

**PROGRAM TO PROGRAM ARTICULATION AGREEMENT**  
between  
**ALEXANDRIA TECHNICAL & COMMUNITY COLLEGE**  
and  
**DAKOTA STATE UNIVERSITY**  
with respect to applying the  
**Associate of Applied Science Degree Program (A.A.S.)**  
**in Cybersecurity, Virtualization, & Networking**  
and the  
**Associate of Science Degree Program (A.S.)**  
**in Computer Information Systems**  
towards the  
**Bachelor of Science Degree Programs (B.S.)**  
in Artificial Intelligence, Computer Science,  
Cyber Operations, and Network and Security Administration

**I. Parties**

The parties to this agreement are Alexandria Technical & Community College (ATCC) and Dakota State University (DSU).

**II. Purpose**

The purpose of this agreement is to:

- A. Establish an articulation agreement that addresses the varying needs of students and the complementary nature of the institutions' programs.
- B. Extend educational opportunities, clarify course equivalencies, and reduce duplication of coursework.
- C. Provide ATCC students who have completed the Associate of Applied Science degree with a transfer pathway to earn a Bachelor of Science.
- D. Provide ATCC students who have taken the equivalent ATCC courses indicated in the corresponding Course and Program Mapping Attachments to transfer in fulfillment of the equivalent DSU course.

**III. Academic Program**

- A. Upon completion of the ATCC Associate of Applied Science (A.A.S.) in Cybersecurity, Virtualization, & Networking or the ATCC Associate of Science (A.S.) in Computer Information Systems, all 60 credits will transfer. Any credits not applied toward specific general education, major, or elective requirements will apply toward total degree credit.
  - 1. Additional earned credits may be transferred upon DSU review and approval.
  - 2. Excess credits may apply toward general electives, elective blocks, or total degree credits, as determined by DSU. This ensures ATCC students do not lose earned credit when transferring.
- B. Requirements to be completed at DSU to earn a Bachelor of Science are indicated in the Remaining Requirements Attachments per program, including:
  - 1. Remaining program requirements.
  - 2. Remaining general education.

- a. All 30 required credits must meet System General Education requirements and be selected from the approved list of courses specified in South Dakota Board of Regents (SDBoR) policy 2.3.7.
  - b. Additional earned general education course credits can be reviewed for transfer equivalency.
- C. SDBoR policies, university graduation requirements, and degree residency requirements must be met, including the following (see SDBoR Policy 2.6.1).
- 1. A bachelor’s degree requires 120 total credits.
  - 2. A minimum of 30 credit hours must be earned at DSU.
  - 3. A minimum of 15 of the last 30 credit hours must be earned at DSU.
  - 4. This agreement may waive the residency requirement for up to 50 percent of major program credits, as permitted by SDBoR policy.

**IV. Obligations**

Both parties agree to confer with each other on a yearly basis regarding any changes in curricula involved in this articulation agreement.

The annual articulation review will include, at minimum, the DSU Registrar (or designee), DSU Academic Affairs (or designee), the ATCC Registrar, and the ATCC Dean of Academics (or designee).

The annual review will address curriculum or catalog changes, course renumbering, prerequisite changes, Board of Regents revisions, accreditation-driven changes, and alignment of course outcomes. Agreed-upon modifications will be jointly communicated to advising and catalog offices at both institutions.

**V. Modification**

This agreement may be modified from time to time by the SDBoR, DSU, and ATCC. Modifications may not diminish the entitlements granted to students who have already attended classes delivered under the terms of earlier versions of the agreement, except in rare instances where retroactive implementation of modifications is required to comply with accreditation standards or to conform to professional licensure requirements.

Students who begin under the terms of a specific published version of this articulation agreement will retain those transfer protections and mappings for a minimum of three academic years following completion of the ATCC degree, unless accreditation or licensure requirements mandate earlier adjustment.

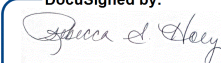
**VI. Effective Date of Agreement**

This agreement is effective upon SDBoR approval and remains valid until modified or terminated by either party. This agreement applies to students who graduated from ATCC in 2025 and subsequent academic years. This agreement will be reviewed and is valid for a period of five (5) years from the effective date, unless modified or terminated earlier by either party.

**VII. Acceptance of Agreement**

Dakota State University and Alexandria Technical & Community College have executed this Agreement on the dates indicated below.

DAKOTA STATE UNIVERSITY

DocuSigned by:  


\_\_\_\_\_  
Rebecca Hoey, Ed.D.  
Provost and Senior VP for Student & Academic Affairs

03/17/2026

Date: \_\_\_\_\_

ALEXANDRIA TECHNICAL & COMMUNITY COLLEGE

Signed by:  


\_\_\_\_\_  
Sara Fier, Ph.D.  
Vice President of Academic & Student Affairs

03/18/2026

Date: \_\_\_\_\_

## **Attachments**

**Attachment A.** ATCC A.A.S. in Cybersecurity, Virtualization, & Networking Requirements

**Attachment B.** ATCC A.S. in Computer Information Systems

**Attachment C.** Minnesota Transfer Curriculum Goal Areas

**Attachment D.** DSU Course to ATCC Course Equivalents

**Attachment E.** General Education: ATCC A.A.S. → DSU Course Mapping AND ATCC A.S. → DSU Course Mapping

**Attachment F.** DSU B.S. in Artificial Intelligence (BSAI) – ATCC A.A.S. → Course Mapping

**Attachment G.** DSU B.S. in Artificial Intelligence (BSAI) → ATCC A.A.S. Remaining DSU Credits for Completion

**Attachment H.** DSU B.S. in Computer Science (BSCS) – ATCC A.A.S. → Course Mapping

**Attachment I.** DSU B.S. in Computer Science (BSCS) → ATCC A.A.S. Remaining DSU Credits for Completion

**Attachment J.** DSU B.S. in Cyber Operations (BSCO) – ATCC A.A.S. → Course Mapping

**Attachment K.** DSU B.S. in Cyber Operations (BSCO) → ATCC A.A.S. Remaining DSU Credits for Completion

**Attachment L.** DSU B.S. in Network & Security Administration (BS NetSec) – ATCC A.A.S. → Course Mapping

**Attachment M.** DSU B.S. in Network & Security Administration (BS NetSec) → ATCC A.A.S. Remaining DSU Credits for Completion

**Attachment N.** Summary Table of DSU B.S. Programs → ATCC A.A.S. in Cybersecurity, Virtualization, & Networking

**Attachment O.** DSU B.S. in Artificial Intelligence (BSAI) – ATCC A.S. → Course Mapping

**Attachment P.** DSU B.S. in Artificial Intelligence (BSAI) → ATCC A.S. Remaining DSU Credits for Completion

**Attachment Q.** DSU B.S. in Computer Science (BSCS) – ATCC A.S. → Course Mapping

**Attachment R.** DSU B.S. in Computer Science (BSCS) → ATCC A.S. Remaining DSU Credits for Completion

**Attachment S.** DSU B.S. in Cyber Operations (BSCO) – ATCC A.S. → Course Mapping

**Attachment T.** DSU B.S. in Cyber Operations (BSCO) → ATCC A.S. Remaining DSU Credits for Completion

**Attachment U.** DSU B.S. in Network & Security Administration (BS NetSec) – ATCC A.S. → Course Mapping

**Attachment V.** DSU B.S. in Network & Security Administration (BS NetSec) → ATCC A.S. Remaining DSU Credits for Completion

**Attachment W.** Summary Table of DSU B.S. Programs → ATCC A.S. in Computer Information Systems

**Attachment A. ATCC A.A.S. in Cybersecurity, Virtualization, & Networking Requirements**

This A.A.S. requires 15 credits of General Education coursework from at least three Minnesota Transfer Curriculum Goal Areas, and 45 credits of technical coursework for a total of 60 credits.

