### Natural Resources – Wildland Fire Ecology Option

[http://www.forestry.oregonstate.edu/academic-programs/undergraduates/natural-resources](http://www.forestry.oregonstate.edu/academic-programs/undergraduates/natural-resources)

### Degree Requirements:
- BS in Natural Resources – Wildland Fire Ecology option requires 180 credits. At least 60 credits must be upper-division (300-400 level).
- Maximum of 124 community college credits applied to the degree.
- Available on the Corvallis and Distance campuses

### Natural Resources Major Requirements
(Complete one course from each category)

<table>
<thead>
<tr>
<th>Wildland Fire Ecology Courses</th>
<th>OSU Course</th>
<th>Chemeketa CC Course</th>
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<tr>
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<td><strong>Baccalaureate Core</strong></td>
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<td></td>
<td><strong>Elective</strong></td>
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#### Biology I
- BI 101. *General Biology I*
- BI 204. *Introductory Biology I*
- BI 211. *Principles of Biology I*

#### Biology II
- BI 102. *General Biology II*
- BI 205. *Introductory Biology II*
- BI 212. *Principles of Biology II*

#### Biology III
- BI 103. *General Biology III*
- BI 206. *Introductory Biology III*
- BI 213. *Principles of Biology III*

#### Chemistry
- CH 121. General Chemistry
- CH 231 & 261. *General Chemistry with Lab*

#### Climate Science
- ATS 201. *Climate Science*
- FW 345. Global Change Biology
- GEOG 323. *Climatology*
- SUS 103. *Introduction to Climate Change*

