

MECHANICAL ENGINEERING (BS)

Program Description

Mechanical engineers apply hands-on physics to model, analyze, and design mechanical and energy systems such as automobiles, aircraft, ships, heating and cooling systems, prosthetics, robots, household appliances, or industrial equipment and machinery. In this major, you'll learn to think critically and solve quandaries through multiple, extended hands-on projects.

The BS in Mechanical Engineering degree is accredited by the Engineering Accreditation Commission of ABET (<http://www.abet.org/>).

Entering and Completing the Major

In order to earn a degree, you must complete at least one academic major. SPU encourages students to explore various academic paths, so if you change your mind about a major, or want to include an additional program, you are able to do so, as outlined below.

Note that the University encourages you to enter your chosen major(s) as soon as you have determined it and are eligible to join it, especially by the start of your junior year. Students who transfer as juniors and seniors should enter a major within their first two quarters at SPU.

- If this is your first quarter at SPU and you identified a major in this department as your first choice on your application for admission to the University, you have gained entry to the major. To change or add a major, follow these instructions (<https://spu.atlassian.net/l/cp/a3th1keb/>).
- If you are an SPU student with an SPU cumulative GPA of 2.0 or better, follow these instructions (<https://spu.atlassian.net/l/cp/a3th1keb/>) to enter a major in this department.
- The University requires a grade of C- or better in all classes that apply to a major; however, programs may require higher minimum grades in specific courses. You may repeat an SPU course only once for a higher grade.
- To advance in this program, meet with your faculty advisor regularly to discuss your grades, course progression, and other indicators of satisfactory academic progress. If your grades or other factors indicate that you may not be able to successfully complete the major or minor, your faculty advisor can work with you to explore options, which may include choosing a different major.
- You must complete the major requirements that are in effect in the SPU Undergraduate Catalog for the year you enter the major.

Mechanical Engineering (BS)

131 Credits Minimum, Including 45 Upper Division (UD)

Code	Title	Credits
Engineering Requirements		
EE 2726	Electric Circuits I	5
EGR 1501	Computer Aided Design Applications for Engineers	1
EGR 1502	Machining and Fabricating	1
EGR 1503	Engineering Tools and Systems	1
EGR 3000	Principles of Professional Practice	1

or GS 3001	Internship and Job Search Strategies	
EGR 3311	Experimental Methods I	3
EGR 3810	General Engineering Design	5
EGR 4811	Engineering Senior Design I	3
EGR 4812	Engineering Senior Design II	3
EGR 4899	Engineering Capstone and Senior Design	3
EGR 4941	Engineering Professional Experience ¹	1
ME 2891	Statics	4
ME 3300	Properties of Materials	3
ME 3310	Mechanics of Materials	4
ME 3400	Dynamics	5
ME 3430	System Dynamics	5
ME 3500	Thermal Science I: Thermodynamics	5
ME 3501	Thermal Science II: Fluid Mechanics	5
ME 3502	Thermal Science III: Heat Transfer	5
ME 4410	Mechanical Design	4
ME 4910	WA State FE Preparation for Mechanical Engineers	1
Section Credits Required		68
Mathematics Requirements		
MAT 1234	Calculus I	5
MAT 1235	Calculus II	5
MAT 1236	Calculus III	5
MAT/EGR 2200	Engineering Probability and Statistics	3
MAT 2401	Linear Algebra	3
MAT 3237	Differential Equations	3
MAT 3238	Vector Calculus	3
Section Credits Required		27
Science Requirements		
CSC 1230	Problem Solving and Programming	5
or CSC 2230	Computer Programming for Engineers	
CHM 1211	General Chemistry I	5
or CHM 1310	Survey of General Chemistry	
PHY 1121	Physics for Science and Engineering	5
PHY 1122	Physics for Science and Engineering	5
PHY 1123	Physics for Science and Engineering	5
Section Credits Required		25
Technical Electives		
Select 11 credits of the following:		11
BUS 3682	Social Venture Planning	
CPE 3350	Operating Systems Programming	
CPE 4350	Advanced Operating Systems	
CPE 4750	Computer Networks	
CPE 4760	Advanced Computer Architecture	
EE 2727	Electric Circuits II	
EE 3028	Electric Circuits III	
EE 3280	Microcontroller System Design	
EE 3315	Electricity and Magnetism I	
EE 3410	Signal and System Analysis	
EE 3500	Power Systems Fundamentals	
EE 3510	Power Electronics Fundamentals	
EE 3550	Communication System Analysis	
EE 3721	Electronics I - Analog Devices and Circuits	