Course Prefix & #	Course Title	Credits
CRLT 1439	Job Seeking/Keeping Skills	1
CVNP 1601	Linux Administration	3
CVNP 1603	Cisco 1	3
CVNP 1606	Supporting Windows Operating Systems	3
CVNP 1612	Cisco 2	4
CVNP 1620	Enterprise Operating System I	4
CVNP 2601	Virtual Computing	3
CVNP 2603	Advanced Network Operating System	3
CVNP 2606	Cisco 3	4
CVNP 2615	Security Fundamentals	3
CVNP 2625	Defensive Security	4
CVNP 2626	Computer Hardware	3
CVNP 2639	Scripting & Command Line	3
CVNP 2646	Python/JSON	4
ENGL 1460	Technical Writing	3
MNTC 3	MN Transfer Curriculum Elective	3
MNTC 6	MN Transfer Curriculum Electives	6
PHIL 1445	Ethics	3
<b>TOTAL</b>		<b>60</b>

CVN AAS-26-28		Semester Listing		Tuesday, February 24, 2026						
PROGRAM	COURSE TITLE	CR NO	STA	GOAL	TERM	CRS	LEC	LAB	SOE	CHrs
CVN AAS-26-28	Supporting Windows Operating Systems	CVNP1606	R		Fall	3	2	1	0	4
CVN AAS-26-28	Virtual Computing	CVNP2601	R		Fall	3	2	1	0	4
CVN AAS-26-28	Computer Hardware	CVNP2626	R		Fall	3	2	1	0	4
CVN AAS-26-28	MN Transfer Curriculum Elective	MNTC 3	GE		Fall	3	3	0	0	3
CVN AAS-26-28	Ethics	PHIL1445	GE	6,9	Fall	3	3	0	0	3
Semester Total						15.0	12.0	3.0	0.0	18.0
CVN AAS-26-28	Job Seeking/Keeping Skills	CRLT1439	GE		Spr	1	1	0	0	1
CVN AAS-26-28	Cisco 1	CVNP1603	R		Spr	3	2	1	0	4
CVN AAS-26-28	Enterprise Operating System 1	CVNP1620	R		Spr	4	3	1	0	5
CVN AAS-26-28	Scripting & Command Line	CVNP2639	R		Spr	3	3	0	0	3
CVN AAS-26-28	Technical Writing	ENGL1460	GE	1,2	Spr	3	3	0	0	3
Semester Total						14.0	12.0	2.0	0.0	16.0
CVN AAS-26-28	Linux Administration	CVNP1601	R		Fall	3	3	0	0	3
CVN AAS-26-28	Cisco 2	CVNP1612	R		Fall	4	3	1	0	5
CVN AAS-26-28	Security Fundamentals	CVNP2615	R		Fall	3	2	1	0	4
CVN AAS-26-28	MN Transfer Curriculum Electives	MNTC 6	GE		Fall	6	6	0	0	6
Semester Total						16.0	14.0	2.0	0.0	18.0
CVN AAS-26-28	Adv Network Op Systems	CVNP2603	R		Spr	3	2	1	0	4
CVN AAS-26-28	Cisco 3	CVNP2606	R		Spr	4	3	1	0	5
CVN AAS-26-28	Defensive Security	CVNP2625	R		Spr	4	3	1	0	5
CVN AAS-26-28	Python/JSON	CVNP2646	R		Spr	4	3	1	0	5
Semester Total						15.0	11.0	4.0	0.0	19.0
Program Total						80.0	49.0	11.0	0.0	71.0

AAS degrees must have general education courses from three goal areas of the MN Transfer Curriculum.

Elective Courses		CR NO	STA	GOAL	TERM	CRS	LEC	LAB	SOE	CHrs
CVN AAS-26-28	Public Speaking	COMM1415	GE			3	3	0	0	3
CVN AAS-26-28	Interpersonal Communication	COMM1435	GE			3	3	0	0	3
CVN AAS-26-28	Composition I	ENGL1410	GE			3	3	0	0	3
CVN AAS-26-28	Mathematical Reasoning	MATH1415	GE			3	3	0	0	3
CVN AAS-26-28	College Algebra	MATH1421	GE			4	4	0	0	4
CVN AAS-26-28	General Psychology	PSYC1445	GE			3	3	0	0	3
CVN AAS-26-28	Critical Thinking in Society	SOCS1405	GE			3	3	0	0	3

**Attachment B. ATCC A.S. in Computer Information Systems**

This A.S. requires 30 credits of General Education coursework from six Minnesota Transfer Curriculum Goal Areas including MATH 1421, and 30 credits of elective technical coursework including ITEC1430 for a total of 60 credits.

Course Prefix & Number	Course Title	Credits
COMM 1415	Public Speaking	3
ENGL 1410	Composition I	3
ENGL 1420	Composition II	3
ITEC 1430	Computer Applications & Technology	3
MATH 1421	College Algebra	4
MNTC ELECTIVE	Minnesota Transfer Curriculum Electives	17
TECH ELECTIVE	Computer Information Systems Technical Electives	27
<b>TOTAL</b>		<b>60</b>

Computer Info Sys-AS-26		Semester Listing				Monday, March 9, 2026				
PROGRAM	COURSE TITLE	CR NO	STA	GOAL	TERM	CRS	LEC	LAB	SOE	CHrs
Computer Info Sys-AS-26	Computer Applications and Technology	ITEC1430	GE			3	3	0	0	3
Computer Info Sys-AS-26	College Algebra	MATH1421	GE	4		4	4	0	0	4
Computer Info Sys-AS-26	MN Transfer Gen Ed Electives	MNTC 26	GE			26	26	0	0	26
Computer Info Sys-AS-26	Technical Electives	TE 27	TE			27	18	9	0	36
Semester Total						60.0	51.0	9.0	0.0	69.0
Program Total						60.0	51.0	9.0	0.0	69.0

AS degrees must have general education courses from six goal areas of the MN Transfer Curriculum.

**Elective Courses**

Computer Info Sys-AS-26	Microsoft Excel & Access Applications	ACCT1810	TE			3	2	1	0	4
Computer Info Sys-AS-26	Cybersecurity & Information Systems Audit	ACCT2829	TE			2	2	0	0	2
Computer Info Sys-AS-26	Linux Administration	CVNP1801	TE			3	3	0	0	3
Computer Info Sys-AS-26	Cisco 1	CVNP1803	TE			3	2	1	0	4
Computer Info Sys-AS-26	Networking Essentials	CVNP1804	TE			3	2	1	0	4
Computer Info Sys-AS-26	Supporting Windows Operating Systems	CVNP1806	TE			3	2	1	0	4
Computer Info Sys-AS-26	Cisco 2	CVNP1812	TE			4	3	1	0	5
Computer Info Sys-AS-26	Enterprise Operating System 1	CVNP1820	TE			4	3	1	0	5
Computer Info Sys-AS-26	Virtual Computing	CVNP2601	TE			3	2	1	0	4
Computer Info Sys-AS-26	Adv Network Op Systems	CVNP2603	TE			3	2	1	0	4
Computer Info Sys-AS-26	Cisco 3	CVNP2606	TE			4	3	1	0	5
Computer Info Sys-AS-26	Security Fundamentals	CVNP2615	TE			3	2	1	0	4
Computer Info Sys-AS-26	Defensive Security	CVNP2625	TE			4	3	1	0	5
Computer Info Sys-AS-26	Computer Hardware	CVNP2626	TE			3	2	1	0	4
Computer Info Sys-AS-26	Scripting & Command Line	CVNP2639	TE			3	3	0	0	3
Computer Info Sys-AS-26	Offensive Security	CVNP2645	TE			3	2	1	0	4
Computer Info Sys-AS-26	Python/JSON	CVNP2646	TE			4	3	1	0	5
Computer Info Sys-AS-26	Cyber Forensics	CVNP2655	TE			3	2	1	0	4
Computer Info Sys-AS-26	Ethics	PHIL1445	GE			3	3	0	0	3

**Attachment C. Minnesota Transfer Curriculum Goal Areas**

# Minnesota Transfer Curriculum

The Minnesota Transfer Curriculum (MnTC) is the means by which a student transfers a complete package of lower division general education from one Minnesota State institution to another. At Alexandria Technical and Community College this is accomplished by a minimum of 40 credits as designated. If a course is eligible for multiple goals, the additional goal(s) is listed in parentheses; however, credits for any course may count only once towards the minimum 40 credits. "D" grades in MnTC courses are calculated in cumulative MnTC GPA for both resident and transfer courses. A minimum of 2.0 cumulative MnTC GPA is required for certification of completion.

