

# DATA ANALYTICS & SYSTEMS ENGINEERING B.I.



University of Colorado  
Colorado Springs

## ACADEMIC ADVISING

*Partnering with students to successfully navigate college*

**Location:** Main Hall 208

**Phone:** 719.255.3260

**Website:** [Academic Advising](https://www.uccs.edu/advising)

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Current UCCS Students

• Appointments: [www.uccs.edu/advising/current-students](https://www.uccs.edu/advising/current-students)

Prospective Students: [www.uccs.edu/admissions/contact](https://www.uccs.edu/admissions/contact)

## GENERAL ACADEMIC INFORMATION

### Minimum Graduation Requirements

- 130 credit hours
- 2.0 CU cumulative GPA
- Residency: Last 30 credit hours of degree must be completed while registered in the College Engineering & Applied Science at UCCS

### Student Responsibilities

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: [catalog.uccs.edu](https://catalog.uccs.edu)
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

## DEGREE REQUIREMENTS

Explore Data Analytics and Systems Engineering (DASE): [BI in Data Analytics and Systems Engineering \(DASE\) - \(uccs.edu\)](https://www.uccs.edu/dase)

Major Requirements			
DASE Required courses (35 hours)	Course/Area	Course Title	Credit Hours
<ul style="list-style-type: none"> <li>• A minimum GPA of 2.0 must be maintained on all courses taken toward the major.</li> </ul> <p><i>You must be admitted into the College of Engineering in order to take any CS, MAE, ECE, or ENGR coursework.</i></p>	DASE 1011	Introduction to Data Analytics and System Engineering	3
	DASE/CS 1150	Principles of Computer Science	3
	DASE/CS 1450	Data Structure and Algorithms	3
	DASE 2020	Introduction to Statistics for Data Analytics	3
	DASE 2021	Computer Based Modeling in C	3
	DASE/CS 2080	Programing with Unix	3
	DASE 3030 or MGMT 3300	Project Management or Introduction to Management and Organization	3
	DASE/CS 3050	Social & Ethical Implications for DASE	1
	DASE/CS 3080	Programing Languages for Data Analytics	3
	DASE/CS 3300	Software Engineering	3
	DASE 4460	Intelligent Robotics	3
	ECE 4890	Senior Seminar	1
	ECE 4899	Senior Design Project	3
<b>DASE Required Track</b> (18 hours)  DASE students are required to pick one of the tracks listed as part of their degree program.	Data Analytics Track	Complete 18 credit hours from the courses listed below. DASE 4210, 4310, 4410, 4420, 4435, 4440, 4470, 4510, 4540, 4570, 4710, 4820, 4860, 4870, 4890	18
	Systems Engineering Track	Complete 18 credit hours from the courses listed below. DASE 2030, 4000, 4030, 4570, 4910, ECE 2205, 2610, 3003, 3210, MAE 2055, 3342, 3401, 4421, 4425	18
	General Track	Complete 9 hours from each of the Data Analytics and Systems Engineering Tracks above.	18
<b>BI Innovation Core</b> (24 hours)  *NOTE: ENTP 1001 and INOV 1011 may be taken as alternatives to these courses.	<b>Innovation Core</b> – Complete the following courses		
	BLAW 2010	Business and Intellectual Property Law	3
	ENTP 1000*	Introduction to Entrepreneurship	3
	ENTP 4500	Entrepreneurship and Strategy	3
	INOV 1010*	The Innovation Process	3
	INOV 2010	Innovation Team: Analyze and Report	3
	INOV 2100	Technical Writing, Proposals, and Presentations	3
	INOV 3010	Innovation Team: Research and Execute	3
	INOV 4010	Innovation Team: Design and Lead	3
<b>BI Cross-Discipline Core</b> (15 hours)	Complete one of the Cross-Discipline Cores listed below. Each Cross-Discipline Core consists of 15 credit hours. See the degree audit or Academic Catalog for specific courses: <a href="https://catalog.uccs.edu/">http://catalog.uccs.edu/</a> <b>Business, Creative Communication, Globalization, Inclusive Education, or Custom (for Veterans and Transfer students only)</b>		15

