

# 4-year Degree Plan

## BS in Computer Science, BS in Artificial Intelligence Sciences w/ CS Concentration, And CS Cybersecurity Certificate

Coding and other courses useful for an INL or other internship can be front loaded into the first 2 years.

<b>Semester 1 - Fall</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS1181	3	Intro to Computer Science I	C-	Math1143 or equiv.		F.S
Math1170	3	Calculus I	C-	Math1144/1147 or equiv.		F.S
Eng1101	3	English Composition		Test score or equiv.		F.S
Phil 1103	3	Introduction to Ethics				F.S
Gen Ed	3	Objective 6				
<b>Semester 2 - Spring</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS1337	3	Computer Org and Arch	C-	(Math1144/1147) CS1181		F.S
CS2281	4	Data Structures	C-	(Math1144/1147) CS1181		F.S
Math2240	3	Linear Algebra	C-	Math1170		F.S
CS1185	3	Intro to Artificial Intel. Tools	C-	CS1181		S
Math1175	3	Linear Algebra	C-	Math 1170		F.S
<b>Semester 3 - Fall</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS3309	3	Adv. Object-Oriented Prog.	C-	CS1337 CS2281 (Math1144/1147)		F.S
CS3310	3	Databases	C-	CS1337 CS2281 (Math1144/1147)		F
CS3311	3	Secure Client-Server Web Dev	C-	CS1337 CS2281 (Math1144/1147)	CS 3310	F
CS4416	3	Cybersec & Resilience	C-			F
CS3337	3	Secure Systems Networks	C-	CS1337 CS2281 (Math1144/1147)		F
<b>Semester 4 - Spring</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS3321	3	Intro Software Engineering	C-	CS1337 CS3309 (Math1144/1147)	CS 3310	S
CS4461	3	Secure Operating Systems	C-	CS1337 CS3309 (Math1144/1147)		S
Math1187/2287	3	Discrete Math	C-	CS1181		F.S
Math3332	3	Data Sci & App Mach Learning	C-	CS 1181 Math 1170 Math 2240		S
Eng1102	3	English Composition II		Eng1101 or equiv.		F.S
<b>Semester 5 - Fall</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS 4433	3	Applied Neural Networks	C-	CS1337 CS2281 Math 1170 Math 2240		F
CS4412	3	Algorithms	C-	CS1337 CS3309. Math2240 Math1175 1187/2287		F
Math 3352	3	Intro to Probability	C-	Math1175		F.S
CS3305	3	Intro Computational Theory	C-	Math1170 CS1181 Math1187/2287		F
Physics 2211	4	Engineering Physics	C-	Math1170		F.S
<b>Semester 6 - Spring</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
Gen Ed	3	Objective 4				F.S
Gen Ed	3	Objective 6				F.S
Math 4405	3	Numerical Linear Algebra	C-	Math 2240. CS 1181 -	<b>Offered Even Springs</b>	
CS 4417	3	Cybersecurity Threat Intell.	C-C-			
CS4434	3	Generative Artificial Intelligence	C-	CS1185 CS CS 4433 CS 3309 Math 1170 Math		S
<b>Semester 7 - Fall</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS 4470	3	High Performance Computing	C-	CS 4461		F
CS 4472	3	Artificial Intelligence Alg.	C-	CS 1337 CS 3309 CS 4412 Math 1175 Math 2240		
Gen Ed	3	Objective 9				F.S
Math3350	3	Statistical Methods	C-			F.S
Eng3307/8	3	Technical Writing	C-	Engl 1102		F.S
<b>Semester 8 - Spring</b>						
<b>Course</b>	<b>Credits</b>	<b>Title</b>	<b>MinGrade</b>	<b>Prerequisites</b>	<b>PreCoR</b>	<b>Sem</b>
CS4488	3	Capstone Project	C-	CS3337		S
CS4481	3	Intro to Compilers	C-	Math1170 Math1187/2287 CS1337 CS4412		S
Gen Ed	4	Objective 5 Science + Lab		Test score or equiv.		F.S
Gen Ed	3	Objective 2	C-			F.S
CS 4478	3	Machine Learning Algorithms	C-	CS 1337 CS 33-0 CS 4412 Math 1175 Math 2240		S