

## **NRRM 405/505 Park & Recreation Ecology**

Spring 2018, 3 Credits, SEC 201 (CRN 4301)

M/W: 01:00 – 02:15 pm

Room: ML Commons

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### **Instructor**

Min Kook Kim, Ph.D.

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### **Teaching Assistant**

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### **University Policies**

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to [www.marshall.edu/academic-affairs/policies/](http://www.marshall.edu/academic-affairs/policies/). Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

### **Required Texts, Additional Reading, and Other Materials**

- 1) Main Text: Weekly reading materials will be assigned by the instructor.
- 2) Recommended, but not required:
  - Manning, R. (2009). *Parks & People: Managing Outdoor Recreation at Acadia National Park*. Burlington, VM: University of Vermont Press (ISBN-13: 978-1584657910).
  - Cole, D.N. & Yung, L. (2010). *Beyond Naturalness: Rethinking Park and Wilderness Stewardship in an Era of Rapid Change*. Washington, DC: Island Press (ISBN-10: 1597265098).

## Course Description

Park/Recreation Ecology (PRE) generally refers to the scientific study of recreation resource impacts and their effective management. It can be specifically defined as the field of study that examines, assesses and monitors visitor-induced impacts on the environment. Therefore, the course is designed to help students identify and evaluate the level of recreation resource impact, understand factors that cause impact, and suggest appropriate management actions to minimize impact under given conditions. Additionally, both social/biophysical science monitoring techniques for recreation resources will be introduced. While the course covers natural and human disturbance factors based on traditional disturbance/forest ecology, the spatial scope of the course is restricted to public lands and protected/conserved areas. Various studies in academic/professional journals will be reviewed and analyzed by each student during the semester (**Pre/co-requisites:** N/A)

## Natural Resources/Recreation Management Discipline-Specific Learning Outcomes

Students will *demonstrate* the ability to *identify* natural resource and or/recreation management problems, *propose* appropriate management actions to address those problems, and *evaluate* the potential implications of their proposed management actions.

## Course Student Learning Outcomes and Assessment Measures

Upon completion of this course, student will be able to

Course Student Learning Outcomes	How students will practice each outcome in the course	How student achievement of each outcome will be accessed in the course
Students will <i>understand</i> the magnitude and significance of visitor-induced impacts on the environment (the nature of visitor-induced impacts).	In-class examples/materials, student-led group discussion	Group discussion 1-3, exam 1, research question analysis presentation/paper
Students will <i>identify</i> impact & recovery relationship to its influential factors such as environmental condition and site durability (social and biological factors).	In-class examples/materials, student-led group discussion, low-stake writing	Group discussion 4-5, exam 1, research question analysis presentation/paper
Students will <i>understand</i> how much visitor-induced impact is	In-class examples/materials, student-led group discussion	Group discussion 6-7, exam 1, research question analysis

acceptable or unacceptable under given condition.		presentation/paper
Students will <i>evaluate</i> various types of social and biological monitoring techniques/methods for identifying impacts.	In-class examples/materials, student-led group discussion, low-stake writing	Group discussion 8, exam 1, research question analysis presentation/paper
Students will <i>apply</i> appropriate management tactics/strategies for controlling impacts under given conditions.	In-class examples/materials, student-led group discussion	Group discussion 9-10, exam 1, research question analysis presentation/paper

### Course Requirements

- 1) **Exam:** There will be one in-class exam during the semester (closed book test).
- 2) **Research Question Analysis Presentation (individual project):** The research questions will be assigned to each student later this semester and presentation schedule will be arranged at the end of the semester. Each student is expected to prepare max. 25 minute power point presentation about the research question assigned.
- 3) **Research Question Analysis Paper:** In addition to the research question analysis presentation, students will be required to submit an analysis paper about the research question. The instructor will provide more instructions for the expected style of this assignment (e.g. double spaced, 2-page limit).
- 4) **Journal Article Review:** Students will be required to review two journal articles assigned by the instructor during the semester. The instructor will provide instructions for the expected content of assignment.
- 5) **Individual/Group Activity (in class):** Almost every week, students will be required to have an individual or group activity based on the questions that the instructor provides. The instructor will provide instructions for the activities.
- 6) **Attendance & Participation:** Attendance will be part of your grade as noted below. If students miss more than 30 percent of the lectures, the instructor reserves the right to summarily assign you a failing grade for the course. In addition, 15 percent of the grade for this course is comprised of individual/group activities, most of which will be completed in class. Student will not be allowed to make-up in class activities missed due to unexcused absences. Absences will only be excused if they have been pre-approved by the instructor or if the student is able to document a valid reason for their absence (i.e. illness, death in family, automobile accident, the Dean of Students, etc.).

