

## ENV 261 – Mixed Methods for Environmental Studies WEEKLY CALENDAR – Autumn 2021

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

General format for most weeks will be to cover textbook material on Tuesday, lab on Wednesday, and then discuss scientific articles or additional readings on Thursday. Please plan your weekly reading accordingly.

- Readings for a specific class/lab are identified by **(For Thursday)** or similar.
- \*\*\*\*\*Readings designated with a series of asterisks will be the topic of detailed class discussion/activities and should be read closely.
- **Assignment due dates are highlighted.**

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### SEPT 8-10 – Intro to Course

Wednesday “lab” (first day of class is Sept 8); Thursday lecture

Required reading: (all passed out first day of class & posted to D2L)

- Syllabus
- Weekly Calendar
- Ruben, A. (2016, Jan 20). “How to read a scientific paper.” *Science*, doi:10.1126/science.caredit.a1600012. Retrieved from <https://www.sciencemag.org/careers/2016/01/how-read-scientific-paper>
- (For Thursday)** Pain, E. (2016, Mar 21). “How to (seriously) read a scientific paper.” *Science*, doi: 10.1126/science.caredit.a1600047. Retrieved from <https://www.sciencemag.org/careers/2016/03/how-seriously-read-scientific-paper>

Recommended reading: *A good overview and quick reference for mixed methods research and a hint of what will be covered in this class.*

- Small, M.L. (2011). How to conduct a mixed methods study: Recent trends in a rapidly growing literature. *Sociology*, 37(1): 57-86. doi: 10.1146/annurev.soc.012809.102657.

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### SEPT 13-17 – Intro to Mixed Methods (MM) Research

Tuesday lecture; Wednesday lab (**MM Documentaries Lab**); Thursday lecture

Required reading:

- Textbook (**T&T hereafter**) Chapter 1 (skim): 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.
- T&T Chapter 2 (read closely)
- Fetters, M.D. (2018). Six equations to help conceptualize the field of mixed methods. *Journal of Mixed Methods Research*, 12(3): 262–267. doi: 10.1177/1558689818779433.

## SEPT 20-24 – Paradigms

Tuesday lecture; Wednesday lab (**Literature Review Lab**); Thursday discussion (**Scientific Article Discussion # 1**)

### Required reading:

- \*\*\*\*\*(**Tuesday**) Chapter 5 from 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., Cheruvilil, K.S., Montgomery, G.M., & Soranno, P.A. (2016). Conceptions of good science in our data-rich world. *BioScience*, 66(10): 880-889.
- \*\*\*\*\*(**For Thursday - Scientific Article Discussion # 1**) 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.

### Optional reading: *A great guide to conducting systematic literature reviews*

- Siddaway, A.P., A.M. Wood, & L.V. Hedges. (2019). How to do a systematic review: A best practice guide for conducting and reporting narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology*, 70: 9.1-9.24.

**Documentaries Lab due Friday, September 24, 11:59 pm**

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## SEPT 27-OCT 1 – Causation

Tuesday lecture; Wednesday field trip (**Observation Lab: Northwest Indiana FIELD TRIP #1 – leave by 7:30 am, return by 12:50 pm**); Thursday discussion (**Scientific Article Discussion # 2**)

### Required reading:

- Chapter 6 (skip pp. 120-126) from the textbook T&T
- Roulston, K. (2017, April 14). "Memo writing as a way of being a researcher." *QualPage*. Available at: <https://qualpage.com/2017/04/14/memo-writing-as-a-way-of-being-a-researcher/>
- (**Background for Wednesday field trip**) Vogt, J., Abood, M. (2020). A transdisciplinary, mixed methods research agenda for evaluating the collective impact approach for tree planting: The CommuniTree initiative in northwest Indiana, U.S. *Urban Forestry and Urban Greening*, 53: 126735. <https://doi.org/10.1016/j.ufug.2020.126735>
- \*\*\*\*\*(**For Thursday - Scientific Article Discussion # 2**) Verlič, A., Arnberger, A., Japelj, A., Simončič, P., Pirnat, J. (2015). Perceptions of recreational trail impacts on an urban forest walk: A controlled field experiment. *Urban Forestry & Urban Greening*, 14: 89-98. <http://dx.doi.org/10.1016/j.ufug.2014.12.004>

### Optional, advanced reading:

- Johnson, R.B., F. Russo, J. Schoonenboom. (2017). Causation in mixed methods research: The meeting of philosophy, science, and practice. *Journal of Mixed Methods Research*, 13(2):143-162. doi: 10.1177/1558689817719610.

**Literature Review Lab due Friday, October 1, 11:59 pm**

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## OCT 4-8 – Mixed Methods Research Design

Tuesday lecture; Wednesday lab (**Research Design Assignment overview & worksheet time**); Thursday discussion (**Scientific Article Discussion # 3**)

### Required reading:

- T&T Chapter 7
- \*\*\*\*\*(**For Wednesday lab**) Ch. 5 “How to draw a diagram of procedures” (p. 51-62) from: Creswell, J.W. (2015) *A Concise Introduction to Mixed Methods Research*. Los Angeles, CA: Sage.
- \*\*\*\*\*(**For Wednesday lab**) 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/>
- \*\*\*\*\*(**For Thursday – Scientific Article Discussion # 3**) 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.

### Optional reading:

- Garcia, J.R., Zazueta, A. (2015). Going beyond mixed methods to mixed approaches: A systems perspective for asking the right questions. *IDA Bulletin*, 46(1): 30-43.