EE 3722	Electronics II Analog Electronics	
EE 3760	Computer Organization and Assembly Language	
EE 4311	Optics and Lasers	
EE 4410	Embedded and Fixed Point Digital Signal Processing	
EE 4450	Control System Design	
EE 4560	Wireless Communication Systems	
EGR 3211	Acoustics	
EGR/PHY 3312	Experimental Methods II	
EGR/PHY 3313	Experimental Methods III	
EGR 3611	Appropriate and Sustainable Engineering I: Alternative Energy Systems	
EGR 3612	Appropriate and Sustainable Engineering II	
EGR 3614	Appropriate and Sustainable Engineering III	
EGR 3800	Biomedical Engineering I	
EGR 4450	Control Systems Design	
EGR 4610	Systems Design	
EGR 4615	Engineering Project Management	
EGR 4900	Independent Study in Engineering	
EGR 4930	Practicum - Service ²	
EGR 4931	Engineering Practicum ²	
EGR 4950	Special Topics: General Engineering	
EGR 4960	Senior Project ²	
EGR 4970	Research ²	
MAT 3724	Applied Analysis	
Section Credits Required		11
Total Credits		131

1

A tech internship or professional experience must be approved before enrolling in EGR 4941 and must be completed before passing EGR 4941.

2

Can apply a maximum of eight credits to meet the Technical Electives requirement from the combination of the following courses: EGR 4930, EGR 4931, EGR 4960, and EGR 4970.

Suggested Course Sequences

Four Year Plan Starting with Calculus

Course	Title	Credits
Freshman		
Variable		
Take one of each per quarter		15
WRI 1000 & WRI 1100	Academic Inquiry and Writing Seminar and Disciplinary Research and Writing Seminar ¹	
UFDN 1000	The Christian Faith	
Credits		15
Autumn		
EGR 1502	Machining and Fabricating	1
MAT 1234	Calculus I	5
PHY 1121	Physics for Science and Engineering	5
UCOL 1000	University Colloquium ²	1
Credits		12
Winter		
EGR 1501	Computer Aided Design Applications for Engineers	1

MAT 1235	Calculus II	5
PHY 1122	Physics for Science and Engineering	5
Credits		11
Spring		
EGR 1503	Engineering Tools and Systems	1
MAT 1236	Calculus III	5
PHY 1123	Physics for Science and Engineering	5
Credits		11
Sophomore		
Variable		
Common Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/) and Exploratory Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/)		
GS 3001	Internship and Job Search Strategies ³	1
Credits		1
Autumn		
ME 2891	Statics	4
EE 2726	Electric Circuits I	5
MAT 3238	Vector Calculus	3
CSC 2230	Computer Programming for Engineers	5
Credits		17
Winter		
MAT 3237	Differential Equations	3
ME 3310	Mechanics of Materials	4
ME 3400	Dynamics	5
CHM 1211 or CHM 1310	General Chemistry I or Survey of General Chemistry	5
Credits		17
Spring		
MAT 2200	Engineering Probability and Statistics	3
MAT 2401	Linear Algebra	3
Credits		6
Junior		
Variable		
Common Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/) and Exploratory Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/) as needed		
Tech Electives ⁴		
Credits		0
Autumn		
ME 3430	System Dynamics ⁵	5
PHY 3311	Experimental Methods I	3
ME 3300	Properties of Materials ⁵	3
GS 3001	Internship and Job Search Strategies ⁶	1
Credits		12
Winter		
ME 3501	Thermal Science II: Fluid Mechanics	5
ME 4410	Mechanical Design	4
ME 3500	Thermal Science I: Thermodynamics	5
Credits		14
Spring		
ME 3502	Thermal Science III: Heat Transfer	5
EGR 3810	General Engineering Design	5
Credits		10
Senior		
Variable		
EGR 4941	Engineering Professional Experience ⁷	1
Tech Electives ⁴		

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed

	Credits	
Autumn		1
ME 4910	WA State FE Preparation for Mechanical Engineers	1
ME 3430	System Dynamics ^{5,6}	5
EGR 4811	Engineering Senior Design I	3
ME 3300	Properties of Materials ^{5,6}	3
	Credits	12
Winter		
EGR 4812	Engineering Senior Design II	3
	Credits	3
Spring		
EGR 4899	Engineering Capstone and Senior Design	3
	Credits	3
	Total Credits	145

1

Engineering majors should take a WRI 1100 section taught by an engineering faculty member.

