

APPENDIX A: Black Hawk College and National Louis University

**Associate in Applied Science, Computer Information Technology - Secure Software Development Track to Bachelor of Science,
Computer Science and Information Systems**

Step I: Associate in Applied Science Degree

B.S. Computer Science and Information Systems requirements	Associate in Applied Science Degree courses which fulfill NLU requirements	Semester Hours	Quarter Hours
GENERAL EDUCATION		10	15
Communications Written Communication - min 4 QH	ENG 101 Composition I	3	4.5
Humanities and Fine Arts Humanities/Fine Arts - min 4 QH	AAS Humanities General Ed (select an IAI course)	3	4.5
Mathematics and Natural Sciences Mathematics/Natural Science - min 4 QH	MATH 112 College Algebra	4	6
COMPUTER SCIENCE AND INFORMATION SYSTEMS		25	37.5
MIS 103 Management Info Systems Concepts	CS 105 Computer Science Principles	3	4.5
CSS 200 Introduction to Information Systems	CS 100 Introduction to Computers	3	4.5
CSS 205 Operating Systems	ITS 112 Operating Systems	3	4.5
CSS 210 Intro to Networking and Info Security	NETW 120 Basic Networking	3	4.5
CSS 215 Introduction to Systems Analysis	CIP 260 Systems Design and Development	3	4.5
CSS 225 Introduction to Applied Programming	CS 121 Intro to Computer Science	4	6
CSS 301 Applied Object-Oriented Programming	CIP 214 C Programming	3	4.5
MIS 433 Developing and Managing Databases	BE 264 Microsoft Access	3	4.5
PROGRAM ELECTIVES		29	43.5
CSS 302 Information Security*	NETW 170 Intro to Information Security	3	4.5
MIS 424 Managing and Developing Websites**	CIP 170 Web Page Development	3	4.5
CSS 304 Application Development**	CIP 240 Mobile Application Programming	3	4.5
	ITS 125 IT Professional Skills	1	1.5
	CIP 150 Secure Coding	3	4.5
	CIP 220 Intro to Assured Software Eng	3	4.5
	NETW 167 PowerShell	3	4.5
	CS 225 Advanced Programming	4	6
	CIP 270 Field Project	3	4.5
	ITS 212 Linux Shell Programming	3	4.5
TOTAL TRANSFER:		64	96

Note: After transfer, online students are also required to complete MIS 437 Data Mining and Warehousing (5QH) as a part of Program Major

* This course is a part of Network and Info Security Concentration

**These courses are part of Coding and Software Development Concentration

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Step II: Additional courses to be taken at Black Hawk College or National Louis University

NLU Requirements	College courses which fulfill NLU requirements	Semester Hours	Quarter Hours
Communications			
ENG 201 Intermediate English Composition	ENG 102 Composition II	3	4.5
ENG 203 Effective Speaking for Undergraduate	SPEC 101 Prin of Speech Communication	3	4.5
Mathematics and Natural Sciences			
Natural Sciences	ASTR 101, 102; BIOL 100, 101, 105, 106, 200, 201, 211, 250, 251; CHEM 101, 110, 111; NSCI 101, 102; PHYS 101, 110, 140, 201; PS 101	3	4.5
MTH 102 Statistical Foundations*	MATH 108 Statistics for Gen Ed	3	4.5
Computer Science and Information Systems Major			
CSS 220 Discrete Structures	MATH 161 Discrete Mathematics	3	4.5
TOTAL TRANSFER:		15	22.5

*Grade of C or better is required for transfer

Step III: National Louis University - B.S. Computer Science and Information Systems

	SH	QH
General Education Requirement	20	30
GEN 203 You & NLU: Tools and Strategies of Student Success - This course will be waived for any student who transfers a minimum of 60SH/90QH		
One from the following courses: PHI 107 Ethics, Logic and Critical Inquiry, HIS 103 History Across Globe, ART 101 Basic Art Appreciation (5)		
Two Social and Behavioral Sciences courses (10)		
Two additional General Education courses (10)		
BRV 200 Braven Accelerator or CAR 214 Creating and Communicating the Professional Brand or CAR 202 Creating Professional Identity and CAR 203 You the Professional (5)		
Computer Science and Information Systems Major	10	15
CSS 300 Data Analysis		
CSS 492 Internship in Computer Science and Information Systems (must be taken at NLU)		
Upper Level CIS Elective		
Free Electives	11	17
TOTAL	41	62

SUMMARY		SH	QH
Black Hawk College	Associate Degree	64	96
Black Hawk College or National Louis University	Additional Courses from Step II	15	22.5
National Louis University	Courses taken at NLU	41	62
TOTAL		120	180.5