Updated: October 31, 2025

**1. Communications (9 credits)**

**Require at least 2 written (ENGL) and 1 oral (COMM) course**

*Goal: To develop writers and speakers who use the English language effectively and who read, write, and listen critically.*

- COMM 1415 Public Speaking
- COMM 1435 Interpersonal Communication
- COMM 1437 Intercultural Communication (Goal 7A)
- COMM 1485 Social Media Communication (Goal 9)
- COMM 2414 Conflict Resolution through Communication
- ENGL 1410 Composition I (Required) (Goal 2)
- ENGL 1420 Composition II (Goal 2)
- ENGL 1460 Technical Writing (Goal 2)

**2. Critical Thinking (0-3 credits)**

*Goal: To develop thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought. Critical thinking skills will be taught and used in courses across the general education curriculum.*

- CHEM 1406 Fundamentals of Chemistry 4 credits (Goal 3)
- CHEM 1500 General Chemistry I 4 credits (Goal 3)
- CHEM 1505 General Chemistry II 4 credits (Goal 3)
- ENGL 1410 Composition I (Required) (Goal 1)
- ENGL 1420 Composition II (Goal 1)
- ENGL 1460 Technical Writing (Goal 1)
- ENGL 1490 Introduction to Literary Studies (Goal 6)
- PHYS 1407 College Physics I (Goal 3)
- SOCS 1405 Critical Thinking in Society (Goal 7A)

(Taking 40 General Education credits to otherwise accomplish the Minnesota General Education Transfer Curriculum will also satisfy this goal.)

**3. Natural Sciences (7-8 credits)**

*Goal: To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena.*

- BIOL 1410 Introduction to Biology I 4 credits
- BIOL 1411 Introduction to Biology II 4 credits (Goal 10)
- BIOL 1413 Plant Biology 4 credits (Goal 10)
- BIOL 1416 Essentials of Anatomy and Physiology
- BIOL 1417 Human Anatomy and Physiology I 4 credits
- BIOL 1419 Human Anatomy and Physiology II 4 credits
- BIOL 1430 People & the Environment~ (Goal 10)

SOCS 1402 Social Problems (Goal 7A)

**6. Humanities and the Fine Arts (6 credits from a minimum of 2 disciplines)**

*Goal: To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought.*

ART 1408 Survey of Western Art and Culture 4 credits  
ART 1420 Modern Design & Theory (Goal 8)  
ART 1451 Drawing I  
ART 1475 Digital Photography  
COMM 2409 Communication and Films We Watch  
ENGL 1453 Multicultural American Literature (Goal 7A)  
ENGL 1465 Creative Writing  
ENGL 1475 Introduction to Literature  
ENGL 1485 Introduction to Film Studies  
ENGL 1490 Introduction to Literary Studies (Goal 2)  
ENGL 1495 Environmental Literature (Goal 10)  
ENGL 2405 Modern to Contemporary American Literature (Goal 7A)  
ENGL2420 Modern World Literature  
HUMA 1407 Introduction to Humanities  
HUMA 1411 Theatre Appreciation  
MUSC 1500 American Music and Culture (Goal 8)  
MUSC 1600 ATCC Concert Choir  
PHIL 1405 Introduction to Philosophy (Goal 8)  
PHIL 1445 Ethics (Goal 9)  
PHIL 1450 Introduction to World Religion (Goal 8)

**7. Human Diversity, Race, Power, and Justice in the United States (3 credits)**

*Goal: To increase students' understanding of individual and group differences (e.g. race, gender, class) and their knowledge of the traditions and values of various groups in the United States.*

*Opt A- Human Diversity - Goal: To increase students' understanding of individual and group differences (e.g. race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.*

ASL 1400 American Sign Language (Goal 8)  
ASL 1410 American Sign Language II (Goal 8)  
COMM 1437 Intercultural Communication (Goal 1)  
ENGL 1453 Multicultural American Literature (Goal 6)  
ENGL 2405 Modern to Contemporary American Literature (Goal 6)  
HIST 1401 U.S. History to 1877 (Goal 5)  
HIST 1402 U.S. History, 1877 to Present (Goal 5)  
SOCS 1402 Social Problems (Goal 5)  
SOCS 1405 Critical Thinking in Society (Goal 2)

*Opt B- Race, Power, and Justice - Goal: To build knowledge and understanding of historic and contemporary structures of racism in the United States, which systemically shape complex social, political, economic and environmental inequities experienced by marginalized groups and identities, and promote agency to address matters of structural inequality.*

SOCS 2410 Inequality and Social Change (Goal 9)

- University of Minnesota

*Beginning January 1, 2002, all Minnesota Transfer Curriculum courses offered by Minnesota State institutions must transfer within Minnesota State system into the goal areas as designated by the original institution.*

**Attachment D. DSU Course to ATCC Course Equivalents**

DSU Course #	DSU Course Title	DSU Credits	NOTE	ATCC Course #	ATCC Course Title	ATCC Credits
CSC 105	Introduction to Computers	3		ITEC 1430	Computer Applications & Technology	3
CSC 134	Introduction to Cyber	3		CVNP 2615	Security Fundamentals	3
CSC 150	Computer Science I	3		CVNP 2646	Python/JSON	4
CSC 163	Hardware, Virtualization, and Data Communication	3	This is covered by two ATCC courses.	CVNP 2601	Virtual Computing AND	3
				CVNP 2626	Computer Hardware	3
CSC 232	Tech Foundations: Scripting	1		CVNP 2639	Scripting and Command Line	3
CSC 285	Networking I	3		CVNP 1612	Cisco 2	4
CSC 385	Networking II	3		CVNP 2606	Cisco 3	4
CSC 409	Operating Environments	3	Satisfied by the combination of two ATCC courses.	CVNP 1601	Linux Administration AND	3
				CVNP 1620	Enterprise Operating System I	4
MATH 114	College Algebra	3		MATH 1421	College Algebra	4
MATH 115	Precalculus	5		MATH 1425	Precalculus	4
MATH 120	Trigonometry	3		MATH 1432	Principles of Trigonometry	3
MATH 123	Calculus I	4		MATH 1426	Calculus I	4
MATH 125	Calculus II	4		MATH 2232	Calculus II	4
MATH 225	Calculus III	4		MATH 2240	Calculus III	4
MATH 281	Intro to Statistics	3		MATH 1447	Intro to Statistics	4
MATH 315	Linear Algebra	3		MATH 2200	Differential Equations and Linear Algebra	4

NOTE: When an ATCC course carries more credits than the DSU equivalent, excess credits may apply toward electives or total degree credits.

**Attachment E. General Education: ATCC A.A.S. → DSU Course Mapping AND ATCC A.S. → DSU Course Mapping**

This A.A.S. requires 15 credits of General Education coursework from three Minnesota Transfer Curriculum Goal Areas; MN Goal numbers reflect Minnesota Transfer Curriculum designations and do not numerically align with SDBoR goals.