2

Engineering majors should take a UCOL taught by an engineering faculty member.

3

Or Fall of junior year.

4

11 credits spread over junior and senior year. See link at the bottom of this page for a list.

5

ME 3430 System Dynamics and ME 3300 Properties of Materials will change from being offered every year to alternate years after 2023. Fall 2024: 3430 (no 3300) Fall 2025: (no 3430)

6

If not already completed.

7

Must be taken AFTER completing an approved internship or pursuing an approved certification.

Code	Title	Credits
Tech Elective		
Select 11 credits of tech electives		11
Common Curriculum		
UCOR 2000	The Emergence of the Modern Global System	5
UFDN 2000	Christian Scripture	5
UCOR 3000	Faith, Philosophy, and Science	5
UFDN 3100	Christian Theology	5
Exploratory Curriculum		
with DTA or AA see Advisor		
Ways of Knowing in the Arts (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkatext)		20
Cultural Understanding and Engagement (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/cue-requirement/)		

Ways of Knowing in the Social Sciences (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wksstext>)

Ways of Engaging (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wetext>)

Ways of Knowing in the Humanities (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkhtext>)

Four Year Plan Starting with Algebra or Trigonometry

Course	Title	Credits
Freshman		
Variable		
Take one of each per quarter		15
WRI 1000 & WRI 1100	Academic Inquiry and Writing Seminar and Disciplinary Research and Writing Seminar ¹	
UFDN 1000	The Christian Faith	
	Credits	15
Autumn		
EGR 1502	Machining and Fabricating	1
PHY 1121 or PHY 1101	Physics for Science and Engineering or General Physics	5
MAT 1010	College Algebra (if needed)	3
UCOL 1000	University Colloquium ²	1
	Credits	10
Winter		
EGR 1501	Computer Aided Design Applications for Engineers	1
MAT 1110	Precalculus	5
CHM 1310 or CHM 1211	Survey of General Chemistry or General Chemistry I	5
	Credits	11
Spring		
EGR 1503	Engineering Tools and Systems	1
MAT 1234	Calculus I	5
Exploratory Curriculum		5
	Credits	11
Sophomore		
Variable		
GS 3001	Internship and Job Search Strategies ³	1
Common Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/) and Exploratory Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/)		
	Credits	1
Autumn		
ME 2891	Statics	4
CSC 2230	Computer Programming for Engineers	5
MAT 1235	Calculus II	5
	Credits	14
Winter		
ME 3310	Mechanics of Materials	4
ME 3400	Dynamics	5
PHY 1122	Physics for Science and Engineering	5
	Credits	14
Spring		
MAT 2401	Linear Algebra	3
MAT 1236	Calculus III	5
PHY 1123	Physics for Science and Engineering	5
	Credits	13

Junior**Variable**

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed

Tech Electives ⁴			
	Credits		0

Autumn			
PHY 3311	Experimental Methods I	3	
EE 2726	Electric Circuits I	5	
ME 3300	Properties of Materials ⁵	3	
MAT 3238	Vector Calculus	3	
GS 3001	Internship and Job Search Strategies ⁶	1	

	Credits		15
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Winter			
ME 3500	Thermal Science I: Thermodynamics	5	
ME 3501	Thermal Science II: Fluid Mechanics	5	
ME 4410	Mechanical Design	4	
MAT 3237	Differential Equations	3	

	Credits		17
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Spring			
ME 3502	Thermal Science III: Heat Transfer	5	
EGR 3810	General Engineering Design	5	

	Credits		10
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Senior**Variable**

EGR 4941	Engineering Professional Experience ⁷	1	
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Tech Electives ⁴

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed

	Credits		1
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Autumn			
ME 4910	WA State FE Preparation for Mechanical Engineers	1	
ME 3430	System Dynamics ⁵	5	
EGR 4811	Engineering Senior Design I	3	
ME 3300	Properties of Materials ^{5,6}	3	

	Credits		12
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Winter			
EGR 4812	Engineering Senior Design II	3	

	Credits		3
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Spring			
EGR 4899	Engineering Capstone and Senior Design	3	

	Credits		3
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	Total Credits		150
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1

Engineering majors should take a WRI 1100 section taught by an engineering faculty member.

