COLLEGE OF BUSINESS
Entrepreneurship Minor

27 total credits required

All minor courses are 4 credits each unless otherwise noted (). *Courses, pre-reqs and availability are subject to change.

Required Minor Courses (19-24 credits)
- ECON 201 (4) or AEC 250 (3) or ENGR 390 (3). Microeconomics
- BA 315. Accounting for Decision Making
- BA 260. Introduction to Entrepreneurship or BA 167 & 168 (6)
- BA 464. New Venture Financing
- BA 363. Technology and Innovation Management

Existing Prereq (check with advisor)
- MTH 111
- Soph
- Senior
- BA 260, Junior

Electives (3-8 credits)
Business electives are available to any Entrepreneurship minor student if pre-req is met; will need override from COB Advising Office. For all other electives, students must be in that major to access and will need to check with major advisor if allowed to double count.

Electives (credits)
- BA 354. Managing Ethics and Corporate Social Responsibility (4)
- BA 362. Social Entrepreneurship and Social Initiatives (4)
- BA 365. Family Business Management (4)
- BA 367. Launch Academy (3)
- BA 458. Innovation and New Product Development (4)
- BA 460. Venture Management (4)
- BA 467. New Venture Laboratory (4)
- BA 468. Technology Commercialization (4)

Engineering Electives - Must be a student in the corresponding major to enroll

Biological & Ecological Engineering
- BEE 221. Fundamentals of Ecological Engineering (3) BI 211 [C] or BI 211H [C] ) and (MTH 256 [C] or MTH 256H [C] )
- BEE 469. Ecological Engineering Design I
- BEE 470. Ecological Engineering Design II BEE 322 [C] and (ENGR 391 or ENGR 391H)
- BEE 473. Introduction to Food Engineering Process Design (3) BEE 472 or BEE 572

Biological Engineering
- BIOE 420. Social Justice, Ethics and Engineering (3)
- BIOE 470. Regulation of Drugs and Medical Devices (2)
- BIOE 490. Bioengineering Process Design BIOE 457
- BIOE 491. Bioengineering Product Design BIOE 490 [C]
- BIOE 492. Bioengineering Capstone Design BIOE 491 [C]

Chemical Engineering
- CHE 320. Safety, Engineering Ethics and Professionalism (3)
- CHE 431. Chemical Plant Design I (3) CHE 312 [C] and CHE 411 [C] and CHE 443 [C]
- CHE 432. Chemical Plant Design II (3) CHE 431 [C]
- CHE 443. Chemical Reaction Engineering CHE 312 [C] and (CHE 333 [C] or CHE 333H [C] )
- CHE 445. Polymer Engineering and Science CH 334 and CH 335 and CH 336 or equiv and (MTH 256 or MTH 256H)

Construction Engineering Management
- CEM 341 Construction Estimating I
- CEM 342 Construction Estimating II CEM 341 with C or better
- CEM 343 Construction Planning and Scheduling CEM 341 with C or better
- CEM 431. Obtaining Construction Contracts CEM 341 with C or better
- CEM 432 Construction Project Planning FE 315 with C or better or CE 372 with C or better
- CEM 441. Heavy Civil Construction Management
- CEM 442. Building Construction Management
- CEM 443. Project Management for Construction CEM 341 with C or better and CEM 343 [C]

Civil Engineering
- CCE 201. Civil and Construction Engineering Graphics and Design (3)
- CE 202. Civil Engineering: Geospatial Information and GIS (3) CE 201 [C] or CCE 201 [C] or ENGR 248 [C]
- CE 418. Civil Engineering Professional Practice (3) CE 382 [C] and CE 313 [C] and (CE 372 [C] or FE 315 [C]
- CE 420. Engineering Planning
- CE 424. Contracts and Specifications
- CE 428. Project Management for Civil Engineers
WR 327. Technical Writing (3)
ST 314. Introduction to Statistics for Engineers (3)

