

## ENV 261 – Mixed Methods for Environmental Studies CALENDAR – Fall 2018

Full citations to readings, videos, and other material assigned for class each day is listed here. *Optional readings, supplementary material, and citations to materials covered in class are listed in italics.* Please see Content >> Weekly Course Materials for links or PDFs of all non-textbook assigned reading. D2L information also includes recommendations of which articles to print and bring to class.

***This printed list is provided as a convenience only. Please refer to D2L during the quarter for up-to-date information, deadlines, etc., and email me with any questions.***

### Week 1: INTRO TO MIXED METHODS (MM) RESEARCH

In class Thursday: Introductions; Syllabus & Course Overview; Definitions of Mixed Methods (MM) research

### Week 2: INTRO TO MIXED METHODS (MM) RESEARCH (continued)

For Tuesday class:

Ch. 1 & 2 from: Teddlie C, Tashakkori A (2009) *Foundations of Mixed Methods Research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage Publications, Thousand Oaks, CA. (*hereafter: T&T*) – read ch. 2 more closely

For Thursday class:

Creswell, J. (2013). "What is Mixed Methods Research" [YouTube video]. Available at: <https://www.youtube.com/watch?v=1OaNiTIpyX8>. Provides an overview of MM research methods and design; pay particular attention to first ~11 minutes now; the latter 4 minutes on research design will make more sense during Week 4.

Week 2 Lab:

Activity: Documentary & Storytelling as MM Research (& practice honing your skills of observation)

*Documentaries watched during lab:*

*Bolt, D., & McCann, S.E. (Producers). (1992). Crafting Institutions for Self-governing Irrigation Systems [Video documentary]. United States: Institute for Contemporary Studies, International Center for Self-Governance, & Studio Miramar.*

*Dell'Angelo, M., & Dell'Angelo, J. (Producers). (2015). Working Together: Research & Water Governance on Mount Kenya [Video documentary]. United State: Indiana University Ostrom Workshop, & Princeton University. Available at: <https://vimeo.com/159276686>. (See also Dell'Angelo et al. [2016] assigned for next week, based on this research.)*

***Prep for Week 3 lab: As you walk around the city, take photos – at least 5, no more than 10 – of your surroundings according to the guidelines decided upon during Week 2 lab.***

## Week 3: PARADIGMS, FRAMEWORKS, THEORIES, MODELS

For Tuesday class:

Ch. 5 in T&T – *read the following sections closely: “A Review of Philosophical Issues Relevant to Paradigms” and “Contemporary Points of View Regarding the Use of Paradigms”; skim remainder of chapter*

Elliott, K.C., Cheruvellil, K.S., Montgomery, G.M., & Soranno, P.A. (2016). Conceptions of good science in our data-rich world. *BioScience*, 66(10): 880-889.

Scholz, R.W., Steiner, G., 2015a. The real type and ideal type of transdisciplinary processes: part I— theoretical foundations. *Sustain. Sci.* 10, 527–544. doi:10.1007/s11625-015-0326-4

Mausser, W., Klepper, G., Rice, M., Schmalzbauer, B.S., Hackmann, H., Leemans, R., Moore, H., 2013. Transdisciplinary global change research: The co-creation of knowledge for sustainability. *Curr. Opin. Environ. Sustain.* 5, 420–431. doi:10.1016/j.cosust.2013.07.001

For Thursday class:

McGinnis, M.D., & Ostrom, E. (2014). Social-ecological system framework: Initial changes and continuing challenges. *Ecology and Society*, 19(2): article 30. <http://dx.doi.org/10.5751/ES-06387-190230>

Dell'Angelo, J., McCord, P.F., Gower, D., Carpenter, S., Caylor, K.K., & Evans, T.P. (2016). Community water governance on Mount Kenya: An assessment based on Ostrom's Design Principles of Natural Resource Management. *Mountain Research and Development*, 36(1): 102-115. *(This piece is an example of all types of “mixing” in MM: QUAN + QUAL, social + natural sciences, researchers + practitioners, etc. We'll discuss extensively in class, including as an example for the type of analysis you are asked to do for the Paradigms Essay assignment.)*