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<b>General Education and Elective Requirements</b>		
<b>Core Writing Requirement</b> (3 hours)	<ul style="list-style-type: none"> <li>ENGL 1310, 1308, or 1305 (<i>Students choosing ENGL 1305 must complete ENGL 1300 first.</i>)</li> <li>PORT 3000 (0 Credits) – Writing Portfolio</li> </ul>	
<b>Mathematics</b> (21 hours)	<ul style="list-style-type: none"> <li>MATH 1350</li> <li>MATH 1360</li> <li>MATH 2350</li> <li>CS 2150</li> <li>CS 2300</li> <li>ECE 3610 <b>OR</b> MATH 3810</li> </ul>	
<b>Basic Science</b> (11 hours)	<ul style="list-style-type: none"> <li>PES 1110</li> <li>7 additional basic science hours – see degree audit for course options</li> </ul>	
<b>Compass Curriculum</b> (3 hours) <ul style="list-style-type: none"> <li>Explore and Navigate courses must be outside major requirements</li> <li>Writing Intensive, Inclusiveness, and Sustainability courses can count towards other requirements within degree</li> </ul>	<b>Component</b>	<b>Course</b>
	<b>Gateway</b>	GPS 1010
	<b>Explore – Arts, Humanities and Cultures</b>	INOV 1010 (included in BI Core requirements)
	<b>Explore – Society, Behavior and Health</b>	ENTP 1000 (included in BI Core requirements)
	<b>Explore – Physical and Natural World</b>	PES 1110 (included in Basic Science requirement)
	<b>Navigate</b>	INOV 3010 (included in BI Core requirements)
	<b>Summit</b>	ENTP 4500 (included in BI Core requirements)
	<b>Writing Intensive Courses (WIC)</b> <i>Two courses with one upper-division (3000+ level)</i>	<ul style="list-style-type: none"> <li>INOV 2010 (included in BI Core requirements)</li> <li>INOV 3010 (included in BI Core requirements)</li> </ul>
	<b>Inclusiveness</b>	INOV 1010 (included in BI Core requirements)
	<b>Sustainability</b>	ENTP 1000 (included in BI Core requirements)

## FOUR-YEAR DEGREE PLAN

Please note that this is an *example* degree program and your program may vary. **Students are responsible for completing all course prerequisites.**

<b>Year One</b>	✓	<b>FALL</b>	<i>Hours</i>	✓	<b>SPRING</b>	<i>Hours</i>
		DASE 1011	3		DASE 2021	3
		DASE/CS 1150	3		DASE/CS 1450	3
		ENTP 1000	3		INOV 1010	3
		GPS 1010	3		MATH 1360	4
		MATH 1350	4		PES 1110	4
		<b>TOTAL</b>	16		<b>TOTAL</b>	17

<b>Year Two</b>	✓	<b>FALL</b>	<i>Hours</i>	✓	<b>SPRING</b>	<i>Hours</i>
		BLAW 2010	3		DASE/CS 2080	3
		CS 2150	3		DASE/CS 3050	1
		CS 2300	3		DASE/CS 3080	3
		DASE 2020	3		ECE 3610 (Spring Only) <b>OR</b> MATH 3810	3
		ENGL 1310	3		INOV 2010	3
		MATH 2350	4		INOV 2100	3
		<b>TOTAL</b>	19		<b>TOTAL</b>	16

<b>Year Three</b>	✓	<b>FALL</b>	<i>Hours</i>	✓	<b>SPRING</b>	<i>Hours</i>
		DASE 3030 <b>or</b> MGMT 3300	3		DASE 4460	3
		DASE/CS 3300	3		DASE Track Course	3
		DASE Track Course	3		INOV 3010	3
		Cross-Discipline Core Course	3		Cross-Discipline Core Course	3
		Basic Science Elective	4		Basic Science Elective	3
		<b>TOTAL</b>	16		<b>TOTAL</b>	15

<b>Year Four</b>	✓	<b>FALL</b>	<i>Hours</i>	✓	<b>SPRING</b>	<i>Hours</i>
		ECE 4890	1		ECE 4899	3
		DASE Track Course	3		ENTP 4500	3
		DASE Track Course	3		DASE Track Course	3
		INOV 4010	3		DASE Track Course	3
		Cross-Discipline Core Course	3		Cross-Discipline Core Course	3
		<b>TOTAL</b>	16		<b>TOTAL</b>	15