WLF694 Decision Analysis for Conservation - 2020

- 3 credits
- Prerequisites - permission of instructor
- Location and Meeting Time: Online
- Instructor: Mark Lindberg
- Office: 411 Irving I
- Office Hours: By appointment
- Email: mslindberg@alaska.edu (best contact)
- Phone: 907-474-6598

COURSE DESCRIPTION

Introduction to theory and application of structured decision making and adaptive management to natural resource conservation. Emphasis is on application of decision analysis to inform management of natural resources and development of skills using statistics and software to make optimal decisions.

COURSE GOALS

- Understand decision analysis through PrOACT process (Problem Definition, Objectives, Alternatives, Consequences, and Tradeoffs)
- Apply decision analysis to an actual problem using rapid prototyping
- Develop skills in using common software (e.g., Netica) for decision analysis

STUDENT LEARNING OUTCOMES

- Demonstrate knowledge of theory of decision analysis by applying the decision process to hypothetical examples.
- Complete computer exercises in population modeling and decision analysis.
- Work in a small group to complete a term project to inform an actual decision problem

COURSE MATERIAL AND INSTRUCTIONAL METHOD

The course will be delivered with online lecture notes, PPT presentations, audio lectures, and readings. Small group exercises will be used to complete the term project.
material will be linked in Blackboard. One course text is required and 2 are recommended readings.

Texts:


COURSE POLICIES

Course material will be organized into weekly folders and you are expected to keep pace in class. You can work ahead, but you don’t fall behind. As part of this course, you will be asked to participate in public spaces on the internet. For example, you may be asked to write a blog post, comment on someone else's blog post, or post to online services like YouTube. You will create an account and a screen name for each of these services; it's important to understand that the screen name you choose will be public to the world. If you do not wish to use your real name, we suggest using your university username (your login username for Blackboard or you may choose to use a nickname alias instead). If you are working in WordPress, from the Dashboard edit your profile and set your display name to the nickname of your choice. Contact your instructor directly if you have questions or concerns.

EVALUATION

- Letter grades without + or –
  - >89% - A
  - >79% - B
  - >69% - C
  - >59% - D
- Grades will be based on following:
  - Homework Assignments – 75%
  - Term Project Presentation – 25%
“C” (including C+ and C-) indicates a satisfactory level of acquired knowledge and performance in completion of course requirements. C– (1.7) is the minimum acceptable grade that undergraduate students may receive for courses to count toward the major or minor degree requirements, or as a prerequisite for another course. A minimum grade of C (2.0), however, MAY be required by specific programs for prerequisite and/ or major / minor courses. Please consult specific program listings in the UAF Catalog.

C– (1.7) is the minimum acceptable grade required for all Core (X) Courses.

“D” (including D+ and D-) indicates a minimal level of acquired knowledge and minimal performance in completion of course requirements. This grade does not satisfy requirements for courses in the major, minor, Core, or graduate programs.

EXPLANATION OF NB/I/W GRADES

This course adheres to the UAF regarding the granting of NB Grades. The NB grade is for use only in situations in which the instructor has No Basis upon which to assign a grade. In general, the NB grade will not be granted.

Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy: “The letter “I” (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student’s control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an “I” grade.”

Successful, timely completion of this course depends on committing yourself early and maintaining your effort. Failure to submit assignments in a timely manner may result in faculty-initiated Withdrawal from the course, which can result in a W on your transcript.

ACADEMIC INTEGRITY

As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another student. Plagiarism includes use of another author’s words or arguments without attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is punishable by removal from the course and a grade of “F.” For more information go to Student Code of Conduct.

INSTRUCTOR RESPONSE TIME
This is the first time this course is being taught on-line so we appreciate your patience as we work out the kinks this semester. We will strive to respond to emails within 24 hours unless we otherwise note and we will attempt to return graded material in 48 hours, but no longer than a week.

**HOW TO CHECK YOUR GRADE**

To check your grades for assignments/quizzes and find comments from your instructor, click on the My Grades link in the sidebar menu. All assignments and any due dates are listed. If your instructor has left overall assessment comments, Click on the speech bubble icon to view overall comments and feedback. If the score is for a test or quiz, the title of the test is a link. Then click on the check mark or your score to see results and feedback. If the score is for an assignment, the title of the assignment is a link and by clicking this link you'll be taken to your submission, grade and comments. If you see a green exclamation point, your assignment has not been graded yet.