## Grading Policy

Exam (25 %)

Research Question Presentation (20 %.: instructor 15 %., peer-evaluation: 5 %.)

Research Question Paper (10 %)

Journal Article Review (20% = 10 % × 2)

Attendance (Undergraduate) (10%)

Individual/Group Activity (15%)

**Total: 100 %**

## Grading Scale

100 – 93	A
92.9 – 85	B
84.9 – 77	C
76.9 – 70	D
69.9 – 0	F

## Additional Policies and Expectations

- 1) **Class participation** is essential for the successful completion of the course. Students are expected to read the assigned papers prior to class and to come to class ready to discuss what they have read. In the absence of meaningful classroom discussions/activity, quizzes may be given to ensure that readings have been done.
- 2) **Class materials** can be found at MU-online (<http://www.marshall.edu/muonline>). The instructor will upload all lecture and class discussion files (pdf format) at MU-online in a timely manner. It is mandatory that students monitor the MU-online for updated class materials at least once a week.
- 3) **Assignment** (journal article review, research question analysis paper) is expected to be professionally presented. The instructor will provide instructions for the expected style of assignment as well as the sample of the review assignment.
- 4) **Resources**: Students who find themselves in need of additional assistance are reminded that the instructor is available during office hours. Again, the instructor's office hours are as follows: W (08:00 – 03:30 pm, except class times) & R (08:00 – 09:30 am).
- 5) **Course Evaluation**: Mid-semester evaluation will be done by the instructor to identify students' suggestions on the course (i.e. pace and topic/subject of the course). Final student course evaluation will be conducted during the last two weeks of the semester in a manner that maintains the integrity of the process and the anonymity of evaluators (online format).

**Course Outline** (Please note this is a tentative schedule and it may change upon class progress)

<b>NRRM 405/505: Park/Recreation Ecology</b>		
<b>Date</b>	<b>Topic</b>	<b>Note</b>
Jan. 08/10	Introduction: What is Park/Recreation Ecology (PRE)?	
Jan. 15	<b>Martin Luther King, Jr. Holiday - University closed</b>	
Jan. 17	<u>Individual/Group Activity #1</u>	
Jan. 22/24	Significance & Implication: Why do we need PRE? <u>Individual/Group Activity #2</u>	<i>Guideline for “Journal Article Review”</i>
Jan. 29/31	Type of Impact: Natural resource components <u>Individual/Group Activity #3</u>	
Feb. 05/07	Factor/Degree of Impact: What is resistance and resilience? <u>Individual/Group Activity #4</u>	
Feb. 12/14	Pattern of Impact: Spatial & temporal impact patterns <u>Individual/Group Activity #5</u>	<i>1st Journal Article Review Due</i>
Feb. 19/21	Planning: How much impact is too much impact? <u>Individual/Group Activity #6</u>	
Feb. 26/28	Multidisciplinary Nature of PRE (holistic approach) <u>Individual/Group Activity #7</u>	
Mar. 05/07	Monitoring: Social & biological monitoring methods <u>Individual/Group Activity #8</u>	
Mar. 12/14	Management: Visitor & site management strategies <u>Individual/Group Activity #9</u>	<i>2nd Journal Article Review Due</i>
Mar. 19/21	<b>Spring Break – University closed</b>	
Mar. 26/28	Research trends & future research in PRE (Invasive Species Management) <u>Individual/Group Activity #10</u>	
Apr. 02/04	<b>Review</b> <b>Exam (lecture room)</b> Note: geospatial education in MD (from Monday to Wednesday)	
Apr. 09/11	Research Question Allocation / Presentation Schedule / Q & A / Research Question Presentation Preparation	
Apr. 16/18	Research Question Presentation Preparation	
Apr. 23/25	<b>Presentation I/II</b>	<i>Research Question Paper Due</i>

## Readings for PLS 405/505 Park & Recreation Ecology

2<sup>nd</sup> Week. Why do we need PRE?

