended prep: CGS1060C and CTS1134 or equivalent knowledge	
	‡ Elective	CGS*; CIS*; COP*; CTS* CGS 1560, CIS 2900, CTS 1145, CTS 1328 CTS 1437, CTS 2153	4		
	Humanities	ARH 1000, HUM 1020, LIT 2000 MUL 1010, PHI 2010, THE 2000	3	Note: ENC 1101 is a prerequisite to LIT 2000 and PHI 2010.	
	Total Credits			15	
5	CTS2306	Windows Networking Services	4	Recommended preparation: CTS 1145 or equivalent knowledge in Microsoft	
	CTS2334	Windows Identity Services	4	Recommended preparation: CTS2303 and CTS2306 or equivalent knowledge.	CompTIA Server+
	Elective	CGS*; CIS*; COP*; CTS* CGS 1560, CIS 2900, CTS 1145, CTS 1328 CTS 1437, CTS 2153	1-4		
	Natural Science	AST 1002, BSC 1005, CHM 1020, ESC 1000 EVR 1001, PHY 1020, PHY 2053	3	Note: Check with advisor for requisite information	
	Total Credits			12	
Program Total			60		

* Summer term

† AMH2020 and POS2041 fulfills part of the civic literacy graduation requirement. Passing an examination is additionally required.

Academic Pathway at MDC: The AS in Networking is a pathway to the Bachelor's in Information Systems Technology. Students may acquire a CCC in Cisco Certified Network Associate (66050) and in Network Server Administration (66035) along the way.