Spring 2017 Syllabus
WR440: Watershed Problem Analysis

Class times: T 9:00-10:40; Th 9:00-10:50
NR201

Instructors:

Tim Covino
Office: Natural and Environmental Sciences Building (NESB), A126C
Office Hours: Tuesday 3:30-5:00 pm or by appointment
Phone: 491-2236
Email: Tim.Covino@colostate.edu

Stephanie Kampf
Office: Natural and Environmental Sciences Building (NESB), B248
Office Hours: Monday 1-2 pm, Friday 2-3 pm or by appointment
Phone: 491-0931
Email: Stephanie.Kampf@colostate.edu

Teaching Assistant:

John Hammond
Office: Natural and Environmental Sciences Building (NESB), A115
Office Hours: Monday, Friday 9:30-11 am by appointment
Email: John.Hammond@colostate.edu

Course overview and objectives: Applying and improving skills in analyzing watershed data, technical writing, oral presentation, and peer review. This class is intended to synthesize concepts and skills you have learned through the Watershed Science major and help prepare you for work in the Watershed Science profession.

Text: Readings posted on Canvas

Online resources: Course documents will be posted on Canvas, http://canvas.colostate.edu.

Field trip: We will take a field trip to Copper on February 10. Please save the date, and we can provide letters to other instructors if needed.

Week	Dates	Tuesday	Thursday
1	1/17 – 1/19	Lecture: Introduce Copper Mountain area (Kampf); Course overview (Covino) Discussion: Brainstorm project topics	Lab: Watershed delineation (Hammond) PA1 due: Project ideas posed as research questions
2	1/24 – 1/26	Lecture: Climate data (Kampf); objectives and data needs (Covino) Discussion: Project objectives and data needs	Lab: Climate data (Kampf) GA1 due: Watershed map and written description PA2 due: Project objectives and data needs
3	1/31 – 2/2	Lecture: HEC-HMS model (Kampf); outline (Covino) Discussion: Fool Creek experiment	Lab: HEC-HMS model (Kampf) GA2 due: Climate description
4	2/7 – 2/9	Lecture: Water rights (Fifer) Discussion: Project outline	Lab: Water rights data GA3 due: HEC-HMS model PA3 due: Project outline
5	2/14 – 2/16	Lecture: Snow hydrology, trend analysis (Hammond) Discussion: Background references CA1: share paper with breakout group	Lab: Trend analysis in Excel and R (Hammond) GA4 due: Water rights PA4 due: List of 10 background references
6	2/21 – 2/23	Lecture: Erosion (Kampf); annotated bibliography (Covino) Discussion: Highway sand paper	Lab: Erosion (Kampf) GA5 due: Trend analysis
7	2/28 – 3/2	Lecture: Water quality (Hall); technical writing, ethics and objectivity (Kampf) Discussion: Technical writing	Lab: Water quality (Hall) GA6 due: Erosion PA5 due: Annotated bibliography
8	3/7 – 3/9	Lecture: Stream health Discussion: Peer review: bring draft of intro and background	Lab: Work session GA7 due: Water quality PA6 due: Draft of introduction, objectives, and background
9	3/14 – 3/16	Spring break no class!!	
10	3/21 – 3/23	No lecture attend hydrology days	Discussion: Hydrology Days presentations and research presentation

			CA2 due: Review of presentations
11	3/28 – 3/30	Discussion: Methods brainstorm	CA3: Methods presentation
12	4/4 – 4/6	Visual presentation Discussion: Effective visualization	CA4: Figure presentation PA7 due: Methods
13	4/11 – 4/13	Work session on posters	Work session on posters PA8 due: Results
14	4/18 – 4/20	Discussion: Peer review; bring draft of poster with abstract	Lab: Attend ESS research fair PA9 due: Poster presentation
15	4/25 – 4/27	Lecture: Professional development Discussion: Resumes and cover letters; bring copy of your resume and a cover letter	Elevator speech on 440 project CA5 due: Elevator speech PA10 due: Discussion and conclusion
16	5/2 – 5/4	Presentations	Presentations

Submit complete final report: May 10, 6 PM

Grading:

In-class participation:	10%
General assignments (GA):	10%
Project assignments (PA):	35%
Final presentation:	20%
Final report:	25%

Course grades will be based on the following scale:

A+	≥98%	B+	≥88%	C	≥70%
A	≥92%	B	≥82%	D	≥60%
A-	≥90%	B-	≥80%	F	<60%

Expectations:

Attendance: You are responsible for attending all classes. Lecture notes will not be available electronically, so if you miss class you should make arrangements to get class notes from someone else.

Assignments: All assignments are due in class on the assignment due date. To avoid losing points on late assignments, you must request an extension at least 24 hours before the assignment is due. Late assignments lose 10% of the assignment grade per week after the assignment due date, up to a maximum point loss of 50%.

Academic integrity: You are responsible for adhering to all university policies on academic integrity and student conduct. TILT has a number of resources for students related to writing and study skills: http://tilt.colostate.edu/integrity/resources/forstudents.cfm.