ESM 228: Monitoring & Evaluation (S'22)
Instructor: Patrick Hunnicutt (phunnicutt@bren.ucsb.edu)
Class meetings: Tuesday/Thursday, 8:00am - 9:15am
Physical Classroom: MSB 1302
Remote Classroom: link (password: esm228!); used if necessary.
Office hours: By Appointment, Bren 3017

Course Description

Evidence-based programming and policy-making are now priorities for many non-profit organizations and public agencies, including organizations that work on energy, climate change, and natural resource management. At the heart of evidence-based decision-making are *monitoring and evaluation* systems, which focus on the *prospective* design of data collection procedures and evaluations to support decision-making. To generate datasets that are useful for decision-making, organizations often have to create plans to collect data in advance of implementing programs. Likewise, the ability to evaluate the impacts of programs depends in large part on the ways that programs are rolled out and the data collection systems that are in place, which requires advanced planning. This course provides an overview of the considerations and techniques involved in *prospectively* designing monitoring and evaluation systems within public and non-profit organizations to support decision-making and accountability. We will explore the advantages of advanced planning for monitoring and evaluation, as opposed to relying passively on available data.

Assignments

Participation: Your active participation is important for the success of this course. I expect that you will closely read all of the assigned articles and documents before coming to (virtual) class and that you will be prepared to engage in all discussions and activities.

Practicums: The course is organized into four units, each of which culminates with a practicum where you will be asked to practice the skills discussed in that unit. The detailed instructions for the practicums will be laid out in separate documents. For each practicum, you will be randomly assigned to groups of two individuals. We will spend the practicum sessions on active work, group Q&A, and lightning presentations. For each practicum, your group will turn in a written product. Short descriptions of each practicum are listed below.

- "Theory of Change" practicum: Pick a future-oriented program or strategy for an organization that is intended to have an impact on outcomes you care about. Sketch out and justify a detailed theory of change that links the input and activities of the organization to the targeted outcomes and impacts.
- "Measurement" practicum: Pick a future-oriented program or strategy for an organization that it intended to have an impact on outcomes you care about. Sketch out a detailed results framework for the program. Additionally, design a data collection instrument that will be used to measure the outcomes in your results framework.
- "Evaluation" practicum: Pick a program of interest that has yet to be implemented, but for which a full description or initial appraisal has been carefully documented. Design an

impact evaluation for this program that can be used to estimate the impacts of the program. The impact evaluation should address: (1) treatment; (2) randomization; (3) sample; (4) power; (5) contingencies; and (6) mechanisms.
- "Organizational Strategy" practicum: Design an organizational M&E strategy for an organization that you might like to work for. Identify the key questions that an M&E strategy could answer and discuss how you will utilize scarce resources for achieving the learning or accountability objectives of the organization.

Student Evaluation

I want your focus in the course to be on learning and applying new skills. Therefore, we will use a method of student evaluation called <u>contract grading</u>. Contract grading is meant to both reduce the amount of stress/uncertainty surrounding grades and give students more agency in deciding which assignments they would like to complete. For more information regarding the theory/research behind contract grading, please see this [paper](#).

In practice, contract grading involves the following: First, the instructor presents bundles of assignments that correspond to discrete letter grades (see below). Second, students select the bundle of assignments that corresponds to the grade they would like to receive in the course. Third, students and the instructor will sign a contract noting this commitment (we will do this via a Google form). Fourth, students will complete each assignment within their contract to a satisfactory level prior to the end of the academic term.

An "A" contract consists of the following:
- Participation: no more than *one* unexcused absence, and active participation when present in class.
- Practicums: complete Theory of Change, Measurement, Evaluation, and Organizational Strategy practicums to a satisfactory level by the end of Week 10.

An "A-" contract consists of the following:
- Participation: no more than *two* unexcused absences, and active participation when present in class.
- Practicums: complete Theory of Change, Measurement, and Evaluation practicums to a satisfactory level by the end of Week 10.