DSU Prefix/Number	DSU Course Title	DSU Credits	DSU Goal	ATCC Prefix/Number	ATCC Course Title	ATCC Credits	MN Goal
<b>B.S. General Education Requirement (30 Credits). ATCC A.A.S. students must complete General Education coursework spanning at least three goal areas.</b>							
SDBoR Written Communications Goal 1		6 CR total		Communications and Critical Thinking Goals (1 & 2)		3-6 CR total	
ENGL 101	Composition I	3	1	ENGL 1410	Composition I	3	1
ENGL 201	Composition II	3	1	ENGL 1420	Composition II (if taken)	3	1
SDBoR Oral Communications Goal 2		3 CR total		Communications and Critical Thinking Goals (1 & 2)		3 CR total	
CMST 101, 215 or 222	Fundamentals of Speech	3	2	COMM 1415	Public Speaking	3	2
SDBoR Social Sciences Goal 3 (two different disciplines)		3-6 CR total		History and the Social and Behavioral Sciences & Global Perspectives		3-6 CR total	
ANTH, CIV, ECON, GEOG, HIST (US), POLS, PSYC, SOC	Social Science Choice #1	3	3	ECON, GEOG, HIST, POLS, PSYC, SOCS	PSYC 1445 General Psychology (if taken)	3	5, 8
	Recommend HIST or POLS to fulfill civics requirement	3	3		HIST 1401, HIST 1402, POLS 1635, or POLS 1460 (if taken)	3	5, 7
SDBoR Arts & Humanities Goal 4 (two different disciplines)		3-6 CR total		Humanities and the Fine Arts & Global Perspectives		3-6 CR total	
ART, ARTH, CHIN, ENGL (Literature), HIST (Civilizations), LAKL, MUS, PHIL, RUSS, SPAN, THEA	Arts and Humanities Choice #1	3	4	ART, ENGL, GEOG, HIST, MUSC, PHIL	Humanities and Fine Arts (from two disciplines) (if taken)	3	6, 8
	Must be a different prefix from Choice #2 (Optional)	3	4		Humanities and Fine Arts (from two disciplines) (if taken)	3	6, 8
SDBoR Mathematics Goal 5		3 CR total		Mathematics / Logical Reasoning		3-4 CR total	
MATH 114, 115, 120, 121, 123, 125, 201, 225, or 281	Math Choice	3	5	MATH	MATH 1421, 1425, 1426, 1432, 1447, 2200, or 2232 (suggested) (if taken)	3-4	4
SDBoR Natural Sciences Goal 6		3-6 CR total		Natural Sciences		6-8 CR total	
BIOL, CHEM, GEOG, PHYS	Natural Science Choice #1	3	6	BIOL, CHEM, PHYS	Natural Science Choice #1 (if taken)	3-4	3
	Natural Science Choice #2 (Optional)	3	6		Natural Science Choice #2 (if taken)	3-4	3
NOTE: Students placing into MATH 123 or MATH 201 bypass MATH 114 and instead take 3 credits of general electives.							
<b>General Education Credits required</b>		<b>30</b>		<b>General Education Credits accepted</b>		<b>*15-33</b>	

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

This A.S. requires 30 credits of General Education coursework from six MN Transfer Curriculum Goal Areas, which do not numerically align with SDBoR goals.

DSU Prefix/Number	DSU Course Title	DSU Credits	DSU Goal	ATCC Prefix/Number	ATCC Course Title	ATCC Credits	MN Goal
<b>General Education Requirement (30 Credits). ATCC students must complete coursework spanning at least six goal areas</b>							
SDBoR Written Communications Goal 1		6 CR total		Communications and Critical Thinking Goals (1 & 2)		3-6 CR total	
ENGL 101	Composition I	3	1	ENGL 1410	Composition I	3	1
ENGL 201	Composition II	3	1	ENGL 1420	Composition II (if taken)	3	1
SDBoR Oral Communications Goal 2		3 CR total		Communications and Critical Thinking Goals (1 & 2)		0-3 CR total	
CMST 101, 215 or 222	Fundamentals of Speech	3	2	COMM 1415	Public Speaking (if taken)	3	2
SDBoR Social Sciences Goal 3 (two different disciplines)		3-6 CR total		History and the Social and Behavioral Sciences & Global Perspectives		3-6 CR total	
ANTH, CIV, ECON, GEOG, HIST (US), POLS, PSYC, SOC	Social Science Choice #1	3	3	ECON, GEOG, HIST, POLS, PSYC, SOCS	History and the Social and Behavioral Sciences Choice #1	3	5, 8
	Recommend HIST or POLS to fulfill civics requirement	3	3		HIST 1401, HIST 1402, POLS 1635, or POLS 1460 (if taken)	3	5, 7
SDBoR Arts & Humanities Goal 4 (two different disciplines)		3-6 CR total		Humanities and the Fine Arts & Global Perspectives		3-6 CR total	
ART, ARTH, CHIN, ENGL (Literature), HIST (Civilizations), LAKL, MUS, PHIL, RUSS, SPAN, THEA	Arts and Humanities Choice #1	3	4	ART, ENGL, GEOG, HIST, MUSC, PHIL	Humanities and Fine Arts (from two disciplines)	3	6, 8
	Must be a different prefix from Choice #2 (Optional)	3	4		Humanities and Fine Arts (from two disciplines) (if taken)	3	6, 8
SDBoR Mathematics Goal 5		3 CR total		Mathematics / Logical Reasoning		3-4 CR total	
MATH 114, 115, 120, 121, 123, 125, 201, 225, or 281	Math Choice	3	5	MATH	MATH 1421, 1425, 1426, 1432, 1447, 2200, or 2232 ( <i>suggested</i> ) (if taken)	3-4	4
SDBoR Natural Sciences Goal 6		3-6 CR total		Natural Sciences		6-8 CR total	
BIOL, CHEM, GEOG, PHYS	Natural Science Choice #1	3	6	BIOL, CHEM, PHYS	Natural Science Choice #1 (if taken)	3-4	3
	Natural Science Choice #2 (Optional)	3	6		Natural Science Choice #2 (if taken)	3-4	3
NOTE: Students placing into MATH 123 or MATH 201 bypass MATH 114 and instead take 3 credits of general electives.							
<b>General Education Credits required</b>		<b>30</b>		<b>General Education Credits accepted</b>		<b>*30-33</b>	

*\*Range reflects variability in completed ATCC coursework. Excess credits apply as general electives.*

**Attachment F. DSU B.S. in Artificial Intelligence (BSAI) – ATCC A.A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*15-33
<b>Program Courses (48 Credits)</b>					
CIS 368	Predictive Analytics	3			
CIS 372	Programming for Analytics	3			
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology (if taken)	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON	4
CSC 230	Tech Foundations: Ethics	1			
CSC 232	Tech Foundations: Scripting	1	CVNP 2639	Scripting and Command Line	3
CSC 233	Tech Foundations: Secure AI Lifecycles	1			
CSC 247	Introduction to Artificial Intelligence	3			
CSC 250	Computer Science II	3			
CSC 300	Data Structures	3			
CSC 382	Adversarial AI and Security	3			
CSC 386	Applications of Deep Learning	3			
CSC 402	Mathematical Foundations of AI	3			
CSC 447	Artificial Intelligence	3			
CSC 478	AI Tools and Frameworks	3			
CSC 479	Applied Artificial Intelligence	3			
CSC 482	Algorithms and Optimization	3			
Program Courses Credits required		48	Program Courses Credits accepted		*10-13
<b>Support Courses (16 Credits)</b>					
MATH 123	Calculus I	4	MATH 1426	Calculus I (if taken)	4
MATH 201	Introduction to Discrete Mathematics	3			
MATH 281 or MATH 381	Choose one (3 cr) Intro to Statistics or Probability & Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
MATH 315	Linear Algebra	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
MATH 316	Discrete Mathematics	3			
Support Courses Credits required		16	Support Courses Credits accepted		*0-12

