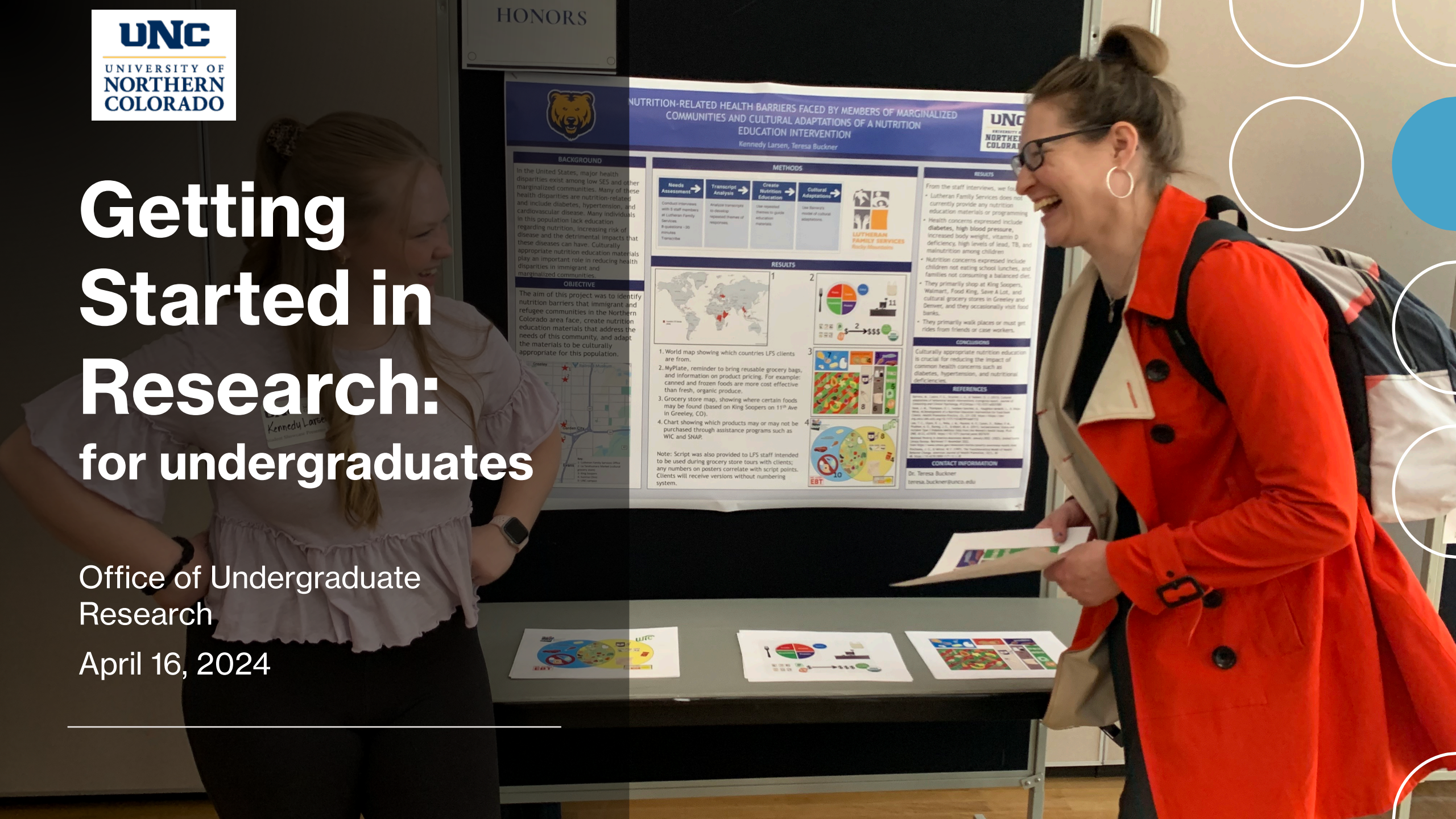
UNC
UNIVERSITY OF NORTHERN COLORADO

Getting Started in Research:
for undergraduates