Computer Science
CS 295. Website Management
CS 352. Introduction to Usability Engineering
CS 361 Software Engineering I
CS 362 Software Engineering II
CS 391. Social and Ethical Issues in Computer Science (3)
CS 458. Introduction to Information Visualization
CS 461. Senior Software Engineering Project I (3)
CS 462. Senior Software Engineering Project II (3)
CS 463. Senior Software Engineering Project (2)
CS 464. Open Source Software
CS 468. Inclusive Design HCI

Electrical Engineering & Computer Science
ECE 341. Junior Design I (3)
ECE 342. Junior Design II (3)
ECE 441. Engineering Design Project (3)
ECE 442. Engineering Design Project (3)
ECE 443. Engineering Design Project (3)

Engineering Science
ENGR 221. The Science, Engineering, and Soc Impact of Nanotechnology (3)
ENGR 248. Engineering Graphics and 3-D Modeling (3)
ENGR 350. Sustainable Engineering (3)
ENGR 352. Creative Collaboration: Designing and Building (3)
ENGR 390. Engineering Economy (3)
ENGR 391. Engineering Economics & Project Management (3)
ENGR 421. Applied Robotics

Humanitarian Engineering Science & Tech
HEST 241. Household Energy in Guatemala: Background (1)
HEST 242. Household Energy in Guatemala: Applications (3)
HEST 310. Intro to Community Engagement & Community-Based Design (3)
HEST 320. Engineering for Global Health Solutions (3)
HEST 411. Engr Design for Emergency & Low-Resource Environments (3)

Industrial Engineering
IE 212. Computational Methods for Industrial Engineering
IE 255 Introductory Quantitative Analysis of Industrial and Mfr. Systems (3)
IE 285. Introduction to Industrial and Mfr. Engineering (3)
IE 355. Statistical Quality Control
IE 356. Experimental Design for Industrial Processes
IE 366. Work Systems Engineering
IE 367. Production Planning and Control
IE 368. Facility Design and Operations Management
IE 380. The Responsible Engineer (3)
IE 415. Simulation and Decision Support Systems
IE 425. Industrial Systems Optimization
IE 426. Stochastic Models of Industrial Systems
IE 470. Management Systems Engineering
IE 471. Project Management in Engineering (3)
IE 475. Advanced Manufacturing Costing Techniques (3)

Manufacturing Engineering
MFGE 285. Introduction to Indus and Manufacturing Engineering (3)
MFGE 436. Lean Manufacturing Systems Engineering

Material Science
MATS 322. Mechanical properties of materials (3)
MATS 445. Welding metallurgy
MATS 455. Experimental techniques in material science
MATS 478. Thin film materials characterization and properties

Mechanical Engineering
ME 373. Mechanical Engineering Methods (3)
ME 382. Introduction to Design
ME 383. Mechanical Component Design
ME 412. Design of Mechanisms