Minor Requirement (18 Credits)					
Minor	Any Non-AI/ML Minor or 2nd Major	18			
Minor Requirement Credits required		18	Minor Requirement Credits accepted		0
Electives (8 Credits)					
	General Elective	4	CVNP 1620	Enterprise Operating System I	4
	General Elective	4	CVNP 2625	Defensive Security	4
Electives Credits required		8	Electives Credits accepted		8
TOTAL (Includes General Education)					
Total Credits required		120	Total Credits accepted		*60-66

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment G. DSU B.S. in Artificial Intelligence (BSAI) → ATCC A.A.S. Remaining DSU Credits for Completion**

<b>DSU Prefix/Number</b>	<b>DSU Course Title</b>	<b>DSU Credits</b>
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-15
<b>Program Courses (48 Credits)</b>		
CIS 368	Predictive Analytics	3
CIS 372	Programming for Analytics	3
CSC 105	Introduction to Computers (if ITEC 1430 not taken)	3
CSC 230	Tech Foundations: Ethics	1
CSC 233	Tech Foundations: Secure AI Lifecycles	1
CSC 247	Introduction to Artificial Intelligence	3
CSC 250	Computer Science II	3
CSC 300	Data Structures	3
CSC 382	Adversarial AI and Security	3
CSC 386	Applications of Deep Learning	3
CSC 402	Mathematical Foundations of AI	3
CSC 447	Artificial Intelligence	3
CSC 478	AI Tools and Frameworks	3
CSC 479	Applied Artificial Intelligence	3
CSC 482	Algorithms and Optimization	3
Program Courses Credits remaining		*38-41
<b>Support Courses (16 Credits)</b>		
MATH 123	Calculus I (if MATH 1426 not taken)	4
MATH 201	Introduction to Discrete Mathematics	3
MATH 281 OR MATH 381	Choose one (3 credits) Intro to Statistics OR Probability & Statistics (if MATH 1447 not taken)	3
MATH 315	Linear Algebra (if MATH 2200 not taken)	3
MATH 316	Discrete Mathematics	3
Support Courses Credits remaining		*6-16
<b>Minor Requirement (18 Credits)</b>		
Minor	Any Non-AI/ML Minor or 2nd Major	18
Minor Requirement Credits remaining		18
<b>Electives (8 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*62-90</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment H.** DSU B.S. in Computer Science (BSCS) – ATCC A.A.S. → Course Mapping

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*15-33
<b>Program Courses (57 Credits)</b>					
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology (if taken)	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON	4
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 260	Object Oriented Design	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2	4
CSC 300	Data Structures	3			
CSC 310	Advanced Data Structures	3			
CSC 314	Assembly Language	3			
CSC 404	Foundation of Computation	3			
CSC 410	Parallel Computing	3			
CSC 456	Operating Systems	3			
CSC 461	Programming Languages	3			
CSC 470	Software Engineering	3			
CSC 482	Algorithms and Optimization	3			
CIS 332 / CIS 424 / CSC 321	Choose one: Structured Systems Analysis and Design OR Software Development with Agile Methodologies OR Cyber Law and Policy	3			
UPPER CIS/CSC Electives	Program Elective CSC 385: Networking II	3	CVNP 2606	Cisco 3	4
UPPER CIS/CSC Electives	Program Elective CSC 409: Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
UPPER CIS/CSC Electives	Select 300–400-level CIS/CSC courses (specialization courses may apply)	3			
Program Courses Credits required		57	Program Courses Credits accepted		*19-22

<b>Support Courses (19 Credits)</b>					
MATH 123	Calculus I	4	MATH 1426	Calculus I (if taken)	4
MATH 201	Introduction to Discrete Mathematics	3			
MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
MATH 316	Discrete Mathematics	3			
MATH Electives	Math Electives (from approved list)	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
MATH Electives	Math Electives (from approved list)	3			
NOTE: Approved MATH/CSC list: CSC 402; MATH 125, 204, 225, 282, 315, 318, 321, 361, 381, 413, 418, 436, 437, 471, 475, 492.					
Support Courses Credits required		19	Support Courses Credits accepted		*0-12
<b>Artificial Intelligence / Machine Learning Specialization or Software Engineering Specialization and General Electives Option (14 Credits)</b>					
Specialization Credits required		12	Specialization Credits accepted		0
General Elective Credits required		2	General Elective Credits accepted		2
<b>TOTAL reflects degree completion with specialization (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-69</b>

<b>Electives with No Specialization Option (14 Credits)</b>					
	Elective Credits	3	CVNP 2603	Advanced Network Operating System	3
CSC 134	Elective Credits: Introduction to Cyber	3	CVNP 2615	Security Fundamentals	3
	Elective Credits	4	CVNP 2625	Defensive Security	4
	Elective Credits	3	CVNP 2626	Computer Hardware	3
CSC 232	Elective Credits: Tech Foundations: Scripting	1	CVNP 2639	Scripting and Command Line	3
No Specialization Option Credits required		14	No Specialization Option Credits accepted		16
<b>TOTAL reflects degree completion without specialization (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-83</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment I. DSU B.S. in Computer Science (BSCS) → ATCC A.A.S. Remaining DSU Credits for Completion**

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-15
<b>Program Courses (57 Credits)</b>		
CSC 105	Introduction to Computers (if ITEC 1430 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 260	Object Oriented Design	3
CSC 300	Data Structures	3
CSC 310	Advanced Data Structures	3
CSC 314	Assembly Language	3
CSC 404	Foundation of Computation	3
CSC 410	Parallel Computing	3
CSC 456	Operating Systems	3
CSC 461	Programming Languages	3
CSC 470	Software Engineering	3
CSC 482	Algorithms and Optimization	3
CIS 332 / CIS 424 / CSC 321	Choose one: Structured Systems Analysis and Design OR Software Development with Agile Methodologies OR Cyber Law and Policy	3
UPPER CIS/CSC	Select 300–400-level CIS/CSC courses (specialization courses may apply)	3
Program Courses Credits remaining		*42-45
<b>Support Courses (19 Credits)</b>		
MATH 123	Calculus I (if MATH 1426 not taken)	4
MATH 201	Introduction to Discrete Mathematics	3
MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics (if MATH 1447 not taken)	3
MATH 316	Discrete Mathematics	3
MATH ELECTIVES	Math Electives (from approved list) (if MATH 2200 not taken)	3
MATH ELECTIVES	Math Electives (from approved list)	3
NOTE: Approved MATH/CSC list: CSC 402; MATH 125, 204, 225, 282, 315, 318, 321, 361, 381, 413, 418, 436, 437, 471, 475, 492.		
Support Courses Credits remaining		*9-19
<b>Artificial Intelligence / Machine Learning or Software Engineering Specialization (14 Credits)</b>		
Specialization Credits remaining		12
General Elective Credits remaining		0
<b>TOTAL reflects degree completion with specialization (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*63-91</b>
<b>Electives with No Specialization Option (14 Credits)</b>		
Additional Elective Credits remaining		0
<b>TOTAL reflects degree completion without specialization (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*51-79</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment J. DSU B.S. in Cyber Operations (BSCO) – ATCC A.A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*15-33
<b>Program Courses (78 Credits)</b>					
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology (if taken)	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON	4
CSC 163	Hardware, Virtualization, and Data Communication	3	CVNP 2601	Virtual Computing	3
			CVNP 2626	Computer Hardware	3
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2	4
CSC 300	Data Structures	3			
CSC 314	Assembly Language	3			
CSC 321	Cyber Law and Policy	3			
CSC 334	Web Development	3			
CSC 385	Networking II	3	CVNP 2606	Cisco 3	4
CSC 404	Foundation of Computation	3			
CSC 409	Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
CSC 420	Cellular and Mobile Communications	3			
CSC 428	Reverse Engineering	3			
CSC 432	Malware Analysis	3			
CSC 436	Offensive Network Security	3			
CSC 437	Survey of Enterprise Systems	3			
CSC 438	Defensive Network Security	3			
CSC 439	Threat Hunting and Incident Response	3			
CSC 456	Operating Systems	3			
MATH 201	Introduction to Discrete Mathematics	3			
CIS/CSC 300–400 or MATH 123+ Elective	Program Elective	3			