2

Engineering majors should take a UCOL taught by an engineering faculty member.

3

Or Fall of junior year.

4

11 credits spread over junior and senior year. See link at the bottom of this page for a list.

5

ME 3430 System Dynamics and ME 3300 Properties of Materials will change from being offered every year to alternate years after 2023. Fall 2024: 3430 (no 3300) Fall 2025: (no 3430).

6

If not already completed.

7

Must be taken AFTER completing an approved internship or pursuing an approved certification.

Code	Title	Credits
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Tech Elective

Select 11 credits of tech electives		11
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Common Curriculum

UCOR 2000	The Emergence of the Modern Global System	5
UFDN 2000	Christian Scripture	5
UCOR 3000	Faith, Philosophy, and Science	5
UFDN 3100	Christian Theology	5

Exploratory Curriculum

with DTA or AA see Advisor

Ways of Knowing in the Arts (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkatext)		20
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Ways of Knowing in the Humanities (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkhtext>)

Ways of Knowing in the Social Sciences (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wksstext>)

Ways of Engaging (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wetext>)

Cultural Understanding and Engagement (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/cue-requirement/>)

Four Year Plan with Study Abroad

Course	Title	Credits
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Freshman**Variable**

Take one of each per quarter

WRI 1000 & WRI 1100	Academic Inquiry and Writing Seminar and Disciplinary Research and Writing Seminar ¹	
UFDN 1000	The Christian Faith	

	Credits	15
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Autumn

EGR 1502	Machining and Fabricating	1
MAT 1234	Calculus I	5
PHY 1121	Physics for Science and Engineering	5
UCOL 1000	University Colloquium ²	1

	Credits	12
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Winter

EGR 1501	Computer Aided Design Applications for Engineers	1
MAT 1235	Calculus II	5
PHY 1122	Physics for Science and Engineering	5

	Credits	11
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Spring

EGR 1503	Engineering Tools and Systems	1
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MAT 1236	Calculus III	5
PHY 1123	Physics for Science and Engineering	5

Credits 11

Sophomore

Variable

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>)

GS 3001	Internship and Job Search Strategies	1
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Credits 1

Autumn

ME 2891	Statics	4
EE 2726	Electric Circuits I	5
MAT 3238	Vector Calculus	3
CSC 2230	Computer Programming for Engineers	5

Credits 17

Winter

MAT 3237	Differential Equations	3
ME 3310	Mechanics of Materials	4
ME 3400	Dynamics	5
CHM 1211 or CHM 1310	General Chemistry I or Survey of General Chemistry	5

Credits 17

Spring

MAT 2200	Engineering Probability and Statistics	3
MAT 2401	Linear Algebra	3

Credits 6

Junior

Variable

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed

Tech Electives ³		
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Credits 0

Autumn

Study Abroad Quarter 15

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>)

ME 3430	System Dynamics ^{4,5}	
ME 3300	Properties of Materials ^{4,5}	

Credits 15

Winter

ME 3500	Thermal Science I: Thermodynamics	5
ME 3501	Thermal Science II: Fluid Mechanics	5
ME 4410	Mechanical Design	4

Credits 14

Spring

ME 3502	Thermal Science III: Heat Transfer	5
EGR 3810	General Engineering Design	5

Credits 10

Senior

Variable

EGR 4941	Engineering Professional Experience ⁶	1
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Tech Electives ³		
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Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed

Credits 1

Autumn

EGR 4811	Engineering Senior Design I	3
ME 4910	WA State FE Preparation for Mechanical Engineers	1
ME 3430	System Dynamics ^{4,7}	5
ME 3300	Properties of Materials ^{4,7}	3
PHY 3311	Experimental Methods I	3

Credits 15

Winter

EGR 4812	Engineering Senior Design II	3
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Credits 3

Spring

EGR 4899	Engineering Capstone and Senior Design	3
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Credits 3

Total Credits 151

1

Engineering majors should take a WRI 1100 section taught by an engineering faculty member.

2

Engineering majors should take a UCOL taught by an engineering faculty member.

3

11 credits spread over junior and senior year. See link at the bottom of this page for a list.

4

ME 3430 System Dynamics and ME 3300 Properties of Materials will change from being offered every year to alternate years after 2023. Fall 2024: 3430 (no 3300) Fall 2025: (no 3430)

5

Taken while abroad if offered at SPU that year.

6

Must be taken AFTER completing an approved internship or pursuing an approved certification.

7

If not already completed.

