

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE/MASTER OF SCIENCE  
GALLOGLY COLLEGE OF ENGINEERING  
THE UNIVERSITY OF OKLAHOMA**

<b>Academic Year</b>	<b>General Requirements</b>	<b>Program</b>
For Students Entering the Oklahoma State System for Higher Education <b>Summer 2025 through Spring 2026</b>	Minimum Total Credit Hours ..... 138 Minimum Upper-Division Hours ..... 40 <b>Minimum Retention/Graduation Grade Point Averages:</b> Overall - Combined and OU ..... 3.00 Major - Combined and OU ..... 3.00	Software Development and Integration  A846/F847  Bachelor of Science/Master of Science

OU encourages students to complete at least 28 hours of applicable coursework each year to have the opportunity to graduate in 5 years.

**Minimum Total Credit Hours: 138**  
**Minimum Upper-Division Hours: 40**

**Overall GPA - Combined and OU: 3.00**  
**Major GPA - Combined and OU: 3.00**

**Program Code: A846/F847**

### General Education and College Requirements

Courses designated as Core I, II, III, IV, or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list, including at least one upper-division Gen. Ed. course outside of the student's major. **Courses graded P/NP will not apply.**

**A grade of C or better is required in each course in the curriculum, including all prerequisite courses.**

**UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS)**

Code	Title	Credit Hours
<b>Core Area I: Symbolic and Oral Communication</b>		
<i>English Composition</i>		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
<i>Language (0-10 hours in the same language)</i>		
This requirement can be met by two years of the same language in high school:		0-10
Beginning Course (0-5 hours)		
Beginning Course, continued (0-5 hours)		
<i>Mathematics (minimum 3 hours)</i>		
MATH 1503	College Algebra <sup>1</sup>	3
<b>Core Area II: Natural Science (minimum 7 hours, including one laboratory)</b>		
Choose two courses from different disciplines, one must include a laboratory		7
<b>Core Area III: Social Science</b>		
P SC 1113	American Federal Government	3
Choose one course		3
<b>Core Area IV: Arts &amp; Humanities</b>		
<i>Artistic Forms</i>		
Choose one course		3
<i>Western Culture</i>		
HIST 1483	United States to 1865	3

or HIST 1493	United States, 1865 to the Present	
Choose one course (excluding HIST 1483 and HIST 1493)		3
<i>World Culture</i>		
Choose one course		3
<b>Core Area V: First-Year Experience</b>		
POLY 1003	Frontiers in Emerging Technologies, First-year Experience <sup>1</sup>	3
<b>Total Credit Hours</b>		<b>37-47</b>

<sup>1</sup> Major support requirements that also satisfy University General Education requirements.

### Open Electives

Electives to bring total applicable hours to the minimum total required for the degree including a minimum of 40 upper-division hours.

A grade of C or better is required in each course in the curriculum, including all prerequisite courses.

## Major Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
SDI 3103	Programming Languages	3
SDI 3123	Algorithms I	3
SDI 3143	Mobile Application Development	3
SDI 3203	Computer Networks	3
SDI 3213	Cloud Computing	3
SDI 3403	Web Systems Development	3
SDI 3413	User Interface and Experience (UI/UX)	3
SDI 4903	SDI Capstone Project	3
SDI 5103	Software Project Management <sup>1</sup>	3
SDI 5133	Algorithms II <sup>1</sup>	3
SDI 5213	DevOps - CI/CD <sup>1</sup>	3
SDI 5313	Data Analytics <sup>1</sup>	3
CYBS 3213	Foundations of Cybersecurity	3
CYBS 3313	Introduction to Cyber Ethics and Law	3
CYBS 3913	Database Fundamentals	3
<b>Major Electives</b>		
Choose 4 approved SDI electives from a list maintained by the department		12
<b>Total Credit Hours</b>		<b>57</b>

<sup>1</sup> Shared courses between the BS and MS degrees.

## Major Support Requirements

Code	Title	Credit Hours
<b>Math and Science</b>		
POLY 1203	Foundations of Programming for Emerging Technologies	3
POLY 2203	Applied Statistics for Modern Computing	3
POLY 2513	Applied Discrete Mathematics for Computing	3
<b>Total Credit Hours</b>		<b>9</b>

## Graduate Requirements

### Thesis Option

Code	Title	Credit Hours
<b>Core Courses</b>		
Choose a minimum of 12 credits hours of core SDI courses from the following:		12-24
SDI 5103	Software Project Management <sup>1</sup>	
SDI 5113	Real Time Systems	
SDI 5123	Software Testing and Quality Assurance	
SDI 5133	Algorithms II <sup>1</sup>	
SDI 5213	DevOps - CI/CD <sup>1</sup>	

SDI 5233	Process Automation	
SDI 5313	Data Analytics <sup>1</sup>	
SDI 5403	Advanced Web Systems	

### Electives

Choose 0-15 hours of electives from a list of courses (maximum of 6 hours may be chosen from Open Electives list) maintained by the department and approved by the Graduate College, or additional hours from the Core Courses.	0-15
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### Thesis

SDI 5980	Research for Master's Thesis	3-6
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**Total Credit Hours** **30**

<sup>1</sup> Shared courses between the BS and MS degrees.