CIS/CSC 300–400 or MATH 123+ Elective	Program Elective MATH 315 Linear Algebra	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
CIS/CSC 300–400 or MATH 123+ Elective	Program Elective MATH 281 Intro to Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
Program Courses Credits required		78	Program Courses Credits accepted		*28-39
<b>Electives (12 Credits)</b>					
	Elective Credits	3	CVNP 1603	Cisco 1	3
	Elective Credits	3	CVNP 1606	Supporting Windows Operating Systems	3
	Elective Credits	4	CVNP 2625	Defensive Security	4
	Elective Credits	1	CVNP 2639	Scripting and Command Line	3
Electives Credits required		12	Electives Credits accepted (excess credit applies here)		13
<b>TOTAL (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-85</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment K. DSU B.S. in Cyber Operations (BSCO) → ATCC A.A.S. Remaining DSU Credits for Completion**

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-15
<b>Program Courses (78 Credits)</b>		
CSC 105	Introduction to Computers (if ITEC 1430 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 300	Data Structures	3
CSC 314	Assembly Language	3
CSC 321	Cyber Law and Policy	3
CSC 334	Web Development	3
CSC 404	Foundation of Computation	3
CSC 420	Cellular and Mobile Communications	3
CSC 428	Reverse Engineering	3
CSC 432	Malware Analysis	3
CSC 436	Offensive Network Security	3
CSC 437	Survey of Enterprise Systems	3
CSC 438	Defensive Network Security	3
CSC 439	Threat Hunting and Incident Response	3
CSC 456	Operating Systems	3
MATH 201	Introduction to Discrete Mathematics	3
CIS/CSC 300–400 or MATH 123+ Elective	Program Elective (if MATH 2200 not taken)	3
CIS/CSC 300–400 or MATH 123+ Elective	Program Elective (if MATH 1447 not taken)	3
CIS/CSC 300–400 or MATH 123+ Elective	Upper-level CIS/CSC or Math	3
Program Courses Credits remaining		*48-57
<b>Electives (12 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*48-72</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment L. DSU B.S. in Network & Security Administration (BS NetSec) – ATCC A.A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*15-33
<b>Program Courses (74 Credits)</b>					
CIS 484	Database Management Systems	3			
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology (if taken)	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON	4
CSC 163	Hardware, Virtualization, and Data Communication	3	CVNP 2601	Virtual Computing	3
			CVNP 2626	Computer Hardware	3
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2	4
CSC 321	Cyber Law and Policy	3			
CSC 334	Web Development	3			
CSC 385	Networking II	3	CVNP 2606	Cisco 3	4
CSC 387	Routing and Switching	5			
CSC 388	Computer Forensics Fundamentals	3			
CSC 407	Advanced Routing and Switching	3			
CSC 409	Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
CSC 430	Windows Administration	3			
CSC 431	UNIX/Linux Administration	3			
CSC 436	Offensive Network Security	3			
CSC 437	Survey of Enterprise Systems	3			
CSC 438	Defensive Network Security	3			
CSC 439	Threat Hunting and Incident Response	3			
CSC 443	Scripting for Network Administration	3			
CSC 494 OR CSC 498	Choose one (3 cr) Internship OR Research	3			
MATH 281	Introduction to Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
Program Courses Credits required		74	Program Courses Credits accepted		*28-35
<b>Electives (16 Credits)</b>					
Electives Credits required		16	Electives Credits accepted		16
<b>TOTAL (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-84</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment M. DSU B.S. in Network & Security Administration (BS NetSec) → ATCC A.A.S. Remaining DSU Credits for Completion**

<b>DSU Prefix/Number</b>	<b>DSU Course Title</b>	<b>DSU Credits</b>
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-15
<b>Program Courses (74 Credits)</b>		
CSC 105	Introduction to Computers (if ITEC 1430 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 321	Cyber Law and Policy	3
CSC 334	Web Development	3
CSC 387	Routing and Switching	5
CSC 388	Computer Forensics Fundamentals	3
CSC 407	Advanced Routing and Switching	3
CSC 430	Windows Administration	3
CSC 431	UNIX/Linux Administration	3
CSC 436	Offensive Network Security	3
CSC 437	Survey of Enterprise Systems	3
CSC 438	Defensive Network Security	3
CSC 439	Threat Hunting and Incident Response	3
CSC 443	Scripting for Network Administration	3
CSC 494 OR CSC 498	Choose one (3 cr) Internship OR Research	3
MATH 281	Introduction to Statistics (if MATH 1447 not taken)	3
Program Courses Credits remaining		*47-53
<b>Electives (16 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*47-68</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment N. Summary Table of DSU B.S. Programs → ATCC A.A.S. in Cybersecurity, Virtualization, & Networking**

<b>DSU Beacom B.S. Program (A.A.S. pathway)</b>	<b>Total Credits Required (DSU)</b>	<b>Total Credits accepted (posted) (ATCC A.A.S.)</b>	<b>Total Credits applied to program</b>	<b>Total Credits remaining (DSU)</b>
B.S. Artificial Intelligence (BSAI)	120	60–66	30–58	62–90
B.S. Computer Science (BSCS) (no specialization option)	120	60–83	41–69	51–79
B.S. Computer Science (BSCS) (with specialization option)	120	60–69	29–57	63–91
B.S. Cyber Operations (BSCO)	120	60–85	48–72	48–72
B.S. Network & Security Administration (BS NetSec)	120	60–84	52–73	47–68

Total credits accepted reflect DSU transfer credit that may be recorded on the transcript, including credits that do not apply to the selected DSU degree. Total credits applied to program reflect credits that satisfy degree requirements. Total credits applied plus total credits remaining equal 120 within an individual student scenario. Displayed ranges reflect variability across different student coursework patterns.

**Attachment O. DSU B.S. in Artificial Intelligence (BSAI) – ATCC A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*30-33
<b>Program Courses (48 Credits)</b>					
CIS 368	Predictive Analytics	3			
CIS 372	Programming for Analytics	3			
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals (if taken)	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON (if taken)	4
CSC 230	Tech Foundations: Ethics	1			
CSC 232	Tech Foundations: Scripting	1	CVNP 2639	Scripting and Command Line (if taken)	3
CSC 233	Tech Foundations: Secure AI Lifecycles	1			
CSC 247	Introduction to Artificial Intelligence	3			
CSC 250	Computer Science II	3			
CSC 300	Data Structures	3			
CSC 382	Adversarial AI and Security	3			
CSC 386	Applications of Deep Learning	3			
CSC 402	Mathematical Foundations of AI	3			
CSC 447	Artificial Intelligence	3			
CSC 478	AI Tools and Frameworks	3			
CSC 479	Applied Artificial Intelligence	3			
CSC 482	Algorithms and Optimization	3			
Program Courses Credits required		48	Program Courses Credits accepted		*3-13
<b>Support Courses (16 Credits)</b>					
MATH 123	Calculus I	4	MATH 1426	Calculus I (if taken)	4
MATH 201	Introduction to Discrete Mathematics	3			
MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
MATH 315	Linear Algebra	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
MATH 316	Discrete Mathematics	3			
Support Courses Credits required		16	Support Courses Credits accepted		*0-12
<b>Minor Requirement (18 Credits)</b>					
Minor	Any Non-AI/ML Minor or 2nd Major	18	Minor Requirement Credits accepted		0
<b>Electives (8 Credits)</b>					
Electives Credits required		8	Electives Credits accepted		8
<b>TOTAL (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-66</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment P. DSU B.S. in Artificial Intelligence (BSAI) → ATCC A.S. Remaining DSU Credits for Completion**