**Field Trip Observations due Friday, October 8, 11:59 pm**

**Paradigms Essay due Friday, October 8, 11:59 pm**

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## OCT 11-15 – Survey Design & Administration

Tuesday lecture; Wednesday field trip (**Northwest Indiana FIELD TRIP #2** – leave by 7:30 am, return by 12:50 pm); Thursday “lab” during lecture (**Survey Design Lab**)

### Required reading:

- T&T Chapter 10 (skim)
- T&T Chapter 9, pp. 208-216 (starting at “Data Quality in the Quantitative and Qualitative Strands of Mixed Research”)
- \*\*\*\*\*(**For Tuesday**) Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54(2): 93-105.

### Optional, recommended reading:

- 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.
- T&T Chapter 8 – *There are some helpful terms and concepts in this chapter for your Research Design assignment; some of these are summarized in the bullet points on Worksheet 2. This will be required reading next week.*

**Research Design Worksheets due Friday, October 15, 11:59 pm**

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## OCT 18-22 – Survey Analysis

Tuesday activity (**CommuniTree interview design, led by ENV MS student Kristine Lorenzo**); Wednesday lab (**Survey Analysis Lab**); Thursday discussion (**Scientific Article Discussion # 4**)

### Required reading:

- T&T Chapter 11 pp. 256-263 (starting at “Analysis Strategies for Quantitative Data”)
- T&T Chapter 8 – *There are some helpful terms and concepts in this chapter for your Research Design assignment; some of these are summarized in the bullet points on Worksheet 2. I suggest you read chapter 8 sometime in Weeks 7 or 8.*
- \*\*\*\*\***(For Thursday - Scientific Article Discussion # 4)** 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.

**Survey Design Lab (Worksheet) due Friday, October 22, 11:59 pm**

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## OCT 25-29 – Interviews & Ethics of Research

Tuesday lecture; Wednesday lab (**Interview Conduct Lab**); Thursday lecture

### Required reading:

- T&T Chapter 9 pp. 197-204 (beginning of chapter up to “Introduction to Data Collection Issues in Mixed Methods Research”)
- Fluehr-Lobban, C. (1998). Ethics. In: Bernard, H. R. (Ed.), *Handbook of Methods in Cultural Anthropology*, Walnut Creek, CA, AltaMira Press, pp. 173–202.
- Bernard (1995). Ch. 10 “Unstructured and Semistructured Interviewing” (pp. 208–236) from: Bernard, H.R. (1995). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. AltaMira Press, Walnut Creek, CA.

### Optional, recommended reading:

- “Ethical Issues to Anticipate” (pp. 88-98) from: Creswell, J.W. & Creswell, J.D. (2018). *Research Design: Qualitative, quantitative, and mixed methods approaches*, 5<sup>th</sup> edition. Los Angeles. CA, Sage.
- 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.

**Survey Analysis Lab (Methods & Results) due Friday, October 29, 11:59 pm**

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## NOV 1-5 – Qualitative Data Analysis

Tuesday lecture; Wednesday lab (**Qualitative Interview Analysis Lab**); Thursday discussion (**Scientific Article Discussion # 5**)

**Interview Transcript due WEDNESDAY, Nov 3, 9:40 am before class**

### Required reading:

- Chapter 1 from Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers*, 3<sup>rd</sup> edition. Sage Publications, Thousand Oaks, CA. - pay particular attention through page 30, then skimming p. 30 to the end of the chapter
- \*\*\*\*\***(For Thursday – Scientific Article Discussion # 5)** Carmichael, C. E., & McDonough, M. H. (2018). The trouble with trees? Social and political dynamics of street tree-planting efforts in Detroit, Michigan, USA. *Urban Forestry & Urban Greening*, 31(August 2017), 221–229.  
<https://doi.org/10.1016/j.ufug.2018.03.009>

Optional, recommended reading:

- T&T Ch. 11, pp. 249-256 (beginning of chapter up to “Analysis Strategies for Quantitative Data”), which provides an overview of QUAL data analysis useful in MM
- Chapter 4 from: Miles, M.B., Huberman, A.M., Saldaña, J. (2014). *Qualitative Data Analysis: A methods sourcebook*, 3<sup>rd</sup> edition. Sage Publications, Thousand Oaks, CA.

**CITI Training (upload Completion Report) due Friday, Nov 5, 11:59 pm**

**IRB Protocol Draft due Friday, Nov 5, 11:59 pm**

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## **NOV 8-12 – MM Research in Action & Synthesis**

Tuesday lecture; Wednesday lab (**Research Design work time**); Thursday lecture

Required reading:

- T&T Chapter 11, p 263-284, and all of Chapter 12
- \*\*\*\*\*Bryman, A. (2006). Integrating qualitative and quantitative research: How is it done? *Qualitative Research*, 6(1):97-113

Optional, advanced reading:

- 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.
- Fielding, N. (2010). Mixed methods research in the real world. *International Journal of Social Research Methodology*, 13(2): 127-138.
- Mauser, W., G. Klepper, M. Rice, B.S. Schmalzbauer, H. Hackmann, R. Leemans, H. Moore. (2013). Transdisciplinary global change research: The co-creation of knowledge for sustainability. *Current Opinion in Environmental Sustainability*, 5: 420-431.

**Qualitative Interview Analysis Lab due Friday, November 12, 11:59 pm**

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## **NOV 16 – Wrap-Up**

Tuesday lecture (last day of class) – *No required reading*

## **NOV 17-23 – Finals Week – No formal class meeting during Finals Week**

**Research Design due end of Finals Week, Nov 23, 2021, 11:59 pm**