## Non-Thesis Option

Code	Title	Credit Hours
<b>Core Courses</b>		
Choose a minimum of 12 hours of core SDI courses from the following:		12-24
SDI 5103	Software Project Management <sup>1</sup>	
SDI 5113	Real Time Systems	
SDI 5123	Software Testing and Quality Assurance	
SDI 5133	Algorithms II <sup>1</sup>	
SDI 5213	DevOps - CI/CD <sup>1</sup>	
SDI 5233	Process Automation	
SDI 5313	Data Analytics <sup>1</sup>	
SDI 5403	Advanced Web Systems	

### Electives

Choose 3-15 hours of electives from a list of courses (maximum of 6 hours may be chosen from Open Electives list) maintained by the department and approved by the Graduate College, or additional hours from the Core Courses.	3-15
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### Practicum

SDI 5903	Master's Practicum	3
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**Total Credit Hours** **30**

<sup>1</sup> Shared courses between the BS and MS degrees.

More information in the catalog: (<http://ou-public.courseleaf.com/gallogly-engineering/polytechnic-institute/software-development-integration-bachelor-science-master-science/>).

## Suggested Semester Plan of Study

Please refer to the front of the degree checksheet for official requirements. Students must consult with OU Polytechnic Institute academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, Polytechnic Institute, and major requirements.

Courses designated as Core I, II, III, IV or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list. Two college-level courses in a single world language are required; this may be satisfied by successful completion of 2 years in a single world language in high school. Students who must take language at the University will have an additional 6-10 hours of coursework.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	ENGL 1113	Principles of English Composition	3	ENGL 1213 or EXPO 1213	Principles of English Composition or Expository Writing	3
	MATH 1503	College Algebra <sup>1</sup>	3		Approved Elective, Natural Science (Core II) <sup>3</sup>	3
	P SC 1113	American Federal Government	3		Approved Elective, Social Science (Core III) <sup>1</sup>	3
	POLY 1003	Frontiers in Emerging Technologies, First-year Experience ( Core V ) <sup>1</sup>	3		Open Elective, lower-division <sup>2</sup>	3
		Open Elective, lower-division <sup>2</sup>	3	POLY 1203	Foundations of Programming for Emerging Technologies	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
SOPHOMORE	HIST 1483 or HIST 1493	United States to 1865 or United States, 1865 to the Present	3		Approved Elective, World Culture (Core IV) <sup>1</sup>	3
		Approved Elective, Western Culture (Core IV) <sup>1</sup>	3		Open Elective, lower-division <sup>2</sup>	3
		Approved Elective, Natural Science with Lab (Core II-Lab) <sup>3</sup>	4		Open Elective, lower-division <sup>2</sup>	2
		Open Elective, lower-division <sup>2</sup>	3		Open Elective, lower-division <sup>2</sup>	3
	POLY 2203	Applied Statistics for Modern Computing	3	POLY 2513	Applied Discrete Mathematics for Computing	3
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>14</b>
JUNIOR	SDI 3103	Programming Languages	3	SDI 3213	Cloud Computing	3
	SDI 3203	Computer Networks	3	SDI 3123	Algorithms I	3
	SDI 3403	Web Systems Development	3	SDI 3413	User Interface and Experience (UI/UX)	3
	CYBS 3913	Database Fundamentals	3	SDI 3143	Mobile Application Development	3
		Approved Upper-Division Elective (3000-4000), Artistic Forms (Core IV) <sup>1</sup>	3	CYBS 3313	Introduction to Cyber Ethics and Law	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
SENIOR	SDI 5103	Software Project Management <sup>4</sup>	3	SDI 4903	SDI Capstone Project	3
	SDI 5213	DevOps - CI/CD <sup>4</sup>	3	SDI 5133	Data Analytics <sup>4</sup>	3
	SDI 5133	Algorithms II <sup>4</sup>	3		SDI Major Elective	3
	CYBS 3213	Foundations of Cybersecurity	3		SDI Major Elective	3
		SDI Major Elective	3		SDI Major Elective	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
FIFTH YEAR		5000 Level Core Course or Approved Elective <sup>5</sup>	3		5000 Level Core Course or Approved Elective <sup>5</sup>	3
		5000 Level Core Course or Approved Elective <sup>5</sup>	3		5000 Level Core Course or Approved Elective <sup>5</sup>	3
		Choose one of the following:	3		Choose one of the following:	3
	SDI 5980	Research for Master's Thesis		SDI 5980	Research for Master's Thesis	
		5000 Level Core Course or Approved Elective <sup>5</sup>		SDI 5903	Master's Practicum	
	<b>CREDIT HOURS</b>		<b>9</b>	<b>CREDIT HOURS</b>		<b>9</b>

<sup>1</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000). See list in the Class Schedule.

<sup>2</sup> Open electives are not required to be General Education approved.

<sup>3</sup> Courses taken to fulfill the Natural Science requirement must be chosen from the University-Wide General Education Approved Course List (Core II). At least one of the natural science courses must have a laboratory component.

<sup>4</sup> Shared courses between the BS and MS degrees.

<sup>5</sup> Minimum 6 hours of MS Core Courses; maximum of 9 hours of MS approved electives (max 6 hours of MS approved open electives)