Week 2 Lab:

Activity: Literature Review & Synthesis Research

*Optional Resources for Lab Activity:*

*Ch. 6 from T&T – Note that ch. 6's use of the terms “theory” and “framework” is inconsistent with how we defined these terms during week 2.*

*Binder, C.R., Hinkel, J., Bots, P.W.G., & Pahl-Wostl, C. (2013). Comparison of frameworks for analyzing social-ecological systems. Ecology and Society, 18(4): article 26.*

**Documentary Lab Write-Up due Friday Week 3 at 7 pm – turn in via D2L**

## Week 4: DESIGNING MM RESEARCH

For Tuesday class:

Ch. 7 from T&T

Return to last ~5 minutes of Creswell video: <https://www.youtube.com/watch?v=1OaNiTIpyX8>

Silver, N. (2014). In search of America's best burrito. *FiveThirtyEight*, 5 June 2014. Available at: <https://fivethirtyeight.com/features/in-search-of-americas-best-burrito/> – This is an example of a sequential mixed research design.

*Optional Reading: (A good example of an active social-ecological research program that has developed a framework, research questions, and methodologies.)*

*Kliskey, A., Alessa, L., Wandersee, S., Williams, P., Trammell, J., Powell, J., Grumblatt, J., & Wipfli, M. (2017). A science of integration: Frameworks, processes, and products in a place-based, integrative study. Sustainability Science, 12: 293-303.*

### **Photos due Tuesday before class in order to use during lab this week**

For Thursday class:

Ch. 10 from T&T

Scientific Article Discussion # 1:

Conway, T.M., Shakeel, T., & Atalla, J. (2011). Community groups and urban forestry activity: Drivers of uneven canopy cover? *Landscape and Urban Planning*, 101: 321-329.

Week 4 Lab:

Activity: Observations & Field Notes

*Optional Resources for Lab Activity:*

*Ch. 2 "Observational Approaches" (p.33-58) from: Wolfe, C.R. (2016) Seeing the Better City. Washington, D.C.: Island Press.*

*Dahmen, N., Heider, D. (2017). "Want to resist the post-truth age? Learn to analyze photos like an expert would". Quartz, 5 February 2017. Available at: <https://qz.com/902573/want-to-resist-the-post-truth-age-learn-to-analyze-photos-like-an-expert-would/>*

### **Literature Review Lab Write-Up due Friday Week 4 at 7 pm – turn in via D2L**

## **Week 5: DATA COLLECTION, Part 1: SURVEYS**

Read, in order to complete alternative activity class, available on D2L:

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54(2): 93-105.

Ch. 7 "Implementation Procedures" from: Dillman, E., Smyth, J., & Christian, L. (2014). *Internet, phone, mail and mixed-mode surveys: The tailored design method*, 4<sup>th</sup> ed. Hoboken, NJ: John Wiley & Sons, Inc.

### **Paradigms Essay due Friday Week 5 at 7 pm via D2L**

### **Observations Lab Write-Up due Friday Week 5 at 7 pm via D2L**

## **Week 6: DATA COLLECTION, Part 2: INTERVIEWS**

For Tuesday class:

Ch. 4 “Interviewing” from: Weiss, R.S. (1994). *Learning from Strangers: The art and method of qualitative interview studies*. New York, NY: The Free Press.

For Thursday class:

Scientific Article Discussion # 2:

Feinberg, D.S., Hostetler, M.E., Reed, S.E., Pienaar, E.F., & Pejchar, L. (2015). Evaluating management strategies to enhance biodiversity in conservation developments: Perspectives from developers in Colorado, USA. *Landscape and Urban Planning*, 136: 87-96.