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-4
<b>Program Courses (48 Credits)</b>		
CIS 368	Predictive Analytics	3
CIS 372	Programming for Analytics	3
CSC 134	Introduction to Cyber (if CVNP 2615 not taken)	3
CSC 150	Computer Science I (if CVNP 2646 not taken)	3
CSC 230	Tech Foundations: Ethics	1
CSC 232	Tech Foundations: Scripting (if CVNP 2639 not taken)	1
CSC 233	Tech Foundations: Secure AI Lifecycles	1
CSC 247	Introduction to Artificial Intelligence	3
CSC 250	Computer Science II	3
CSC 300	Data Structures	3
CSC 382	Adversarial AI and Security	3
CSC 386	Applications of Deep Learning	3
CSC 402	Mathematical Foundations of AI	3
CSC 447	Artificial Intelligence	3
CSC 478	AI Tools and Frameworks	3
CSC 479	Applied Artificial Intelligence	3
CSC 482	Algorithms and Optimization	3
Program Courses Credits remaining		*38-45
<b>Support Courses (16 Credits)</b>		
MATH 123	Calculus I (if MATH 1426 not taken)	4
MATH 201	Introduction to Discrete Mathematics	3
MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics (if MATH 1447 not taken)	3
MATH 315	Linear Algebra (if MATH 2200 not taken)	3
MATH 316	Discrete Mathematics	3
Support Courses Credits remaining		*6-16
<b>Minor Requirement (18 Credits)</b>		
Minor Requirement Credits remaining		18
<b>Electives (8 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*62-79</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment Q.** DSU B.S. in Computer Science (BSCS) – ATCC A.S. → Course Mapping

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*30-33
<b>Program Courses (57 Credits)</b>					
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON (if taken)	4
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 260	Object Oriented Design	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2 (if taken)	4
CSC 300	Data Structures	3			
CSC 310	Advanced Data Structures	3			
CSC 314	Assembly Language	3			
CSC 404	Foundation of Computation	3			
CSC 410	Parallel Computing	3			
CSC 456	Operating Systems	3			
CSC 461	Programming Languages	3			
CSC 470	Software Engineering	3			
CSC 482	Algorithms and Optimization	3			
CIS 332 / CIS 424 / CSC 321	Choose one: Structured Systems Analysis and Design OR Software Development with Agile Methodologies OR Cyber Law and Policy	3			
UPPER CIS/CSC	Select 300–400-level CIS/CSC courses (specialization courses may apply)	3			
UPPER CIS/CSC CSC 385	Program Elective Networking II	3	CVNP 2606	Cisco 3 (if taken)	4
UPPER CIS/CSC CSC 409	Program Elective Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
Program Courses Credits required		57	Program Courses Credits accepted		*3-22
<b>Support Courses (19 Credits)</b>					
MATH 123	Calculus I	4	MATH 1426	Calculus I (if taken)	4
MATH 201	Introduction to Discrete Mathematics	3			

MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
MATH 316	Discrete Mathematics	3			
MATH ELECTIVES	Math Electives (from approved list)	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
MATH ELECTIVES	Math Electives (from approved list)	3			
NOTE: Approved MATH/CSC list: CSC 402; MATH 125, 204, 225, 282, 315, 318, 321, 361, 381, 413, 418, 436, 437, 471, 475, 492.					
Support Courses Credits required		19	Support Courses Credits accepted		*0-12
<b>Artificial Intelligence / Machine Learning Specialization or Software Engineering Specialization and General Electives Option (14 Credits)</b>					
Specialization Credits required		12	Specialization Credits accepted		0
General Elective Credits required		2	General Elective Credits accepted		2
<b>TOTAL reflects degree completion with specialization (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-69</b>

<b>Electives with No Specialization Option (14 Credits)</b>					
No Specialization Option Credits required		14	Met by unused ATCC credits - No Specialization Option Credits accepted		14
<b>TOTAL reflects degree completion without specialization (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-81</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment R. DSU B.S. in Computer Science (BSCS) → ATCC A.S. Remaining DSU Credits for Completion**

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-4
<b>Program Courses (57 Credits)</b>		
CSC 150	Computer Science I (if CVNP 2646 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 260	Object Oriented Design	3
CSC 285	Networking I (if CVNP 1612 not taken)	3
CSC 300	Data Structures	3
CSC 310	Advanced Data Structures	3
CSC 314	Assembly Language	3
CSC 404	Foundation of Computation	3
CSC 410	Parallel Computing	3
CSC 456	Operating Systems	3
CSC 461	Programming Languages	3
CSC 470	Software Engineering	3
CSC 482	Algorithms and Optimization	3
CIS 332 / CIS 424 / CSC 321	Choose one: Structured Systems Analysis and Design OR Software Development with Agile Methodologies OR Cyber Law and Policy	3
<b>Program Electives</b>		
UPPER CIS/CSC	Select 300–400-level CIS/CSC courses (specialization courses may apply) (if CVNP 2606 not taken)	3
UPPER CIS/CSC	Select 300–400-level CIS/CSC courses (specialization courses may apply) (if both CVNP 1601 and CVNP 1620 not taken)	3
UPPER CIS/CSC	Select 300–400-level CIS/CSC courses (specialization courses may apply)	3
Program Courses Credits remaining		*42-54
<b>Support Courses (19 Credits)</b>		
MATH 123	Calculus I (if MATH 1426 not taken)	4
MATH 201	Introduction to Discrete Mathematics	3
MATH 281 OR MATH 381	Choose one (3 cr) Intro to Statistics OR Probability & Statistics (if MATH 1447 not taken)	3
MATH 316	Discrete Mathematics	3
MATH ELECTIVES	Math Electives (from approved list) (if MATH 2200 not taken)	3
MATH ELECTIVES	Math Electives (from approved list)	3
NOTE: Approved MATH/CSC list: CSC 402; MATH 125, 204, 225, 282, 315, 318, 321, 361, 381, 413, 418, 436, 437, 471, 475, 492.		
Support Courses Credits remaining		*9-19
<b>Electives with Specialization Option: Artificial Intelligence / Machine Learning Specialization or Software Engineering (14 Credits)</b>		
Specialization Credits remaining		12
General Electives Credits remaining		0
<b>TOTAL reflects degree completion with specialization (Includes General Education)</b>		

<b>Total Credits remaining</b>	<b>*63-89</b>
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<b>Electives with No Specialization Option (14 Credits)</b>	
Additional Elective Credits remaining	0
<b>TOTAL reflects degree completion without specialization (Includes General Education)</b>	
<b>Total Credits remaining</b>	<b>*51-77</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment S. DSU B.S. in Cyber Operations (BSCO) – ATCC A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*30-33
<b>Program Courses (78 Credits)</b>					
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals (if taken)	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON (if taken)	4
CSC 163	Hardware, Virtualization, and Data Communication	3	CVNP 2601	Virtual Computing (if taken)	3
			CVNP 2626	Computer Hardware (if taken)	3
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2 (if taken)	4
CSC 300	Data Structures	3			
CSC 314	Assembly Language	3			
CSC 321	Cyber Law and Policy	3			
CSC 334	Web Development	3			
CSC 385	Networking II	3	CVNP 2606	Cisco 3 (if taken)	4
CSC 404	Foundation of Computation	3			
CSC 409	Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
CSC 420	Cellular and Mobile Communications	3			
CSC 428	Reverse Engineering	3			
CSC 432	Malware Analysis	3			
CSC 436	Offensive Network Security	3			
CSC 437	Survey of Enterprise Systems	3			
CSC 438	Defensive Network Security	3			
CSC 439	Threat Hunting and Incident Response	3			
CSC 456	Operating Systems	3			
CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math	3	MATH 2200	Differential Equations and Linear Algebra (if taken)	4
CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math	3	MATH 1447	Intro to Statistics (if taken)	4

CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math	3			
MATH 201	Introduction to Discrete Mathematics	3			
Program Courses Credits required		78	Program Courses Credits accepted		*3-38
<b>Electives (12 Credits)</b>					
Electives Credits required		12	Electives Credits accepted		12
<b>TOTAL (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-83</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment T. DSU B.S. in Cyber Operations (BSCO) → ATCC A.S. Remaining DSU Credits for Completion**

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-4
<b>Program Courses (78 Credits)</b>		
CSC 134	Introduction to Cyber (if CVNP 2615 not taken)	3
CSC 150	Computer Science I (if CVNP 2646 not taken)	3
CSC 163	Hardware, Virtualization, and Data Communication (if CVNP 2601 and CVNP 2626 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 285	Networking I (if CVNP 1612 not taken)	3
CSC 300	Data Structures	3
CSC 314	Assembly Language	3
CSC 321	Cyber Law and Policy	3
CSC 334	Web Development	3
CSC 385	Networking II (if CVNP 2606 not taken)	3
CSC 404	Foundation of Computation	3
CSC 409	Operating Environments (if both CVNP 1601 and CVNP 1620 not taken)	3
CSC 420	Cellular and Mobile Communications	3
CSC 428	Reverse Engineering	3
CSC 432	Malware Analysis	3
CSC 436	Offensive Network Security	3
CSC 437	Survey of Enterprise Systems	3
CSC 438	Defensive Network Security	3
CSC 439	Threat Hunting and Incident Response	3
CSC 456	Operating Systems	3
CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math (if MATH 2200 not taken)	3
CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math (if MATH 1447 not taken)	3
CIS/CSC 300–400 or MATH 123+	Upper-level CIS/CSC or Math	3
MATH 201	Introduction to Discrete Mathematics	3
Program Courses Credits remaining		*54-75
<b>Electives (12 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*54-79</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment U. DSU B.S. in Network & Security Administration (BS NetSec) – ATCC A.S. → Course Mapping**

DSU Prefix/Number	DSU Course Title	DSU Credits	ATCC Prefix/Number	ATCC Course Title	ATCC Credits
<b>B.S. General Education Requirement (30 Credits)</b>					
General Education Credits required		30	General Education Credits accepted		*30-33
<b>Program Courses (74 Credits)</b>					
CIS 484	Database Management Systems	3			
CSC 105	Introduction to Computers	3	ITEC 1430	Computer Applications & Technology	3
CSC 134	Introduction to Cyber	3	CVNP 2615	Security Fundamentals (if taken)	3
CSC 150	Computer Science I	3	CVNP 2646	Python/JSON (if taken)	4
CSC 163	Hardware, Virtualization, and Data Communication	3	CVNP 2601	Virtual Computing (if taken)	3
			CVNP 2626	Computer Hardware (if taken)	3
CSC 234	Software Security	3			
CSC 250	Computer Science II	3			
CSC 285	Networking I	3	CVNP 1612	Cisco 2 (if taken)	4
CSC 321	Cyber Law and Policy	3			
CSC 334	Web Development	3			
CSC 385	Networking II	3	CVNP 2606	Cisco 3 (if taken)	4
CSC 387	Routing and Switching	5			
CSC 388	Computer Forensics Fundamentals	3			
CSC 407	Advanced Routing and Switching	3			
CSC 409	Operating Environments	3	CVNP 1601	Linux Administration AND	3
			CVNP 1620	Enterprise Operating System I (if both are taken)	4
CSC 430	Windows Administration	3			
CSC 431	UNIX/Linux Administration	3			
CSC 436	Offensive Network Security	3			
CSC 437	Survey of Enterprise Systems	3			
CSC 438	Defensive Network Security	3			
CSC 439	Threat Hunting and Incident Response	3			
CSC 443	Scripting for Network Administration	3			
CSC 494 CSC 498	Choose one (3 cr) Internship OR Research	3			
MATH 281	Introduction to Statistics	3	MATH 1447	Intro to Statistics (if taken)	4
Program Courses Credits required		74	Program Courses Credits accepted		*3-35
<b>Electives (16 Credits)</b>					
Electives Credits required		16	Electives Credits accepted		16
<b>TOTAL (Includes General Education)</b>					
<b>Total Credits required</b>		<b>120</b>	<b>Total Credits accepted</b>		<b>*60-84</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment V.** DSU B.S. in Network & Security Administration (BS NetSec) → ATCC A.S. Remaining DSU Credits for Completion

DSU Prefix/Number	DSU Course Title	DSU Credits
<b>B.S. General Education Requirement (30 Credits)</b>		
General Education Credits remaining		*0-4
<b>Program Courses (74 Credits)</b>		
CIS 484	Database Management Systems	3
CSC 134	Introduction to Cyber (if CVNP 2615 not taken)	3
CSC 150	Computer Science I (if CVNP 2646 not taken)	3
CSC 163	Hardware, Virtualization, and Data Communication (if CVNP 2601 and CVNP 2626 not taken)	3
CSC 234	Software Security	3
CSC 250	Computer Science II	3
CSC 285	Networking I (if CVNP 1612 not taken)	3
CSC 321	Cyber Law and Policy	3
CSC 334	Web Development	3
CSC 385	Networking II (if CVNP 2606 not taken)	3
CSC 387	Routing and Switching	5
CSC 388	Computer Forensics Fundamentals	3
CSC 407	Advanced Routing and Switching	3
CSC 409	Operating Environments (if both CVNP 1601 and CVNP 1620 not taken)	3
CSC 430	Windows Administration	3
CSC 431	UNIX/Linux Administration	3
CSC 436	Offensive Network Security	3
CSC 437	Survey of Enterprise Systems	3
CSC 438	Defensive Network Security	3
CSC 439	Threat Hunting and Incident Response	3
CSC 443	Scripting for Network Administration	3
CSC 494 OR CSC 498	Choose one (3 cr) Internship OR Research	3
MATH 281	Introduction to Statistics (if MATH 1447 not taken)	3
Program Courses Credits remaining		*50-71
<b>Electives (16 Credits)</b>		
Electives Credits remaining		0
<b>TOTAL (Includes General Education)</b>		
<b>Total Credits remaining</b>		<b>*50-75</b>

*\*This range reflects variability in completed ATCC coursework and excess credits applying as general electives.*

**Attachment W. Summary Table of DSU B.S. Programs → ATCC A.S. in Computer Information Systems**

<b>DSU Beacom B.S. Program (A.S. pathway)</b>	<b>Total Credits Required (DSU)</b>	<b>Total Credits accepted (posted) (ATCC A.S.)</b>	<b>Total Credits applied to program</b>	<b>Total Credits remaining (DSU)</b>
B.S. Artificial Intelligence (BSAI)	120	60–66	41–58	62–79
B.S. Computer Science (BSCS) (no specialization option)	120	60–81	43–69	51–77
B.S. Computer Science (BSCS) (with specialization option)	120	60–69	31–57	63–89
B.S. Cyber Operations (BSCO)	120	60–83	41–66	54–79
B.S. Network & Security Administration (BS NetSec)	120	60–84	45–70	50–75

Total credits accepted reflect DSU transfer credit that may be recorded on the transcript, including credits that do not apply to the selected DSU degree. Total credits applied to program reflect credits that satisfy degree requirements. Total credits applied plus total credits remaining equal 120 within an individual student scenario. Displayed ranges reflect variability across different student coursework patterns.