REQUIREMENTS FOR THE BACHELOR OF SCIENCE
GALLOGLY COLLEGE OF ENGINEERING
THE UNIVERSITY OF OKLAHOMA

Academic Year
For Students Entering the Oklahoma State System for Higher Education **Summer 2026 through Spring 2027**

General Requirements	
Minimum Total Credit Hours	**120**
Minimum Upper-Division Hours	**40**
Minimum Retention/Graduation Grade Point Averages:	
Overall - Combined and OU	**2.00**
Major - Combined and OU	**2.00**

Program
Digital Manufacturing **B271** Bachelor of Science

OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

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.

MINIMUM OF 40 HOURS REQUIRED FOR UNIVERSITY-WIDE GENERAL EDUCATION

Code	Title	Credit Hours
Core Area I: Symbolic and Oral Communication		
English Composition		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
Language (0-10 hours in the same language)		
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)		
Mathematics (minimum 3 hours)		
MATH 1523	Precalculus and Trigonometry [1]	3
Core Area II: Natural Science (minimum 7 hours, including one laboratory)		
Choose two courses from different disciplines, one must include a laboratory		7
Core Area III: Social Science		
P SC 1113	American Federal Government	3
Choose one course		3
Core Area IV: Arts & Humanities		
Artistic Forms		
Choose one course		3
Western Culture		
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
World Culture		
Choose one course		3
Core Area V: First-Year Experience		
POLY 1003	Frontiers in Emerging Technologies, First-year Experience	3
Total Credit Hours		**37-47**

1 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
Required Courses		
DMFG 3003	Introduction to CAD in Digital Manufacturing	3
DMFG 3103	Materials and Processes in Manufacturing	3
DMFG 3013	Ethics, HR, Environmental, & Safety Policies and Procedures	3
DMFG 3203	CAM in Digital Manufacturing	3
DMFG 3213	CAD in Digital Manufacturing	3
DMFG 3303	Industrial Electronics and Controls	3
DMFG 3313	Smart Factory Integration and Automation	3
DMFG 3323	Industrial Sensors & Data Acquisition	3
DMFG 4103	Advanced Manufacturing Processes	3
DMFG 4113	Additive Manufacturing & 3D Printing	3
DMFG 4303	Supply Chain Management in Smart Manufacturing	3
DMFG 4903	DMFG Capstone Project	3
SDI 4103	Software Project Management	3
SDI 4313	Data Analytics	3
CYBS 3213	Foundations of Cybersecurity	3
Major Electives		
Choose 12 hours of approved electives from a list maintained by the department		12
Total Credit Hours		**57**

MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
Math and Science		
MATH 1914	Differential and Integral Calculus I [1]	4
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
Total Credit Hours		**13**

1 Students may take MATH 2123 (prerequisite of MATH 1743 required) or MATH 2423 (prerequisite of MATH 1823 required) in place of MATH 1914 (the content on integration is required).

More information in the catalog: (http://ou-public.courseleaf.com/gallogly-engineering/polytechnic-institute/digital-manufacturing-bachelor-science/).

SUGGESTED SEMESTER PLAN OF STUDY

This plan shows one possible grouping of courses that would allow students to graduate in four years. 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 (Core I)	3	ENGL 1213 or EXPO 1213	Principles of English Composition (Core I) or Expository Writing	3
	MATH 1523	Precalculus and Trigonometry	3	MATH 1914	Differential and Integral Calculus I	4
	P SC 1113	American Federal Government	3	POLY 1203	Foundations of Programming for Emerging Technologies	3
	POLY 1003	Frontiers in Emerging Technologies, First-year Experience (Core V)	3		Approved Elective, Natural Science (Core II) [3]	3
		Open Elective, lower-division [2]	3		Approved Elective, Social Science (Core III) [1]	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**16**
SOPHOMORE	HIST 1483 or HIST 1493	United States to 1865 or United States, 1865 to the Present	3		Approved Elective, World Culture (Core IV) [1]	3
		Approved Elective, Western Culture (Core IV) [1]	3	POLY 2513	Applied Discrete Mathematics for Computing	3
		Approved Elective, Natural Science with Lab (Core II-Lab) [3]	4	ISE 2311	Computer Aided Design and Graphics Laboratory for Industrial Engineers	1
	POLY 2203	Applied Statistics for Modern Computing	3		Open Elective, lower-division [2]	3
		Open Elective, lower-division [2]	3		Open Elective, lower-division [2]	3
		CREDIT HOURS	**16**		**CREDIT HOURS**	**13**
JUNIOR	DMFG 3003	Introduction to CAD in Digital Manufacturing	3	DMFG 3013	Ethics, HR, Environmental, & Safety Policies and Procedures	3
	DMFG 3103	Materials and Processes in Manufacturing	3	DMFG 3203	CAM in Digital Manufacturing	3
	DMFG 3303	Industrial Electronics and Controls	3	DMFG 3213	CAD in Digital Manufacturing	3
		Approved Upper-Division Elective (3000-4000), Artistic Forms (Core IV) [1]	3	DMFG 3313	Smart Factory Integration and Automation	3
	CYBS 3213	Foundations of Cybersecurity	3	DMFG 3323	Industrial Sensors & Data Acquisition	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15**
SENIOR	DMFG 4103	Advanced Manufacturing Processes	3	DMFG 4903	DMFG Capstone Project	3
	DMFG 4113	Additive Manufacturing & 3D Printing	3	SDI 4313	Data Analytics	3
	DMFG 4303	Supply Chain Management in Smart Manufacturing	3		DMFG Major Elective	3
	SDI 4103	Software Project Management	3		DMFG Major Elective	3
		DMFG Elective	3		DMFG Major Elective	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15**

1 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.

2 Open electives are not required to be General Education approved.

3 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.