(ENGR 213 with C or better or ENGR 213H with C or better) and (ENGR 321 [C] or ENGR 321H [C] or MATS 321 [C])
(MATS 321 with C or better or ENGR 321 with C or better or ENGR 321H with C or better) or MATS 570 with C or better
(ME 311 with C or better or ME 311H with C or better) and (ENGR 321 [C] or ENGR 321H [C] or MATS 321 [C]) and (ENGR 322 [C] or MATS 322 [C])
ENGR 112 [C] or ENGR 112H [C] and MTH 256 [C] or MTH 256H [C]
ENGR 248 [C] and ME 250* [C]
ME 316 [C] and ME 250* [C]
(ME 317 [C] or ME 317H [C] ) and ME 383 [C]
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>ME 413</td>
<td>Computer-Aided Design and Manufacturing</td>
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<tr>
<td>ME 497</td>
<td>MIME Capstone Design</td>
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<tr>
<td>NSE 474</td>
<td>Nuclear Systems Design I</td>
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<td>NSE 475</td>
<td>Nuclear Systems Design II</td>
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<td>ESE 497</td>
<td>MIM Capstone Design</td>
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<tr>
<td>ESE 498</td>
<td>MIM Capstone Design</td>
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<tr>
<td>ENGR 390</td>
<td>Applied Robotics</td>
<td>ENGR 390 with C or better or BA 360 with C or better) and IE 425 [C] and (ME 312 [C] or ME 312H [C]) and (ME 331 [C] or ME 331H [C]) and ESE 355 [C] and ESE 360 [C] and WR 327 [C] and (ST 314 [C] or ST 314H [C])</td>
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<tr>
<td>WSE 250</td>
<td>Computer-aided Design (3)</td>
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<td>WSE 350</td>
<td>Secondary Product Designs and Manufacturing (3)</td>
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<td>WSE 351</td>
<td>Advanced CAD: Computer-aided Design (3)</td>
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<tr>
<td>WSE 406</td>
<td>Projects (1-16 depending on approval)</td>
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<tr>
<td>WSE 450</td>
<td>Entrepreneurial Product Development I (3)</td>
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<tr>
<td>WSE 451</td>
<td>Entrepreneurial Product Development II (3)</td>
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<td>WSE 455</td>
<td>Industrial Marketing in the Forest Sector</td>
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<tr>
<td>FE 312</td>
<td>Forestry Field School (2)</td>
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<td>FE 370</td>
<td>Harvesting Operations</td>
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<td>FE 371</td>
<td>Harvesting Process Engineering</td>
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<td>FE 440</td>
<td>Forest Operations Analysis</td>
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<tr>
<td>FE (FOR) 459</td>
<td>Forest Management Planning and Design I</td>
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<tr>
<td>FE 457 or FOR 459</td>
<td>Forest Operations Regulations and Policy Issues (3)</td>
<td>FE 457 or FOR 457 and senior standing or departmental approval required.</td>
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<tr>
<td>FE 469</td>
<td>Forest Management Planning and Design II</td>
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<td>FE 471</td>
<td>Harvesting Management (3)</td>
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<tr>
<td>FE 480</td>
<td>Forest Engineering Practice and Professionalism (1)</td>
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<td>H 210</td>
<td>Introduction to the Healthcare System (3)</td>
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<td>H 225</td>
<td>Social and individual Health Determinants</td>
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<td>H 250</td>
<td>Introduction to Healthcare Management (3)</td>
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<td>H 319</td>
<td>Introduction to Health Policy (3)</td>
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<td>H 320</td>
<td>Introduction to Human Disease (3)</td>
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<td>H 432</td>
<td>Economic Issues in Health and Medical Care (3)</td>
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<td>H 436</td>
<td>Advanced Topics in Healthcare Management (3)</td>
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<td>H 457</td>
<td>Financial Management of Healthcare Organizations (3)</td>
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<td>H 458</td>
<td>Reimbursement Mechanisms (3)</td>
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<td>H 468</td>
<td>Financing and Administration of Long-term Care (3)</td>
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<td>H 476</td>
<td>Planning and Evaluating Health Promotion Programs</td>
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<td>H 489</td>
<td>Emergency and Disaster Management (3)</td>
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<td>H 495</td>
<td>Design for Environment, Safety, and Health (3)</td>
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<tr>
<td>HDFS 341</td>
<td>Family Studies</td>
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<td>HDFS 360</td>
<td>Critical Thinking in HDFS</td>
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<td>HDFS 431</td>
<td>Family, School, and Community Collaboration (3)</td>
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<td>HDFS 444</td>
<td>Family Violence &amp; Neglect</td>
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<td>HDFS 447</td>
<td>Families and Poverty</td>
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<td>HDFS 460</td>
<td>Family Policy</td>
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<tr>
<td>NUTR 311</td>
<td>Food Service Production and Purchasing</td>
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<tr>
<td>NUTR 312</td>
<td>Issues in Nutrition and Health (3)</td>
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<td>NUTR 319</td>
<td>Promoting Food and Nutrition (3)</td>
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<tr>
<td>NUTR 439</td>
<td>Communications in Dietetics (3)</td>
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<tr>
<td>NUTR 446</td>
<td>Managing Food and Nutrition Services</td>
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<tr>
<td>HDFS 311, HDFS 313</td>
<td>Food Service P</td>
<td>NUTR 235, NUTR 240, NUTR 225, NUTR 240, NUTR 325, NUTR 325, NUTR 311</td>
</tr>
</tbody>
</table>
NUTR 447 Management of Food Systems Laboratory (3)