### Advanced Communications

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<tr>
<th>Advanced Communications</th>
<th>OSU Course</th>
<th>Chemeketa CC Course</th>
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<td><strong>Advanced Communications</strong></td>
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- COMM 321. Introduction to Communication Theory
- COMM 322. Small-Group Problem Solving
- COMM 328. Nonverbal Communication
- COMM 385. Communication and Culture in Cyberspace
- COMM 440. Theories of Conflict and Conflict Management
- COMM 442. Bargaining and Negotiation Processes
- FES 430. Forest as Classroom
- FW 489. Effective Comm. for Fisheries & Wildlife Science
- NR 312. Critical Thinking for Natural Resource Challenges
- TRAL 493. Environmental Interpretation
- WR 362. Science Writing
- WR 462. *Environmental Writing*
| Earth or Soil Science | CSS 205. *Soil Science  
CSS 305. Principles of Soil Science  
SOIL 205 & SOIL 206. *Soil Science with lab  
SOIL 205 & FOR 206. * Soil Science with Forest Soils Lab  
GEO 101. *The Solid Earth  
GEO 201. *Physical Geology  
GEO 202. *Earth Systems Science  
GEO 221. *Environmental Geology  
GEOG 102. *Physical Geography | Online at OSU  
SOIL 205  
Online at OSU  
GEO 201  
GEO 202  
GEOG 105 |
|---|---|---|
| Ecology | BI 351. Marine Ecology (3)  
BI 370. General Ecology (3)  
BOT 341. Plant Ecology (4)  
FES 341. Forest Ecology (3) | Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU |
| Mathematics | MTH 112. *Elementary Functions  
MTH 241. *Calculus for Management and Social Science  
MTH 245. *Math for Mgmt, Life, and Social Sciences  
MTH 251. *Differential Calculus | MTH 112  
MTH 241  
MTH 245  
MTH 251 |
| Statistics | ST 201. Principles of Statistics  
ST 351. Introduction to Statistical Methods | MTH 243  
Online at OSU |
| Animal ID | FES 412 Forest Entomology  
FW 312. Systematics of Birds  
FW 316. Systematics of Fishes  
FW 318. Systematics of Mammals  
Z 365 Biology of Insects  
Z 477. Aquatic Entomology | Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU |
| Environmental Assessment & Planning | FES/FW 445. Ecological Restoration  
FW 462 Ecosystem Services  
GEOG 250 Land Use Planning for Sustainable Communities  
GEOG 450. Land Use in the American West  
GEOG 451 Plan. Prin. & Practices for Resilient Communities  
GEOG 452 Sustainable Site Planning  
RNG 421. Wildland Restoration and Ecology  
RNG 490. Rangeland Management Planning  
SUS 304. *Sustainability Assessment  
SUS 350* Sustainable Communities  
TRAL 456. Planning for Sustainable Recreation  
TRAL 457. Planning for Sustainable Tourism  
NR 325. Scientific Methods for Analyzing NR Problems | Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU |
| Fisheries & Marine Sciences | BI 150. Introduction to Marine Biology  
BI/FW. 302 Biology and Conservation of Marine Mammals  
BI 347. Ocean in Peril  
BI 351. Marine Ecology  
FW 320. Introductory Population Dynamics  
FW 323. Mgmt Principles of Pacific Salmon in the Northwest  
FW 454. *Fishery Biology  
FW 465. Marine Fisheries  
FW 473. Fish Ecology  
FW 481. Wildlife Ecology  
OC 201. Oceanography  
OC 332. Coastal Oceanography | BI 143  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
GS 143 |
| Forestry | FE/FOR 456. *International Forestry  
FE 240. *Forest Biology  
FES 341. Forest Ecology  
FES 342. Forest Types of the Northwest  
FES/HORT 350. Urban Forestry  
FES 440. Wildland Fire Ecology  
FES/FW 445. Ecological Restoration  
FES/FW 452. Biodiversity Conservation in Managed Forests  
FES/NR 477. *Agroforestry  
FOR 346. Topics in Wildland Fire  
FOR 441. Silviculture Principles | Online at OSU  
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| Land and Water | FE 430. Watershed Processes  
FE 434 Forest Watershed Management  
FW 326. Integrated Watershed Management  
FW 456. Limnology  
FW 479. Wetlands and Riparian Ecology  
GEO 307. *National Park Geology and Preservation  
GEO 308. *Global Change and Earth Sciences  
GEOG 340. *Introduction to Water Science and Policy  
GEOG 440. Water Resources Mgmt in the United States  
GEOG 441. International Water Resources Management  
RNG 355. Desert Watershed Management  
RNG 455. Riparian Ecohydrology and Management  
SOIL 366. Ecosystems of Wildland Soils  
SOIL 388. Soil Systems and Plant Growth  
SOIL 395. *World Soil Resources  
SOIL 466. Soil Morphology and Classification | Online at OSU  
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| Range | FES 440. Wildland Fire Ecology  
FES/FW 445. Ecological Restoration  
FOR 346. Topics in Wildland Fire  
RNG 341. Rangeland Ecology and Management  
RNG 351. Range Ecology I-Grasslands  
RNG 352. Range Ecology II-Shrublands  
RNG 421. Wildland Restoration and Ecology  
RNG 441. Rangeland Analysis  
RNG 442. Rangeland-Animal Relations  
RNG 490. Rangeland Management Planning | Online at OSU  
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| Vegetation ID | BOT 321. Plant Systematics  
BOT 414. Agrostology  
BOT 425. Flora of the Pacific Northwest  
FES 241. Dendrology  
HORT 226. Landscape Plant I: Decid. Hardwoods & Conifers  
HORT 228. Landscape Plant II: Spring Flow. Trees &Shrubs  
RNG 353. Wildland Plant Identification | Online at OSU  
HOR 226  
HOR 228  
Online at OSU |
| Wildlife Management | FW 251. Principles of Fish & Wildlife Conservation  
FW 320. Introductory Population Dynamics  
FW 321. Applied Community & Ecosystems Ecology  
FW 435. *Wildlife in Agricultural Ecosystems  
FW 451. Avian Conservation and Management  
FES/FW 452. Biodiversity Conservation in Managed Forests  
FW 458. Mammal Conservation and Management  
FW 481. Wildlife Ecology  
Z 350. Animal Behavior | Online at OSU  
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<th>Ethics and Philosophy</th>
<th>AG 301. *Ecosystem Science of Pacific NW Indians</th>
<th>Online at OSU</th>
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<tr>
<td></td>
<td>ANTH 477. Ecological Anthropology</td>
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<td>ANTH 481. *Natural Resources and Community Values</td>
<td>Online at OSU</td>
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<td>ANTH 482. *Anthropology of International Development</td>
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<td>FW 340. *Multicultural Perspectives in Natural Resources</td>
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<td>GEO 309. *Environmental Justice</td>
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<td>HST 481. *Environmental History of the United States</td>
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<td>NR 312. Critical Thinking for Natural Resource Challenges</td>
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<td>PHL 440. *Environmental Ethics</td>
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<td>PHL/REL 443. *World Views and Environmental Values</td>
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<td>AEC 432. Environmental Law</td>