**EXPECTATION OF STUDENT EFFORT**

Students should expect to spend 9-12 hours per week on this class. Students are expected to complete the weekly assignments by their due dates. If circumstances arise that cause you to need extra time on any assignment(s), email your instructor for guidance. Extensions of due dates may be granted, but your instructor expects to be informed in advance if you are not able to submit your assignment on time. (Emergency situations will be dealt with as needed.) Students are expected to maintain a working backup plan to be implemented in the event of a computer malfunction or interruption of their normal Internet service during the course.

**STUDENT PROTECTIONS AND SERVICES STATEMENT**

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans' services, rural student services, etc to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: [www.uaf.edu/handbook](http://www.uaf.edu/handbook)

**SUPPORT SERVICES**

Go to the Student Handbook ([www.uaf.edu/handbook](http://www.uaf.edu/handbook)) for things like:
academic advising, tutoring, library and academic support, disability services, computing and technology, veteran and military support, academic complaint and appeals, late withdrawals, "classroom" behavior expectations and more.

**UAF eCampus Student Services**

Helps students with registration and course schedules, provides information about lessons and student records, assists with the examination process, and answers general questions. Our Academic Advisor can help students communicate with instructors, locate helpful resources, and maximize their distance learning experience. Contact the UAF eCampus Student Services staff at 907.455.2060 or toll free 1.800.277.8060 or contact staff directly with our [directory listing](#).

**UAF Help Desk**

Go to [http://www.alaska.edu/oit/](http://www.alaska.edu/oit/) to see about current network outages and technology news.

For technical questions, contact the Help Desk at:

- e-mail at [helpdesk@alaska.edu](mailto:helpdesk@alaska.edu)
- phone: 450.8300 (in the Fairbanks area) or 1.800.478.8226 (outside of Fairbanks)

**Effective Communication**

Students who have difficulties with oral presentations and/or writing are strongly encouraged to get help from:

- [UAF Department of Communication’s Speaking Center](mailto:speak@uaf.edu) (907.474.5470, speak@uaf.edu)
- [UAF English’s Department’s Writing Center](mailto:helpdesk@alaska.edu) (907.474.5314, Gruening 8th floor)
- [CTC’s Learning Center](mailto:helpdesk@alaska.edu) (604 Barnette st, 907.455.2860).

**NOTICE OF NONDISCRIMINATION**

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: [www.alaska.edu/titleIXcompliance/nondiscrimination](http://www.alaska.edu/titleIXcompliance/nondiscrimination).

**SCHEDULE**

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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>13 Jan</td>
<td>Introduction - PrOACT Approach to informing decisions</td>
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<tr>
<td>2</td>
<td>20 Jan</td>
<td>Developing Objectives</td>
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<tr>
<td>3rd</td>
<td>Date</td>
<td>Topic</td>
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<td>3</td>
<td>27 Jan</td>
<td>Framing the Decision</td>
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<td>4</td>
<td>3 Feb</td>
<td>Choosing Alternatives</td>
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<td>5</td>
<td>10 Feb</td>
<td>Working with Influence Diagrams</td>
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<td>6</td>
<td>17 Feb</td>
<td>Predictive Modeling and Consequence Tables</td>
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<td>7</td>
<td>24 Feb</td>
<td>Informing Decisions</td>
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<td>8</td>
<td>2 Mar</td>
<td>Develop Term Projects</td>
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<td>9</td>
<td>9 Mar</td>
<td>Spring Break</td>
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<td>10</td>
<td>16 Mar</td>
<td>Informing Decisions Continued</td>
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<td>11</td>
<td>23 Mar</td>
<td>Considering Risk when Making Decisions</td>
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<td>12</td>
<td>30 Mar</td>
<td>Work on Term Projects</td>
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<td>13</td>
<td>6 Apr</td>
<td>Bayesian Belief Networks</td>
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<td>14</td>
<td>13 Apr</td>
<td>Adaptive Management and Value of Information</td>
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<td>15</td>
<td>20 Apr</td>
<td>Complete Projects</td>
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<tr>
<td>16</td>
<td>27 Apr</td>
<td>Project Presentations</td>
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