Kinesiology
KIN 131 Introduction to Kinesiology (1)
KIN 132 Introduction to Allied Health Professions (1)
KIN 230 Introduction to Adventure Programs (3)
KIN 231 Human Group Dynamics (3)
KIN 232 Backcountry Leadership (3)
KIN 233 Teaching Techniques for Outdoor Activities (3)
KIN 325 Fitness Assessment and Exercise Prescription (2)
KIN 394 Professional Activities: Resistance Training Program Design (2)
KIN 395 Professional Activities: Group Fitness (2)
KIN 422 Facilitating Physical Activity for Children and Youth (3)
KIN 435 Physical Activity Promotion (3)

EXSS 230 or KIN 230, PAC 301, PAC 325, PAC 326
KIN 324 or EXSS 324
KIN 324 or EXSS 324
KIN 324 or EXSS 324
KIN 324 or EXSS 324, KIN 325 or EXSS 325

Ag Science - Available only if an Ag Science major

Horticulture
HORT 111 Introduction to Horticulture Crop Production (2)
HORT 112 Introduction to Horticultural Systems, Practices and Careers (2)
HORT (CROP) 300 Crop Production in Pacific Northwest Agroecosystems
HORT 412 Career Exploration: Internships and Research Projects (1)
HORT 480 Case Studies in Cropping Systems (4 or 8)
HORT 481 Horticulture Production Case Studies
HORT 495 Horticultural Management Plans (3 or 6)

Ag Science
AG 121 Leadership Development (3)
AG 492 Technology Transfer in Agriculture (3)

Ag Business Management
AEC 121 Discovering Agricultural and Resource Economics (1)
AEC 211 Agricultural and Food Management
AEC 221 Agricultural and Food Marketing (3)
AEC 251 Introduction to Agricultural and Food Economics (3)
AEC 311 Intermediate Applied Economics I: Producers and Consumers
AEC 353 Introduction to Coastal and Marine Resource Economics (3)
AEC 372 Agricultural Cooperatives (3)
AEC 388 Agricultural Law
AEC 440: The Economics of Business Organization in the Food System
AEC 442: Agricultural Business Management
AEC 460: Capital Investment Analysis Using AGBIZ Logic (3)
AEC 465: Agricultural and Food Financial Management (3)
AEC 466: Agricultural and Food Marketing Management
AEC 475: Writing Business Plans: Agriculture/Food-related Enterprises (2)

Animal Sciences
ANS 215 Beef/Dairy Industry (3)
ANS 216 Sheep/Swine Industries (3)
ANS 217 Poultry Industries (3)
ANS 223 Equine Marketing (2)
ANS 333 Equine Stable Management (3)
ANS 433 Poultry Meat Production Systems (3)
ANS 434 Egg Production Systems (3)
ANS 436 Sheep Production Systems (3)
ANS 439 Dairy Production Systems
ANS 443 Beef Production Systems: Cow/Calf (3)
ANS 444 Beef Production Systems: Stocker/Feedlot (3)
ANS 445 Beef Production Systems
ANS 456 Companion Animal Production Systems (3)
ANS 460 Beef Production Systems

Crop and Soil Science
CROP 280 Introduction to the Complexity of Oregon Cropping Systems
CROP (HORT) 300 Crop Production in Pacific Northwest Agroecosystems
CROP 310 Forage Production
CROP 319 Principles of Field Crop Production

One year of general biology or equivalent.
(CSS 300 or CROP 300 or HORT 300) and (CSS 305 or CSS 205 or SOIL 205) or equivalent
CROP 325 Ag and Environmental Predicaments: A Case Study Approach (3)  
CROP 460 Seed Production (3)  
CROP 480 Case Studies in Cropping Management Systems  
CROP 300 or HORT 300 and senior standing in agriculture.

