

WR492/WR674 - Issues in Hydrology

Offered: S2017

Credits: 3

Organizational Meetings: Tuesdays from 8:00-9:00 am location tba (Oct. 11, Nov. 15, Dec. 06)

Office of International Programs meeting: to be set by <Nicole.Tobin@colostate.edu>

Trip: January 2-13, 2017

Instructor: Steven Fassnacht <Steven.Fassnacht@colostate.edu>

Overview:

This course examines issues associated with hydrology and water resources. Students in the class will participate in a 12-day trip to Spain and Portugal to examine hydrological, ecological and cultural issues associated with the Duero/Douro River that starts at the Laguna Negra in the Iberico and Central Ranges of Spain (north of Soria) and flows into the Atlantic Ocean at Porto, Portugal. We will stay in apartments, and hotels where apartments are not available, and will travel by car (or van) between locations. Daily we will make 2-5 stops depending on the start and end locations, and student interest.

Grading (and due dates):

All assignments will be submitted digitally through OneDrive (or via email). Group assignments are presented in **bold**.

A. Pre-trip

1. Short essay on *Why I want to join the trip* (1-2 pages, 5%) - due October 1, 2016
2. Overview of *ecohydrological topic* to explore throughout the trip (5%) - December 2
 - Each student will select one topic or theme that they will “monitor” throughout the trip. Daily, they will measure their selected topic at most stops to assess how consistent or variable it is across space, as the watershed becomes larger. Examples include soil characteristics, vegetation, and water quality (e.g., secchi depth, dissolved oxygen, temperature, conductivity). At the start of the trip, each student will select a cultural topic that they will qualitatively track throughout the trip.
3. **Group** summary of *key hydro-climatic and GIS data* (10%) - December 9
4. *Day travel plan* (1-2 pages with maps and directions, 10%) - January 3
 - Each student will be responsible for the planning of one day, including providing directions to all stops. Accommodation venues will have been selected prior, and the instructor will provide guidance, where necessary.

B. During the trip

5. Prado favorite *painting exercise* (photo + ½ to 1 page, 5%) - January 20
6. Day-to-day *journal* following the river (25%) - January 20
 - This will include daily reflections based on observations and discussions with the daily partner, and daily measurements/observations of their ecohydrologic and cultural topics.

C. Post-trip

7. Ecohydrologic and Cultural topic *spatial analysis* (1-3 pages with figures, 10%) - February 24
8. Final **group** presentation (30-40 minutes, 20%) - week of March 20
9. Post-trip/course *final reflection*, revisiting the initial essay (2-3 pages, 10%) - March 31

Schedule (2017):

day of week	date	city visited	accommodation venue
Monday	1/2	depart USA	
Tuesday	1/3	arrive Madrid in morning	
Tuesday	1/3	Madrid	Calle Marquez Viudo de Pontejos 1, Madrid
Wednesday	1/4	El Escorial	
Wednesday	1/4	Pozo de Nieve	
Wednesday	1/4	Soria	La Laguna, Hinojosa de la Sierra
Thursday	1/5	Laguna Negra	
Thursday	1/5	Soria	La Laguna, Hinojosa de la Sierra
Friday	1/6	various stops	
Friday	1/6	Arando del Duero, Turégano	
Friday	1/6	Segovia	Don Jaime, Segovia
Saturday	1/7	possibly visit Penalara?	
Saturday	1/7	Avila	
Saturday	1/7	possibly visit Gredos?	
Saturday	1/7	Salamanca	JCH Congreso Apartamentos, Salamanca
Sunday	1/8	Salamanca (day off)	JCH Congreso Apartamentos, Salamanca
Monday	1/9	Sanabria	Casa Rural Xiromo, San Ciprian
Tuesday	1/10	Torre de Moncorvo	Quinta do Valbom, Torre de Moncorvo
Wednesday	1/11	Porto	Rua Santa Catarina 789, Porto
Thursday	1/12	Madrid	to be determined
Friday	1/13	depart Madrid	

Each morning we will have a daily “*tailboard*,” which is brief discuss to document/outline the day’s activity. It will be led by a student, and include the day’s itinerary, safety issues and barricades against incidents. We will also explicitly discuss timing so it is known when “official school hours are over.”