A "B+" contract consists of the following:
- Participation: no more than *three* unexcused absences, and active participation when present in class.
- Practicums: complete Theory of Change and Measurement practicums to a satisfactory level by the end of Week 10.

A "B" contract consists of the following:
- Participation: no more than *four* unexcused absences, and active participation when present in class.

- Practicums: complete Theory of Change practicum to a satisfactory level by the end of Week 10.

A few important notes:
- Before the end of the term, each assignment will receive a grade of either Satisfactory (S) or Incomplete (I). Satisfactory grades will be awarded to assignments that are equivalent to or in excess of a B+ level(>89%). Incomplete grades will be awarded to assignments that fall below a B+ level (<89%). You will have the opportunity to revise any Incomplete assignment prior to the end of term, such that it receives a Satisfactory grade post-revision. Failure to revise Incomplete assignments by the end of term will result in a one-unit demotion of your chosen grading contract.
  - For example, imagine that you selected an A- contract that requires submitting assignments A, B, and C, and that you received a Satisfactory on assignments A and B but an Incomplete on assignment C. Revising assignment C so it meets the standards for Satisfactory would result in a final course grade of A-. Failing to revise assignment C would result in a final course grade of B+.
- There are no within-term deadlines for assignments in this course. All that is required is that you submit the assignments specified in your contract, completed to a Satisfactory level, by the end of Week 10. Failing to submit assignments completed to a Satisfactory level by the end of Week 10 will result in a one-unit demotion of your chosen grading contract.
  - It is in your best interest to complete and submit assignments once we have reviewed the requisite materials to complete them. This will allow you to have as much time as possible to make revisions to assignments that receive a grade of Incomplete.

Course Policies
Re-grades: I take student evaluation seriously and do not entertain requests to re-grade assignments unless I receive a formal, written request for a re-grade that compellingly documents a serious oversight on my part. A serious oversight on my part indicates that the entire assignment should receive further attention. Your score may go up or down if I decide that an assignment needs this kind of attention, so plan accordingly. That being said, I strongly encourage you to meet with me to discuss my feedback on your assignments.

Academic Honesty: I expect you to adhere to the highest standards of academic honesty. This means only turning in work that is your own and properly citing all information and ideas that you draw from others. Any assignment that does not adhere to UCSB academic honesty guidelines will not receive credit and will be referred to campus judicial procedures. See: http://studentconduct.sa.ucsb.edu/academic-integrity

Course changes: It is possible that the order or content of the sessions will have to change. Pay attention to announcements and check back here often.

Reference Texts

Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (2015). *Handbook of Practical Program Evaluation*. John Wiley & Sons. (on-campus access only)

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). *Impact Evaluation in Practice*. Washington, D.C.: World Bank Publications.

Unit 1: Introduction

Session 1 (29-Mar) — Introduction & preliminaries

Baylis, K., Honey-Rosés, J., Börner, J., Corbera, E., Ezzine-de-Blas, D., Ferraro, P. J., ... & Wunder, S. (2016). Mainstreaming impact evaluation in nature conservation. *Conservation Letters*, *9*(1), 58-64.

Ferraro, P. J., & Hanauer, M. M. (2014). Advances in measuring the environmental and social impacts of environmental programs. *Annual Review of Environment and Resources*, *39*, 495-517.

Session 2 (31-Mar) — Goals of M&E

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). Why evaluate? Chapter 1, in *Impact Evaluation in Practice*. Washington, D.C.: World Bank Publications, pp. 1-30.

Skim: Pritchett, L. (2002). It pays to be ignorant: a simple political economy of rigorous program evaluation. *The Journal of Policy Reform*, *5*(4), 251-269.

Session 3 (5-Apr) — Theory of change

White, H. (2009). Theory-based impact evaluation: principles and practice. *Journal of Development Effectiveness*, *1*(3), 271-284.

