

Systems Engineering, BSSE

Intended for use by NC Community College students planning to transfer an AE to UNCC's College of Engineering towards credit towards a BSSE

The University of North Carolina at Charlotte strongly recommends students complete their Associate degree prior to transferring to UNC Charlotte. Pathways are structured for students who have completed all requirements for their Associate degree and qualify for the CAA.

UNC Charlotte Baccalaureate Degree Plans

<https://academics.charlotte.edu/undergraduate-programs>

Additional Requirements / Special Note for Admission to the upper division in major:	Transfer Admission Requirements: for direct admission into the William States Lee College of Engineering <ul style="list-style-type: none"> • 24 transferable credits complete • Cumulative GPA of 2.5 or higher required • College-level Calculus I (MAT 271 at NC Community) must be complete with a grade of C or higher prior to transferring
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	Credit Hrs.	NC Community College Course	UNC Charlotte Equivalent Course	Notes
Semester 1 15 Credit Hrs	2	EGR 150 Intro to Engineering	ENGR 1300 Intro to Engineering	
	3	CHM 151 General Chemistry I	ENGR 1301 Math and Science for Engineering	
	3	MAT 271 Calculus I	MATH 1241: Calculus I [3 credits] + MATH 2ELE Math Elective [1 credit]	UNCC BSSE requires 3 credit Calculus I course only. Additional credit transfers as MATH 2ELE Math Elective.
	3	ANT 210, 221, COM 140, ECO 151, GEO 111, 112, or POL 210	XXXX 1501 Global Social Science	Gen Ed courses taken in as part of a NCCC Assoc in Eng will fulfill this. Otherwise, see UNCC Transf Cred Advisor ¹ .
	3	ART 110, 111, DAN 110, DRA 111, 212, FRE 141, GER 141, HIS 111, 121, MUS 110, 114, POR 141, REL 110, SPA 141, 151	XXXX 1502 Global Arts/ Humanities	Gen Ed courses taken in as part of a NCCC Assoc in Eng will fulfill this. Otherwise, see UNCC Transf Cred Advisor ¹ .
	1	ACA 122: College Transfer Success	TRNF 1ELE: Transfer Elective	Required for transfer of AE towards BSSE

	Credit Hrs.	NC Community College Course	UNC Charlotte Equivalent Course	Notes
Semester 2 16 Credit Hrs	3	Programming Course: CSC 121, 134 or 151	ENGR 1302 Logic and Computational Problem Solving	
	3	DFT 154 Intro to Solid Modeling or DFT 170 Engineering Graphics	ENGR 1303 Visualization and Graphical Communication	
	3	MAT 272 Calculus II	MATH 1242: Calculus II [3 credits] + MATH 2ELE Math Elective [1 credit]	UNCC BSSE requires 3 credit Calculus II course only. Additional credit transfers as MATH 2ELE Math Elective.
	4	PHY 251 General Physics I	PHYS 2101/2101L Physics for Science and Eng I & Lab	
	3	ENG 111 Writing and Inquiry	WRDS 1103 Writing and Inquiry	

	Credit Hrs.	NC Community College Course	UNC Charlotte Equivalent Course	Notes
Semester 3 15 Credit Hrs	3	MAT 280 Linear Algebra	MATH 2164 Matrices & Lin. Algebra	
	3	MAT 273 Calculus III	MATH 2241 Calculus III [3 credits] + MATH 2ELE Math Elective [1 credit]	UNCC BSSE requires 3 credit Calculus III course only. Additional credit transfers as MATH 2ELE Math Elective.
	3	ENG 112 Writing/Research in the Discipline	CTCM 2530 Critical Thinking and Communication	UNCC Gen Ed requirement
	3	BIO 110, BIO 111, CHM 121, COM 110, 231, GEL 111	Science Elective	
	3	CJC 111, EDU 216, HSE 110, POL 120, SOC 225, SWK 110, HIS 131, HIS 231, MUS 112, PHI 215, PHI 220, REL 221	XXXX 1511 or 1512 Local Arts/ Humanities	Gen Ed courses taken in as part of a NCCC Assoc in Eng will fulfill this. Otherwise, see UNCC Transf Cred Advisor ¹ .

	Credit Hrs.	NC Community College Course	UNC Charlotte Equivalent Course	Notes
Semester 4 16 Credit Hrs	3	MAT 285 Differential Equations	MATH 2171 Differential Equations	
	4	PHY 252 General Physics II	PHYS 2102/2102L Physics for Science and Eng II & Lab	
	3	Advanced Programming Course: CSC 221, 234	SEGR 2105 Computational Methods for Systems Engineering I	
	3	HIS 131 or 132 American History	HIST 1575 American Democracy	UNCC Gen Ed requirement
	3	Electives	Technical Elective	Refer to UNCC Transfer Credit Advisor ¹ and BSSE Technical Electives List ² .

Semester	Credit Hrs.	NC Community College Course	UNC Charlotte Equivalent Course	Notes
Semester 5 15 Credit Hrs	3	-	STAT 3128: Probability and Statistics for Engineering	(no NCCC course equivalent)
	3	-	SEGR 2106: Engineering Economic Analysis	(no NCCC course equivalent)
	3	-	SEGR 2110: Systems Engineering Concepts	(no NCCC course equivalent)
	3	-	SEGR 3105: Computational Methods for Systems Engineering II	(no NCCC course equivalent)
	3	-	SEGR 3201: Deterministic Operations Research	(no NCCC course equivalent)
Semester 6 15 Credit Hrs	3	-	SEGR 3202: Stochastic Operations Research	(no NCCC course equivalent)
	3	-	SEGR 3102: Systems Simulation	(no NCCC course equivalent)
	3	-	SEGR 3111: Project Management	(no NCCC course equivalent)
	3	-	SEGR 3110: Systems Design and Deployment	(no NCCC course equivalent)
	3	Electives	Technical Elective / Concentration	Refer to UNCC Transfer Credit Advisor ¹ and BSSE Technical Electives List ² .
Semester 7 15 Credit Hrs	2	-	SEGR 3290: Systems Design Project I	(no NCCC course equivalent)
	1	-	ENGR 3295: Multi-disciplinary Prof. Development	(no NCCC course equivalent)
	3	-	SEGR 3107: Decision and Risk Analysis	(no NCCC course equivalent)
	3	-	SEGR 4141: Engineering Experimental Design	(no NCCC course equivalent)
	3	-	SEGR 4114: Production Control Systems	(no NCCC course equivalent)
	3	-	Technical Elective / Concentration	See Energy Systems concentration requirements ³ if applicable. (no NCCC course equivalent)
Semester 8 14 Credit Hrs	2	-	SEGR 3291: Systems Design Project II	(no NCCC course equivalent)
	3	-	SEGR 4170: Total Quality Systems	(no NCCC course equivalent)
	3	-	Technical Elective / Concentration	See Energy Systems concentration requirements ³ if applicable. (no NCCC course equivalent)
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Color Key	Category
Light Green	Success Marker Course (Critical Course)
Light Blue	UGETC: General Education Course

¹UNCC Transfer Credit Advisor

²BSSE Technical Electives

³BSSE Energy Concentration



UNCC Transfer Credit Advisor



UNC Charlotte BSSE Catalog



Industrial and System Engineering