**Food Science**
- FST 210 Fruit and Vegetable Processing (3)  
- FST 212 Dairy Processing (2)  
- FST 213 Dairy Processing (1)  
- FST 260 Food Science and Technology in Western Culture (3)  
- FST 315 Pilot Plant Experiences (2)  
- FST 370 Industry Preparation/HACCP (3)  
- FST 421 Food Law (3)  
- FST 430 Innovation and Food Product Development  
- FST 460 Brewing Science (3)  
- FST 466 Wine Production Principles (3)  
- FST 467 Wine Production, Analysis, and Sensory Evaluation (5)  

**Geology**
- GEO 440. Economic Geology  
- GEO 497. Field Mapping of Ore Deposits (3)  

**Geography**
- GEOG 360. GISCIENCE I: Geographic information systems and theory  
- GEOG 361. GISCIENCE II: Analysis and applications  
- GEOG 370. Geovisualization: Cartography  
- GEOG 371. Geovisualization: Web Mapping  
- GEOG 462. GISCIENCE III: Programming for geospatial analysis  
- GEOG 463. GISCIENCE IV: Spatial Modeling  
- GEOG 464. Geospatial perspectives on intelligence, security and ethics (3)  
- GEOG 472. Geovisualization: Geovisual analytics (3)  
- GEOG 480. Remote Sensing I: Principles and Applications  
- GEOG 481. Remote Sensing II: Digital Image Processing  

**College of Earth, Ocean and Atmospheric Sciences - Available only if a CEOA major**

**Geology**
- GEO 315 with D- or better

**Geography**
- GEOG 360 with C- or better and MTH 112 [C-] and (ST 201 [C-] or ST 351 [C-])
- GEOG 201 with D- or better or GEO 301 with D- or better
- GEOG 201 with D- or better or GEO 301 with D- or better
- GEOG 201 with D- or better or GEO 301 with D- or better
- GEOG 201 with D- or better or GEO 301 with D- or better
- GEOG 201 with D- or better or GEO 301 with C- or better

**College of Liberal Arts - Available only if a Liberal Arts major**

**Art**
- ART 339. Professional Practices for Artists (3)  
- ART 350. Photography on Assignment  
- ART 352. *Creative Collaboration: Designing and Building (3 Credits)  
- ART 414. Arts Management (3 Credits)  
- ART 451. Introduction to Arts Entrepreneurship (3)

**Economics**
- ECON 350. Financial Economics  
- ECON 460. Industrial Organization Theory and Policy  
- ECON 462. Managerial Economics  
- ECON 463. Efficiency and Productivity Analysis  
- ECON 201 with D- or better and ECON 202 [D-]
- ECON 311 with D- or better and ECON 411 with D- or better
- ECON 311 with D- or better and ECON 411 with D- or better
- ECON 311 with C- or better or ECON 411 with C or better

**Graphic Design**
- GD 230. Graph Design: Professional Development (2)  
- GD 325. Graphic Design: Collaborative Processes  
- GD 420. Professional practices (3)  
- GD 424. Brand Identity Systems  
- GD 429. Graphic Design Studio  
- GD 126 with D- or better
- GD 126 with C- or better

**New Media Communications**
- NMC 255. Introduction to Sound Design  
- NMC 355. Applied Sound Design  
- NMC 380. Pre-production  
- NMC 382. Studio and Multicamera Production  
- NMC 383. Field Production  
- NMC 385. 2D Motion Design  
- NMC 440. Media Management (3)  
- NMC 441. Media Entrepreneurship (3)  
- NMC 101 with C- or better  
- NMC 255 with C- or better and NMC 260 [C-]  
- NMC 301 with C- or better  
- NMC 301 with C- or better
NMC 461. Trans-media Publishing I: Creating IP
NMC 462. Trans-media Publishing II: Exploiting IP (3)
NMC 481. Post Production
NMC 482. Documentary
NMC 483. New Media 3-D
NMC 484. New Media Animation
NMC 498. Advanced Collaborative Experience (3-4)

Philosophy
PHL 121. Reasoning and Writing (3)
PHL 205. Ethics

Writing
WR 414. Advertising and Public Relations Writing
WR 448. Magazine Article Writing