Code	Title	Credits
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Tech Elective

Select 11 credits of tech electives		11
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Common Curriculum

UCOR 2000	The Emergence of the Modern Global System	5
UFDN 2000	Christian Scripture	5
UCOR 3000	Faith, Philosophy, and Science	5
UFDN 3100	Christian Theology	5

Exploratory Curriculum

with DTA or AA see Advisor

Ways of Knowing in the Arts (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkatext)		20
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Ways of Knowing in the Humanities (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wkstext>)

Ways of Knowing in the Social Sciences (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wksstext>)

Ways of Engaging (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/#wetext>)

Cultural Understanding and Engagement (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/cue-requirement/>)

Two Year Plan for Transfer Students with or without a DTA

See below for the pre-requisite courses required to complete the degree in two years. Note also that without a DTA, it will depend on how many of the General Education Courses (Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>), Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>), etc (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/graduation-requirements-policies/>)).) are completed before transferring as to whether or not the degree can be completed in two years. Check the quarter, day and time in the current schedule as course offerings may change. Pay close attention to the pre-requisites of the courses

Course	Title	Credits
First Year		
Variable		
MAT 2200	Engineering Probability and Statistics ¹	3
Common Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/) and Exploratory Curriculum (https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/) as needed ²		
Tech Electives ³		
Credits		3
Autumn		
GS 3001	Internship and Job Search Strategies	1
EGR 1502	Machining and Fabricating	1
PHY 3311	Experimental Methods I	3
ME 3300	Properties of Materials ⁴	3
ME 3430	System Dynamics ⁴	5
Credits		13
Winter		
ME 3500	Thermal Science I: Thermodynamics	5
ME 3501	Thermal Science II: Fluid Mechanics	5
ME 4410	Mechanical Design	4
Credits		14
Spring		
EGR 1503	Engineering Tools and Systems	1
EGR 3810	General Engineering Design	5
ME 3502	Thermal Science III: Heat Transfer	5
Credits		11
Second Year		
Variable		
Tech Electives ³		
MAT 2200	Engineering Probability and Statistics ⁵	3
EGR 4941	Engineering Professional Experience ⁶	1

Common Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/common-curriculum/>) and Exploratory Curriculum (<https://catalog.spu.edu/undergraduate/degree-requirements/baccalaureate-degree-requirements/exploratory-curriculum/>) as needed ²

	Credits	
Autumn		
EGR 4811	Engineering Senior Design I	3
ME 4910	WA State FE Preparation for Mechanical Engineers	1
ME 3300	Properties of Materials ⁷	3
ME 3430	System Dynamics ⁷	5
Credits		12
Winter		
EGR 4812	Engineering Senior Design II	3
Credits		3
Spring		
EGR 4899	Engineering Capstone and Senior Design	3
Credits		3
Total Credits		63

1

May be taken the first or second year.

2

Spread between first and second year.

3

See Catalog for list. Pay attention to pre-reqs. Spread between first and second year. See link at the bottom of this page for a list.

4

Offered alt years. May be taken in year 2.

5

If not already completed.

6

Completed approved internship or certification is a required pre-req.

7

If not already completed. Offered alt years.

Prerequisites for the Two Year Plan

The following courses must be completed before coming to SPU in order to finish at SPU in two years.

Code	Title	Credits
Calculus Equivalent to SPU's		
MAT 1234	Calculus I	
MAT 1235	Calculus II	
MAT 1236	Calculus III	
Additional Math Equivalents to SPU's		
MAT 2401	Linear Algebra	
MAT 3237	Differential Equations	
MAT 3238	Vector Calculus	
Physics Equivalent to SPU's		
PHY 1121	Physics for Science and Engineering	
PHY 1122	Physics for Science and Engineering	
PHY 1123	Physics for Science and Engineering	
Chemistry Equivalent to SPU's		
CHM 1310	Survey of General Chemistry (or a similar class)	
	or CHM 1211 General Chemistry I	

Engineering Courses Equivalent to SPU's

EGR 1501	Computer Aided Design Applications for Engineers
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ME 2891	Statics
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ME 3310	Mechanics of Materials
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ME 3400	Dynamics
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A Programming Course Equivalent to SPU's

CSC 2230	Computer Programming for Engineers
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or CSC 1230 Problem Solving and Programming

A Circuits I Class with Lab	0-5
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Technical Electives List

See the Requirements (p. 1) tab for a complete list of technical electives.