

Announcing a seminar on flooding & climate:

Spring 2011

HWRS 696F Section 002

Advanced Topics in Surface Hydrology and Modeling

Flood Hydrometeorology & Hydroclimatology —Implications for Global Change and Extreme Hydrology

1-3 units on Thursdays 4:00 – 6:30 pm

in Harshbarger 232

NOTICE: If anyone can't meet at this time (e.g., ATMO graduate students) please email me. I may be able to change the meeting time!

Instructor: Katie Hirschboeck

Associate Professor of Climatology

Laboratory of Tree-Ring Research & Chair, Global Change GIDP

(joint appointments in HWR, ATMO, GEOG and ALRS)



Course Description: This graduate seminar course will focus on the meteorological and climate-related causes of floods, both regionally and globally. After an overview of flood-generating processes, participants will examine and present case studies of a selection of past major flood events in the United States based on published post-flood reports (USGS, NOAA). In tandem with these case studies, we will review and discuss the relevant classic and current scientific literature on flood hydrometeorology, hydroclimatology, extreme precipitation events, and flooding and climate change. To apply the knowledge gained, participants will conduct a detailed analysis of a selected watershed's flood history to assess the past, present, and (projected) future climate-related drivers of the watershed's flooding variability. The semester will close with readings and discussion on the policy and planning implications that emerge from this physically based, climate-linked understanding of the underlying causes of flooding variability.

Format: This 1-3-unit class will **meet once a week for 3 hours** and will involve lectures, guest speakers, readings, student-led discussion on selected publications, student presentations on case studies of past floods, and — for those signed up for 3 units — a term project on the flood hydrometeorology and hydroclimatology of a selected watershed. Those signed up for 1 or 2 units will be required to participate in the class proportionately.

Prerequisites: This course will have an interdisciplinary focus. Participants should have a college-level background in the basics of one or more of the following areas: hydrology, meteorology, climatology, geomorphology and/or water resources. In addition, an understanding of basic statistics (probability) will be assumed.

Questions? For more information, contact Katie Hirschboeck: katie@lrr.arizona.edu