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<td>AEC 454. Rural Development Economics and Policy</td>
<td>Online at OSU</td>
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<td>FE 460. *Forest Operations Regulations and Policy Issues</td>
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<td>FOR 460. *Forest Policy</td>
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<td>FOR 462. Natural Resource Policy and Law</td>
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<td></td>
<td>FW 415. Fisheries and Wildlife Law and Policy</td>
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<td>FW 422. Intro to Ocean Law</td>
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<td>PS 473. US Energy Policy</td>
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<td>PS 475. Environmental Politics and Policy</td>
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<td>PS 477. International Environmental Politics and Policy</td>
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<td>Political Issues</td>
<td>ENT 300/HORT 330. *Plagues, Pests, and Politics</td>
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<td>FES 454. Managing at the Wildland-Urban Interface</td>
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<td>FOR 462. Natural Resource Policy and Law</td>
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<td>FW 350. *Endangered Species, Society and Sustainability</td>
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<td>NR 351. *Science and Resource Management</td>
<td>Online at OSU</td>
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<td>PS 455. *The Politics of Climate Change</td>
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<td>PS 475. Environmental Politics and Policy</td>
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<td>PS 476. *Science and Politics</td>
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<td>PS 477. International Environmental Politics and Policy</td>
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<td>TRAL 352. Wilderness Management</td>
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<td>AEC 454. Rural Development Economics and Policy</td>
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<td>FOR 330. Forest Resource Economics I</td>
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<td>Social Issues</td>
<td>FES 355. Management for Multiple Resource Values</td>
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<td>FES 365. *Issues in NR Conservation</td>
<td>Online at OSU</td>
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<td>FW 325. *Global Crises in Resource Ecology</td>
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<td>GEOG 300. *Sustainability for the Common Good</td>
<td>Online at OSU</td>
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<td>GEOG 240. *Climate Change, Water and Society</td>
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<td>GEOG 430. Resilience-based Natural Resource Management</td>
<td>Online at OSU</td>
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<td>NR 351. *When Science Escapes the Lab</td>
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<td>SOC 381. Social Dimensions of Sustainability</td>
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<td>SOC 475. Rural Sociology</td>
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<td>SOC 480. *Environmental Sociology</td>
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<td>SOC 481. *Society and Natural Resources</td>
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<td>SUS 420. Social Dimensions of Sustainability</td>
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<td>TRAL 251. Recreation Resource Management</td>
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<td>TRAL 351. Outdoor Recreation Mgmt on Public Lands</td>
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<td>TRAL 352. Wilderness Management</td>
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<td></td>
<td>TRAL 353. Nature, Eco, and Adventure Tourism</td>
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<td>TRAL 354. Communities, Natural Areas, and Sus. Tourism</td>
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<td>WGSS 440. *Women and Natural Resources</td>
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<td>Spatial Analysis</td>
<td>CROP/HORT 414. Precision Agriculture</td>
<td>Online at OSU</td>
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<td></td>
<td>FE 257. GIS and Forest Engineering Applications</td>
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<td>FW 303. Survey of GIS in Natural Resources</td>
<td>Online at OSU</td>
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<td>GEOG 201. *Foundations of Geospatial Science and GIS</td>
<td>Online at OSU</td>
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<td>GEOG 360. GIScience I: GIS and Theory</td>
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<tr>
<td>Wildland Fire Ecology Option Requirements</td>
<td>OSU Course</td>
<td>Chemeketa Course</td>
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| Measurements                            | BOT 440. Field Methods in Plant Ecology  
FW 255. Field Sampling of Fish and Wildlife  
GEOG 360. GIScience I: GIS and Theory    | Online at OSU  
Online at OSU  
Online at OSU |
| Wildland Fire Ecology                   | FES 440. Wildland Fire Ecology          | Online at OSU |
| Ecological Restoration                  | FES /FW 445. Ecological Restoration    | Online at OSU  
Online at OSU |
|                                        | RNG 421. Wildland Restoration and Ecology | Online at OSU  
Online at OSU |
| Wildland – Urban Interface              | FES 454. Managing at the Wildland Urban Interface | Online at OSU |
| Science and Management                  | FOR 436. Wildland Fire Science and Management | Online at OSU |
| Ecological and NR Electives (choose 22-23 credits) | BOT 341. Plant Ecology  
BOT/ FOR 413. Forest Pathology  
BOT 414. Agrostology  
BOT 425. Flora of the Pacific Northwest  
CROP 440. Weed Management  
FE 208. Forest Surveying  
FE 434. Forest Watershed Management  
FES 341. Forest Ecology  
FES 342. Forest Types of the Northwest  
FES 412. Forest Entomology  
FES/FW 452. Biodiversity Conservation in Managed Forests  
FOR 346. Topics in Wildland Fire  
FOR 431. Economics and Policy of Forest Wildland Fire  
FOR 441. Silviculture Principles  
FW 321. Applied Community and Ecosystem Ecology  
FW 458. Mammal Conservation and Management  
FW 479. Wetlands and Riparian Ecology  
FW 481. Wildlife Ecology  
NR 325. Scientific Methods for Analyzing NR Problems  
SOIL 366. Ecosystems of Wildland Soils  
or SOIL 388. Soil Systems and Plant Growth  
or SOIL 466. Soil Morphology and Classification | Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
Online at OSU  
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Online at OSU |