Conservation International (2013). Constructing theories of change models for ecosystem-based adaptation projects: a guidance document. Conservation International. Arlington, VA.

Session 4 (7-Apr) — Theory of change (practicum)

Examples of theories of change:

Alaska Conservation Foundation
Rare
Marine Stewardship Council
Ford Foundation
WASH Alliance International

Forti, M. (2012). Six theory of change pitfalls to avoid. Blog post.

Assignment: Pick a future-oriented program or strategy for an organization that is intended to have an impact on outcomes you care about. Sketch out and justify a detailed theory of change that links the input and activities of the organization to the targeted outcomes and impacts.

Unit 2: Measurement

Session 5 (12-Apr) — Results framework & indicators

Independent Evaluation Group. (2012). Designing a results framework for achieving results: a how-to guide. Washington, D.C.: World Bank.

Anderson, J. L., Anderson, C. M., Chu, J., Meredith, J., Asche, F., Sylvia, G., ... & McCluney, J. K. (2015). The fishery performance indicators: a management tool for triple bottom line outcomes. *PLoS One*, *10*(5), e0122809.

Example of indicator bank
U.S. Government (2019). *Feed the Future Indicator Handbook*. Washington, D.C.: Feed the Future.

Session 6 (14-Apr) — Interviews, surveys, and human subjects

Newcomer, K. E. & Triplett, T. (2015). Using surveys. Chapter 14, in Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (Eds.). *Handbook of Practical Program Evaluation*. John Wiley & Sons, pp. 344-382.

Nuno, A., & John, F. A. S. (2015). How to ask sensitive questions in conservation: A review of specialized questioning techniques. *Biological Conservation*, *189*, 5-15.

Session 7 (19-Apr) - Sampling bias

Kennedy, C., Blumenthal, M., Clement, S., Clinton, J. D., Durand, C., Franklin, C., ... & Saad, L. (2018). An evaluation of the 2016 election polls in the United States. *Public Opinion Quarterly*, *82*(1), 1-33.

Adams, C., Ide, T., Barnett, J., & Detges, A. (2018). Sampling bias in climate–conflict research. *Nature Climate Change*, *8*(3), 200.

Session 8 (21-Apr) - Sampling techniques

Rooney, B. J., & Evans, A. N. (2018). Selecting research participants. *Methods in Psychological Research*. Sage Publications, pp. 125-139.

Salkind, N. J. (2010). Stratified sampling. Encyclopedia of Research Design. Sage Publications. doi: https://dx.doi.org/10.4135/9781412961288.n445

Session 9 (26-Apr) — Measurement strategy (practicum)

Example results frameworks / measurement strategies
Green Climate Fund
CGIAR
Canada National Energy Board
Food and Agriculture Organization
California Water

Assignment: Pick a future-oriented program or strategy for an organization that it intended to have an impact on outcomes you care about. Sketch out a detailed results framework for the program. Additionally, design a data collection instrument that will be used to measure the outcomes in your results framework.

Template (Gates Foundation)

Unit 3: Impact Evaluation

Session 10 (28-Apr) — Causal inference and counterfactuals

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). Causal inference and counterfactuals. Chapter 3, in *Impact Evaluation in Practice*. Washington, D.C.: World Bank Publications, pp. 47-62.

Ferraro, P. J. (2009). Counterfactual thinking and impact evaluation in environmental policy. *New Directions for Evaluation*, *2009*(122), 75-84.

Session 11 (3-May) — Randomized evaluations

Jayachandran, S., De Laat, J., Lambin, E. F., Stanton, C. Y., Audy, R., & Thomas, N. E. (2017). Cash for carbon: A randomized trial of payments for ecosystem services to reduce deforestation. *Science*, *357*(6348), 267-273.

Aklin, M., Bayer, P., Harish, S. P., & Urpelainen, J. (2017). Does basic energy access generate socioeconomic benefits? A field experiment with off-grid solar power in India. *Science Advances*, *3*(5), e1602153.

