

Special Topics in GIS: Spatial modeling of wildfire risk
Geol 4480-5580 -- 3 credits
Spring Semester

Instructor: Keith T. Weber
Meeting: Wednesday 1:00pm-3:30pm MT
Text: none

Syllabus

#	Week of	Topics	Hands-on
1	Jan. 10	Overview of course and syllabus	
2	Jan. 17	Disasters, emergency management, preparedness and mitigation	
3	Jan. 24	Wildfire and spatial data	
4	Jan. 31	Working with satellite imagery in Idrisi Terrset	
5	Feb. 7	Wildfire susceptibility modeling	
6	Feb. 14	Statistics: the language of science	
7	Feb. 21	MCE and Composite Indices	
8	Feb. 28	Wildfire Hazard modeling	
9	Mar. 7	Understanding lidar/Understanding spatial interpolation	
10	Mar. 14	Wildfire risk modeling	
11	Mar. 21	Spring Break	
12	Mar. 28	Demographics and vulnerabilities	
13	Apr. 4	Wildfire conflagration risk modeling	
14	Apr. 11	Communicating with decision makers	
15	Apr. 18	Project presentations	
16	Apr. 25	Dead week (review)	
17	May 2	Final Exam	

Grading is based on a weighted total points schedule as shown below. Be aware that although homework is weighted equally with the exam, there are nearly 2000 pts derived from homework in contrast to 200 pts for the exam.

4480		5580	
Homework:	40%	Homework:	30%
Final Exam:	40%	Final Exam:	30%
		Project:	20%
Classroom	20%	Classroom	20%

Homework late policy: -10% per day. Late exams will not be accepted.

All exercise file names must use the following naming standard, that is, add an underscore and your name as a suffix to the existing filename. For example, if an exercise file is named DisasterMgmt.docx. The file you send me must be renamed like the following example: DisasterMgmt_KeithWeber.docx. **Files failing to following this standard will not be graded.**

ISU's program is committed to all students achieving their potential. If you have a disability or think you have a disability (physical, learning disability, hearing, vision, psychiatric) which may need a reasonable accommodation, please contact the ADA Disabilities & Resource Center located in Graveley Hall, Room 123, 282-3599 as early as possible.

	Greater than	Less than
A	91	100
A-	87	90.9
B+	84	86.9
B	81	83.9
B-	78	80.9
C+	74	77.9
C	71	73.9
C-	69	70.9
D+	64	68.9
D	60	63.9
D-	56	59.9
F	0	55.9

State Law, Academic Freedom, and Course Expectations

Under Idaho Code § 67-5909D (effective July 1, 2025), courses that are "derived from or promote" certain concepts associated with critical theory or DEI may fall under additional state scrutiny. Importantly, Idaho Code § 67-5909D also affirms that it does not "limit the free discussion of ideas in a classroom setting," allowing us to maintain a learning environment where we can explore a wide range of perspectives thoughtfully and respectfully.

Like all courses at Idaho State University, this course is grounded in the values expressed by the Idaho State Board of Education:

"Membership in the academic community imposes on administrators, faculty members, other institutional employees, and students an obligation to respect the dignity of others, to acknowledge the right of others to express differing opinions, and to foster and defend intellectual honesty, freedom of inquiry and instruction, and free expression on and off the campus of an institution." SBOE Policy III.B.

Your learning is at the forefront of my approach in this class. In designing this course, I have carefully selected readings, activities, and/or assignments to challenge and support your growth. You are encouraged to engage critically with all course materials—questioning arguments, considering multiple viewpoints, and forming your own reasoned conclusions. While you may encounter perspectives different from your own, you will never be asked to adopt any particular belief or ideology.

As we begin our work together, I encourage you to review the syllabus and other course materials carefully. They are designed to help you understand the course structure, expectations, and how we will build a respectful, engaging learning community this semester. If you do not wish to take this course for any reason, please contact your Academic Advisor (AskAnAdvisor@isu.edu) to find alternatives that may be available to you. Please be sure to review the [academic calendar](#) for