Forest Ecology 330
Lecture: Monday & Wednesday 11:00 – 11:50 AM; University Center 303
Lab: Monday & Wednesday 2:00-5:20 PM; University Center Theatre 311

Lectures should be available via Zoom –
https://umontana.zoom.us/j/96249476920?pwd=anlZblBhSDdjWEIQMkthZEtGWjR5QT09

Instructor:
Dr. Peter Kolb
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Adjunct Associate professor of Forest Ecology and Management
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Office hours: Wednesday 10:30AM – 2:00PM or by appointment.

Teaching Assistant:
Robin Rank
Email: robin.rank@umontana.edu
Office: Clapp 447

Required Reading:

Handouts: as distributed during lecture and posted

Videos: https://forestry.msuextension.org/instructional-videos.html  Northern Rockies Forest Ecology and Management 5 part series

Suggested Reading:

Grading:

5 homework assignments  25 points  A – 90%
1 midterm – March 3  25 points  B – 80%
Final Exam – April 21  30 points  C – 70%
Labs – 4 total  20 points  D – 60%

100 points
**Course Objective:**
To provide a thorough understanding of the terminology, definitions, concepts and processes that allow for the function of forests and associated ecosystems with emphasis on the Northern Rockies.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Suggested Reading (Handouts will be posted)</th>
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<tbody>
<tr>
<td>January 11-15</td>
<td>Forest Ecology Overview; Video Part 1 homework</td>
<td>Barns Chapter 1, Pfister pages 1-5</td>
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<td>Jan 18-22</td>
<td>Landscape and time effects;</td>
<td>Barns Chapter 2 &amp; 3, Pfister pages 6-14, 29</td>
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<td>Jan 25-29</td>
<td>Light, temperature &amp; soils;</td>
<td>Barns Chapter 8, 9, 11</td>
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<td>February 1-5</td>
<td>Climate and topography; Video part 2 homework</td>
<td>Barns Chapter 7 &amp; 10</td>
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<td>Feb 8-12</td>
<td>Tree variation</td>
<td>Barns Chapter 4, 6</td>
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<td>Feb 15-19 1-Pres day</td>
<td>Plant regeneration/migration; Video part 3 homework</td>
<td>Barns Chapter 5</td>
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<td>Feb 22-27</td>
<td>Carbon balances;</td>
<td>Barns Chapter 18</td>
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<td>March 1-5 break</td>
<td>Climate change; Lab 1 – Missoula valley</td>
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<td>March 8-12</td>
<td>Forest communities; Lab 2 – Lolo Pass</td>
<td>Barns Chapter 15</td>
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<td>March 15-19 break</td>
<td>Site quality &amp; evaluation;</td>
<td>Barns Chapter 13, 19</td>
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<td>March 22-26</td>
<td>Forest succession; Video part 4 homework</td>
<td>Barns Chapter 17</td>
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<td>March 29 – April 2</td>
<td>Forest disturbances/fire; Video part 5 homework</td>
<td>Barns Chapter 16, 12, 14</td>
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<td>April 5-9</td>
<td>Biodiversity concepts; Lab 3  Lolo fire</td>
<td>Barns Chapter 20</td>
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<td>April 12-16</td>
<td>Landscape Ecology; Lab 4 Evaro hill</td>
<td>Barns Chapter 21</td>
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<td>April 19-23</td>
<td>World picture – preservation/conservation;</td>
<td>Barns Chapter 2</td>
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<td>April 26-30</td>
<td>Final exam</td>
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Labs:

Labs are designed to familiarize you with different Montana forest plant associations and provide real examples of the physical and biological influences on plant distributions and performance, and how these factors are measured. We will be car pooling, taking a bus or van’s to various locations within 1-2 hours of Missoula depending on Covid rules. Be prepared to walk ½ to 1 mile in sun, rain or snow.

Equipment needed:
Good walking shoes – no flipflops
Appropriate clothing – coat, hat etc. when needed.
Notebook or Journal to write lab reports in
Water bottle recommended

Homework: Complete questionnaires/study guides for 5 video presentation.

Content should be short answer typed double spaced, complete sentences with proper grammar.

All works should be your original work – copied work will result in “0” for both authors.

Lab Reports:

Content required in report for each lab (1-3 pages written or printed neatly)

1. Location and forest plant communities visited. 1 paragraph descriptive.
2. Indicator plants for each site: Tree species, shrubs, forbs, grasses, sedges.
3. Natural history of site: disturbance regime, defining process
4. Implications of human use, potential management actions on the future (100 years from now)

Grading: Home work and Lab write-ups must be turned in on time! They will be evaluated for concept thoroughness, and returned.

Office hours: upon appointment – e-mail me to schedule a time.