**REVISED March 23 2020**

Geography/Environmental Studies 303: Pyrogeography

Spring 2020 M, W, F 12:40 pm -1:40 pm

**Credits: 3 Prerequisites: GEOG 121, ES 260, or Instructor consent**

**Instructor**: Colin Long; Nursing/Ed 102; [longco@uwosh.edu](mailto:longco@uwosh.edu)

**Office Hours**: available via email 9 am to 4 pm Monday thru Friday

**Text**: readings and pod casts will be posted on Canvas course page

**Course Description:** Fire is an inherently geographical process. Fire can affect landscapes on spatial scales from local to subcontinental and fire can affect, and be affected by processes that occur in our day or over millennia. The past, present, and future role of wildland fire is a major concern to scientists, land managers, and the public. Concerns over issues such as forest health and sustainability, especially in light of global change, have added urgency to understanding the role of fire in ecosystems. To understand the interaction of fire and ecosystems we will examine the history of humans and fire, fire physics, fire weather, wildland fuels, fire ecology including the effects of fire on plants and soils, methods of obtaining fire history including historical documents, dendrochronology, and paleoecological proxy, fire regimes, fire management, fire problems in urban-wildland interface, and future fire regimes

**Course Objectives**

When you complete this course you should be able to:

* Explain fire climate and fire weather
* Evaluate different methods for obtaining fire histories
* Describe the interactions between vegetation and fire in a variety of ecosystems
* Appraise the management methods humans have used on fire over time
* Envision future fire regimes based on future climate scenarios

**Assessment**: Students will be grade on four components: exams, annotated bibliography, a regional presentation and participation in a field trip. There will be three exams. Exam 1will consist of short multiple choice/matching questions and essay questions covering the material presented. Exam 2 and 3 will consist of essay questions related to podcasts and course readings. Exam 2 and 3 question answers will be uploaded to the Canvas web page. Information about the research paper is below. The paper is an annotated bibliography of 6 research papers of the fire regime/history of a region or ecosystem. Late annotated bibliographies will be penalized 5 points for each day they are late.

Students will submit their PowerPoint presentation along with their annotated bibliographies on May 8th.

Points will be earned in the following fashion:

1st exam = 25 points

2nd exam = 20 points

3rd exam = 20 points

Annotated bibliography = 25 points

Regional presentation = 10 points

TOTAL = 100

**Evaluation**: There will be no curve. Students will strive for mastery rather than competing against each other. A = 100-93.0 points, A- = 92.9-90.0 points, B+ = 89.9-87.0 points, B = 86.9-83.0 points, B- = 82.9 – 80.0, C+ = 79.9 – 77.0 points, C = 76.9 – 72.0 points, C - = 71.9-69.0 points, D+ = 68.9-66.0 points, D = 65.9-63.0 points, D- = 62.9 – 60.0 points, F = less than 60 points. Without acceptable documentation of illness or other emergency, failure take an exam at the appointed times will result in a score of 0 for that exam. Without acceptable documentation of illness or other emergency, failure turn in the annotated bibliography at the appointed time will result in a score of 0 for the paper. There will be NO extra credit opportunities in this class.

**Special Accommodations**: Reasonable accommodations will be made for students with disabilities. Please contact Disability Services (424-3100 (voice) or 424-1319 (TTY)) or visit their web site at http://www.uwosh.edu/dean/disabilities.htm for the University’s accommodation request form and documentation requirements. Information related to an individual’s accommodation request will be kept confidential.

**Academic Integrity**: The University of Wisconsin Oshkosh is committed to a standard of academic integrity of all students. The system guidelines state: “Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others’ academic endeavors. Students are subject to disciplinary action of academic misconduct which is defined in the UWS 14.03 Wisconsin Administrative code. Students are encouraged to review the code, located on the “Dean of Students” web page (see Student Conduct) in order to understand your rights and responsibilities.

TENTATIVE SCHEDULE REVISED MARCH 23-2020

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| --- | --- |
| Week | Subject |
| Feb, 3, 5, 7 | Introduction/Fire basics/disturbance theory |
| Feb. 10, 12, 14 | Fire ecology and fire behavior |
| Feb. 17, 19, 21 | Fire’s effects on ecosystem components |
| Feb. 24, 26, 28 | Fire’s effects on ecosystem components/fire and invasive species |
| March 2, 4, 6 | **EXAM 1 (March. 2)** /Fire history reconstruction methods |
| March 9, 11, 13 | Fire history reconstruction methods |
| March 16, 18, 20 | *Spring Break* |
| March 23 - 27 | *Spring Break* |
| March 30, April 1, 3 | Human uses of fire |
| April 6, 8, 10 | **EXAM 2, (April 8-10)** |
| April 13, 15, 17 | Fire management in the US |
| April 20, 22, 24 | Fire management in the US |
| April 27, 29,  May1 | Fire and climate change |
| May 4, 6, 8 | **Annotated bibliography due (May 8)** |
| May 11, 13, 15 | **EXAM 3 (May 11-15)** |

**Annotated Bibliography Assignment – Regional presentation**

Your annotated bibliography should consist of 6 peer-reviewed papers (8 for GEOG 491 students) that focus on the fire regime, history, and management of a region. Your region must be pre-approved by the instructor but can be located anywhere in the world.

Each entry must follow the format below:

* + A complete citation for the reading (APA format, see formatting guide on Canvas)
  + Overview of major points of the reading
  + Place the reading in a context of your understanding of fire in the region.

Individual annotated bibliography entries are typically 2-3 paragraphs in length.

The papers you choose should be the basis for your in-class regional fire presentation.

The in-class presentation should consist of 5 slides (10 for GEOG 491 students):

1. Regional location

2. Fire regime description

3. Outline of one (two or more for GEOG 491 students) the articles from the Annotated Bibliography

4. Analysis of a summary figure from the selected article

5. Conclusion of article and how future climate change may affect the fire regime