

## Northwest Missouri State University School of Computer Science and Information Systems Information Assurance & Security Emphasis Bachelor of Science

Term 1	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
77-101	University Seminar		1	
10-111	Composition I		3	
29-102	Fundamentals of Oral Communication		4	
44-101	Foundation of Computing		3	
44-141	Computer Programming I	2 units of high school algebra and either CSIS 44101 OR CSIS 44130 with a grade of C or better, or School director's permission	3	
			4.4	
_		Total Hours	14	
Term 2	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
10-112 17-118	Composition II  Pre-Calculus Algebra (Option B)*	ENGL 10-111  An ACT Math score of 22 or higher, or a score of PASS on the NW Algebra Review, or a minimum grade of C in MATH 17082, or concurrent enrollment in MATH 17018	3	
44-241	Computer Programming II	CSIS 44141 with a grade of C or better	3	1
	Fine Arts		3	
	Life Sciences/ Lab		4	
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		Total Hours	16	
Term 3	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
44-356	Network Fundamentals	CSIS 44130 or CSIS 44101 with a grade of C or better	3	2
44-242	Data Structures	CSIS 44241, and MATH 17114 or MATH 17117 or MATH 17118 or MATH 17120 (or concurrent enrollment), all with a grade of C or better, or consent of instructor	3	2
44-296	Professional Development Seminar	Sophomore standing and CSIS 44141	3	
17-114	General Stats (Option B)*	An ACT Math score of 22 or higher, high school GPA of 3.00 or higher, or a minimum grade of C in MATH 17082, or concurrent enrollment in MATH 17014	3	
	Physical Sciences & Lab **		4	
		Total Hours	16	
Term 4	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
44-460	Database Systems	CSIS 44241, with a grade of C or better	3	
44.245		CSIS 44242, with a grade of C or	3	Spring only
44-345	Computer Organization	better, and one semester of chemistry, physics, or physical science		2

<sup>=</sup> a milestone course completed by end of year 1 to remain on pace to finish degree requirements in four years.

= a milestone course completed by end of year 2 to remain on pace to finish degree requirements in four years.

= a milestone course completed by end of year 3 to remain on pace to finish degree requirements in four years.

= a milestone courses taken in final year to complete degree requirements.



## Northwest Missouri State University School of Computer Science and Information Systems Information Assurance & Security Emphasis Bachelor of Science

44-249		Sophomore standing and a	3	
44-243	Building Blocks of Theoretical CS	minimum grade of C in CSIS 44141 and any of the following: MATH 17117 or MATH 17118 or MATH 17120	3	
1	Humanities	17120	3	
		Total Hours	15	
Term 5	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
	Civics- History		3	
17-316	Linear Stat Model I (Option B)*	A minimum grade of C in MATH 17114 or consent of instructor	3	
44-457	Applied Cryptography***	CSIS 44356 and CSIS 44349, each with a minimum grade of C.	3	Fall only Odd years
	Social & Behavioral Sciences		3	
44-555	Network Security	CSIS 44356 with a grade of C of better	3	3
		Total Hours	15	
Term 6	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
10-220	Intro to Literature		3	
44-349	Survey of Algorithms	CSIS 44242 and CSIS 44249 each with a grade of C or better	3	Spring only
	Approved CS/IS Elective (300+ Level)		3	
	Humanities		3	
44-359	Secure System Administration***	CSIS 44356 with a minimum grade of C	3	Spring only Odd years
			4.5	
		Total Hours	15	
Term 7	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
44-550	Operating Systems	CSIS 44345, with a grade of C or better	3	Fall only
44-525	Theory & Imp Programming Language	CSIS 44242 and CSIS 44249, with grades of C or better, or consent of instructor	3	Fall only
44-561	Software Engineering Principles	CSIS 44242 and CSIS 44460 with a grade of C or better	3	Fall only
	Approved CS/IS Elective (300+ Level)***		3	
	Elective		3	
		Total Hours	15	

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	Approved CS/IS Elective (300+ Level)***		3	
44-562	Software Engineering II	CSIS 44561 with a grade of C or better	3	
	Social & Behavioral Sciences		3	
	Elective		5	
Total Hours				

<sup>\*</sup>Schedule shows Math Option B. Students may elect for Math Option A instead. If Math Option A is chosen, then make the following substitutions:

- Spring year 1-replace 17-118 Pre-calculus Algebra with 17-117 Pre-calculus (4hours)
- Fall year 2-replace 17-114 General Statistics with 17-120 Calculus (4 hours)
- Fall year 3-replace 17-316 Linear Stat Model I with 17-114 General Statistics
- \*\*Taking Fundamentals of Classical Physics I & Lab (5 hours) will reduce elective hours by 1.
- \*\*\*If Applied Cryptography and Secure System administration are not available in Junior year, take them in the senior year and replace by approved CS/IS upper division electives.

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