Recreation Ecology Research Findings: Implication for wilderness and park managers

[https://profile.usgs.gov/myscience/upload\\_folder/ci2013Feb0516145336429Rec%20Ecol%20Res%20Findings.pdf](https://profile.usgs.gov/myscience/upload_folder/ci2013Feb0516145336429Rec%20Ecol%20Res%20Findings.pdf)

Recent Advances in Recreation Ecology and the Implications of different relationships between recreation use and ecological impacts

[http://www.fs.fed.us/rm/pubs\\_other/rmrs\\_2013\\_monz\\_c001.pdf](http://www.fs.fed.us/rm/pubs_other/rmrs_2013_monz_c001.pdf)

3<sup>rd</sup> Week. Impact component

Sustaining Visitor Use in Protected Areas

<http://leopold.wilderness.net/pubs/705.pdf>

Impacts of Recreation

<http://onlinelibrary.wiley.com/doi/10.1111/j.1752-1688.1979.tb00287.x/pdf>

4<sup>th</sup> Week. Environmental Durability

Recreation Trampling on Vegetation

<http://www.leopold.wilderness.net/pubs/238.pdf>

Effect of Trampling I

<http://leopold.wilderness.net/pubs/170.pdf>

Effect of Trampling II

<http://onlinelibrary.wiley.com/doi/10.2307/3237032/pdf>

5<sup>th</sup> Week. Impact Patterns

Spatial Pattern of Impact

<http://leopold.wilderness.net/pubs/498.pdf>

Spatial/Temporal Pattern of Impact

[http://www.pwrc.usgs.gov/prodabs/pubpdfs/4966\\_Marion.pdf](http://www.pwrc.usgs.gov/prodabs/pubpdfs/4966_Marion.pdf)

Sustaining Visitor Use in Protected Areas

<http://leopold.wilderness.net/pubs/705.pdf>

6<sup>th</sup> Week. ROS/LAC

Management Framework I

<http://leopold.wilderness.net/pubs/58.pdf>

Management Framework II

<http://leopold.wilderness.net/pubs/115.pdf>

Management Framework III

<http://leopold.wilderness.net/pubs/125.pdf>

Management Framework IV

<http://leopold.wilderness.net/pubs/155.pdf>

7<sup>th</sup> Week. Holistic approach (Instructor lecture note)

<http://onlinelibrary.wiley.com/doi/10.1111/j.1523-1739.2006.00570.x/pdf>

[http://www.fs.fed.us/pnw/pubs/pnw\\_gtr678.pdf](http://www.fs.fed.us/pnw/pubs/pnw_gtr678.pdf)

<http://www.esajournals.org/doi/pdf/10.1890/1051-0761%281998%29008%5B0891%3A%5D2.0.CO%3B2>

<http://www.leopold.wilderness.net/pubs/497.pdf>

8<sup>th</sup> Week. Monitoring

Science of Management/Monitoring

<http://leopold.wilderness.net/pubs/507.pdf>

9<sup>th</sup> Week. Management

Principle of Management

<http://www.treearch.fs.fed.us/pubs/23581>

10<sup>th</sup> Week. Research trends & future research in PRE

<http://www.leopold.wilderness.net/research/fprojects/docs12/issrmchapter.pdf>

[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs141p2\\_018049.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_018049.pdf)

### **Article Review Assignment**

First: <http://leopold.wilderness.net/pubs/180.pdf>

Second: <http://leopold.wilderness.net/pubs/484.pdf>