Up to 6 credits of relevant internship, projects, or study abroad may be applied in the elective requirement.
Chemeketa Community College courses that fulfill OSU’s Baccalaureate Core requirements:
https://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-chemeketa-community-college

<table>
<thead>
<tr>
<th>OSU Baccalaureate Core (Complete one course from each category)</th>
<th>OSU Course</th>
<th>Chemeketa Course</th>
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<tbody>
<tr>
<td>Writing I</td>
<td>WR 121</td>
<td>WR 121</td>
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<tr>
<td>Writing II</td>
<td>WR 326</td>
<td>WR 326 or possibly fulfilled by major requirements: WR 326 or 327</td>
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<tr>
<td>Speech</td>
<td>Choose one course from list above</td>
<td>Choose one course from list above</td>
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<tr>
<td>Mathematics</td>
<td>MTH 105 or higher</td>
<td>Fulfilled by Major Requirements: MTH 112, 241, 245, or 251</td>
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<tr>
<td>Fitness</td>
<td>HHS 231 Lifetime Fitness for Health and HHS 241 Lifetime Fitness</td>
<td>HPE 295</td>
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<td>Physical Science with Lab</td>
<td>Earth or Soil Science course</td>
<td>Fulfilled by Major Requirements: Early or Soil Science Core</td>
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<tr>
<td>Biological Science with Lab</td>
<td>BI 204 or 211</td>
<td>Fulfilled by Major Requirements: Biology I</td>
</tr>
<tr>
<td>Additional Science with Lab</td>
<td>BI 205 or 212</td>
<td>Fulfilled by Major Requirements: Biology II</td>
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<tr>
<td>Western Culture</td>
<td>Choose one course from list above</td>
<td>Choose one course from list above</td>
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<tr>
<td>Cultural Diversity</td>
<td>Choose one course from list above</td>
<td>Choose one course from list above</td>
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<tr>
<td>Literature &amp; Arts</td>
<td>Choose one course from list above</td>
<td>Choose one course from list above</td>
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<tr>
<td>Social Processes &amp; Institutions</td>
<td>Major Course or Choose one course from list above</td>
<td>Possible to fulfill with major requirements – consult advisor</td>
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<tr>
<td>Difference, Power, Discrimination</td>
<td>Choose one course from list above</td>
<td>Possible to fulfill with major requirements – consult advisor</td>
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<tr>
<td>Contemporary Global Issues</td>
<td>Upper-division course required</td>
<td>Possible to fulfill with major requirements – consult advisor</td>
</tr>
<tr>
<td>Science, Technology, Society</td>
<td>FES 485</td>
<td>Fulfilled by major requirements: FES 485</td>
</tr>
<tr>
<td>Writing Intensive Course – major specific</td>
<td>Upper-division course required</td>
<td>Fulfilled by Major Requirements</td>
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</tbody>
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**OSU Contact:** College of Forestry Student Services
541-737-1594
studynaturalresources@oregonstate.edu

**Transfer Student Resources:** http://transfer.oregonstate.edu/

**Chemeketa Advising:** https://www.chemeketa.edu/students/advising/