*Optional Reading: (Blog post from “The Nature of Cities” by one of the coauthors of the assigned Feinberg et al. article)*

Hostetler, M. (2015). *What do developers think about managing for biodiversity in conservation developments?* The Nature of Cities, 25 January 2015. Available at:

<https://www.thenatureofcities.com/2015/01/25/what-do-developers-think-about-managing-for-biodiversity-in-conservation-developments/>

Week 6 Lab:

Activity: Conducting & transcribing interviews

*Optional Resources for Lab Activity:*

**Survey Lab Write-Up due Friday Week 6 at 7 pm via D2L**

## **Week 7: QUALITATIVE DATA ANALYSIS**

For Tuesday class:

Ch. 1 from: Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers*, 3<sup>rd</sup> ed. Los Angeles, CA: Sage Publications.

**Interview transcription completed by class time on Tuesday - submit via D2L**

For Thursday class:

Scientific Article Discussion # 3:

Muñoz-Erikson, T.A. (2014). Co-production of knowledge-action systems in urban sustainable governance: The KASA approach. *Environmental Science & Policy*, 37: 182-191.

*Optional Reading:*

Muñoz-Erikson, T.A. (2014) *Multiple pathways to sustainability in the city: The case of San Juan, Puerto Rico*. *Ecology and Society*, 19(3): article 2.

Week 6 Lab:

Activity: Qualitative coding using NVivo

*Optional Resources for Lab Activity:*

## **Week 8: ETHICS OF MM RESEARCH**

***CITI Training completed by Tuesday Week 8 before class – submit CITI Completion Report via D2L***

For Tuesday class:

Fluehr-Lobban, C. (1998). Ethics. In: Bernard, H. R. (Ed.), *Handbook of Methods in Cultural Anthropology*, Walnut Creek, CA, AltaMira Press, pp. 173–202.

For Thursday class:

TBD – please check D2L

Scientific Article Discussion # 4:

Binder, S.B., Baker, C.K., & Barile, J.P. (2015). Rebuild or relocate? Resilience and postdisaster decision-making after hurricane sandy. *American Journal of Community Psychology*, 56: 180-196.

Week 8 Lab: TBD

***Interview Analysis Lab Write-Up due Friday Week 8 at 7 pm via D2L***

## **Week 9: MM RESEARCH IN ACTION**

For Tuesday class:

Rudel, T.K. (2008). Meta-analyses of case studies: A method for studying regional and global environmental change. *Global Environmental Change*, 18: 18-25.

Campbell, L.K., Svendsen, E.S., & Roman, L.A. (2016). Knowledge co-production at the research-practice interface: Embedded case studies from urban forestry. *Environmental Management*, 57(6): 1262-1280.

*In class: Overview of the Group Project with Drew Hart & CommuniTree*

For Thursday: *(In preparation for the field trip during class/lab time)*

*Abood, Hart & Vogt in preparation*

*TBD reading material in preparation for group project with CommuniTree (see D2L)*

Week 9 FIELD TRIP: **Leave at 7:30 am**

Field Trip to NW Indiana for Group Project: Tree planting. *Dress to be outside for the duration.*

***IRB Protocol for Research Design due Friday Week 9 at 7 pm via D2L***

## **Week 10: DATA ANALYSIS & SYNTHESIS**

For Tuesday class:

Ch. 11 from T&T

Other research methods: TBD (see D2L)

For Thursday class:

Rissman, A.R., & Gillon, S. (2016). Where are ecology and biodiversity in social-ecological systems research? A review of research methods and applied recommendations. *Conservation Letters*, 10(1): 86-93.

Week 9 Lab:

Activity: TBD

(Rain date for NW Indiana field trip.)

**Research Design due Friday at 7 pm via D2L**

## Finals Week

**Group Project due Thursday Nov 15 at 8:30 am (at scheduled final exam period)**

**We WILL meet during final exam time, Thursday Nov 15, 8:30-10:45 am, when we'll share the Group Project results with the CommuniTree stakeholders.**