

HYDROCLIMATE PAST, PRESENT, & FUTURE GEOG696M Autumn 2017

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M 3:30 to 6pm 2 or 3 Credit options

What controls hydroclimate variability across space and

time? A new graduate seminar offered in Autumn 2017 will explore this question from multiple approaches theoretical, observational, paleoclimate, and modeling. The course will focus on hydroclimate variability over the Common Era, recent and current trends in precipitation, drought, soil moisture, and riverflow, and projections of future hydroclimate change. Readings are from classic, foundational, and recent papers, and topics will include: hydroclimate reconstructions of the Common Era (particularly from tree rings, but also other proxies), expectations from models and theory about the range of forced and unforced variability in global and regional hydroclimate systems, inferences about large-scale controls on hydroclimate variability across a range of time scales and climate states, uncertainties in observations and reconstructions of the hydroclimate system, statistical challenges in interpreting and reconstructing hydroclimate variability, and projections of future hydroclimate changes.