Session 12 (5-May) — Design principles for randomized evaluations

Gerber, A. S., & Green, D. P. (2012). *Field experiments: Design, analysis, and interpretation*. WW Norton. Chs. 2-3. [posted on Gauchospace]

Session 13 (10-May) - Power analysis

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). Choosing a sample. Chapter 15, in *Impact Evaluation in Practice*. Washington, D.C.: World Bank Publications, pp. 261-290.

Buntaine, M.T, Zhang, B. & Hunnicutt, P. (2020). Citizen Monitoring of Waterways Decreases Pollution in China by Supporting Government Action and Oversight. Working Paper.

Session 14 (12-May) — Design challenges of randomized evaluations

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). Addressing methodological challenges. Chapter 9, in *Impact Evaluation in Practice.* Washington, D.C.: World Bank Publications, pp. 159-174.

Glennerster, R. (2017). The practicalities of running randomized evaluations: partnerships, measurement, ethics, and transparency. In *Handbook of Economic Field Experiments* (Vol. 1, pp. 175-243). North-Holland.

Session 15 (17-May) — Mechanisms

Astbury, B., & Leeuw, F. L. (2010). Unpacking black boxes: mechanisms and theory building in evaluation. *American Journal of Evaluation*, *31*(3), 363-381.

Levy Paluck, E. (2010). The promising integration of qualitative methods and field experiments. *The ANNALS of the American Academy of Political and Social Science*, *628*(1), 59-71.

Session 16 (19-May) — Quasi-experimental techniques

Henry, G. T. (2015). Comparison group designs. Chapter 6, in Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (Eds.). *Handbook of Practical Program Evaluation*. John Wiley & Sons, pp. 137-157.

Ahmadia, G. N., Glew, L., Provost, M., Gill, D., Hidayat, N. I., Mangubhai, S., & Fox, H. E. (2015). Integrating impact evaluation in the design and implementation of monitoring marine protected areas. *Phil. Trans. R. Soc. B*, *370*(1681), 20140275.

Session 17 (24-May) — Impact evaluation (practicum)

Reading: 3ie Impact Evaluation Database (read at least two impact evaluations of interest)

Assignment: Pick a program of interest that has yet to be implemented, but for which a full description or initial appraisal has been carefully documented. Design an impact evaluation for this program that can be used to estimate the impacts of the program. The impact evaluation should address: (1) treatment; (2) randomization; (3) sample; (4) power; (5) contingencies; and (6) mechanisms.

Unit 4: Building Monitoring & Evaluation Systems

Session 18 (26-May) — Formative, process and performance evaluations

Epstein, D., & Klerman, J. A. (2012). When is a program ready for rigorous impact evaluation? The role of a falsifiable logic model. *Evaluation Review*, *36*(5), 375-401.

USAID. (n.d.) Rapid Feedback MERL. Project Webpage.

USAID. (n.d.) Rapid Feedback MERL Fact Sheet. Fact Sheet.

Session 19 (31-May) — Developing organizational M&E strategies

Skim these strategies for real-world examples:

U.S. Environmental Protection Agency (2009). *Guidelines for Evaluating and EPA Partnership Program*. Washington, D.C.: U.S. Environmental Protection Agency.

Australian Government (2009). *Natural Resource Management Monitoring, Evaluation, Reporting, and Improvement Framework*. Commonwealth of Australia.

Session 20 (2-Jun) — Organizational M&E strategy (practicum)

Hatry, H. P. & Newcomer, K. E. (2015). Pitfalls in evaluations. Chapter 26, in Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (Eds.). *Handbook of Practical Program Evaluation*. John Wiley & Sons, pp. 701-724.

Assignment: design an organizational M&E strategy for an organization that you might like to work for. Identify the key questions that an M&E strategy could answer and discuss how you will utilize scarce resources for achieving the learning or accountability objectives of the organization.

Syllabus change log