Office of Undergraduate Research

April 16, 2024



Workshop Overview

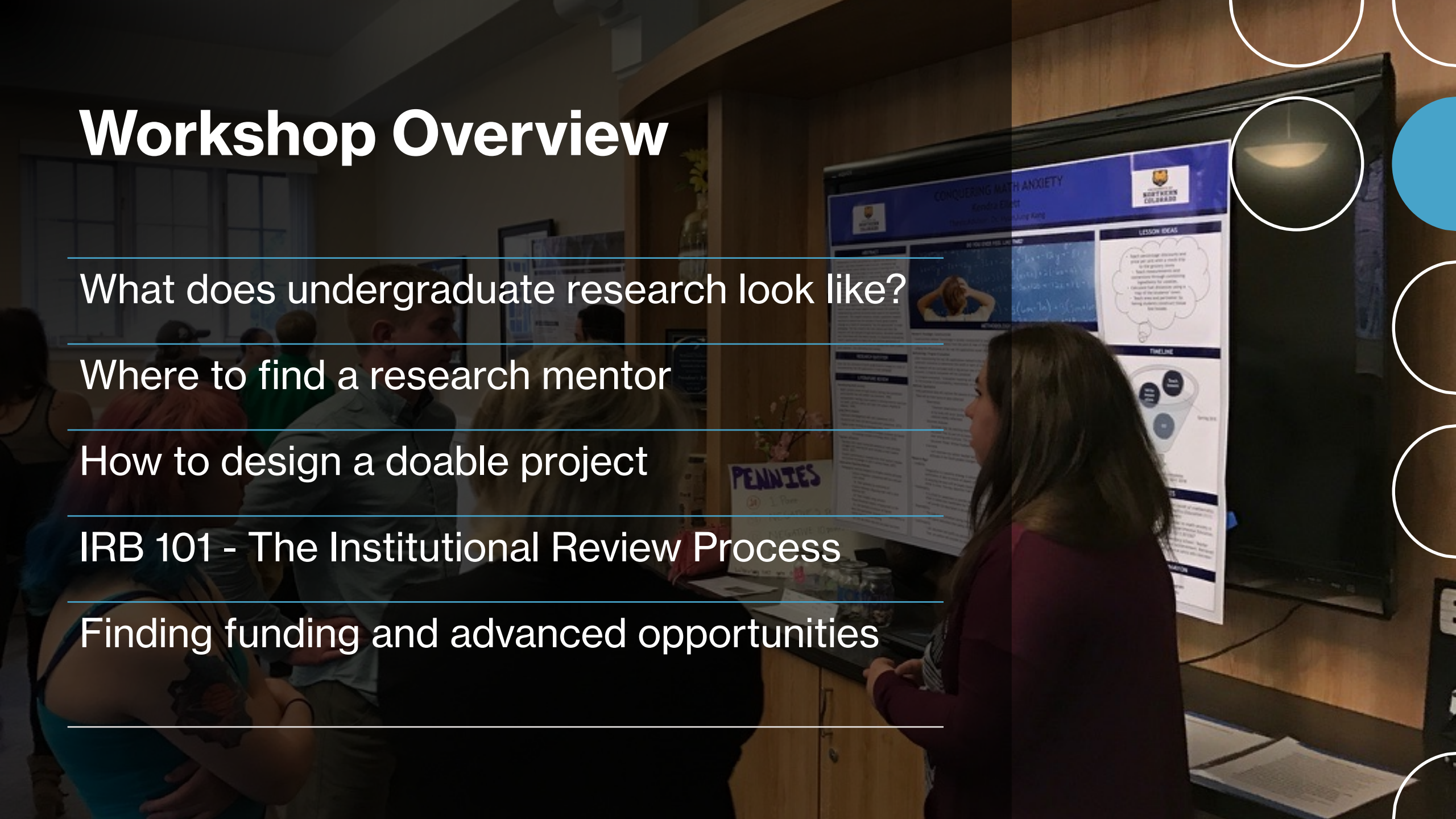
What does undergraduate research look like?

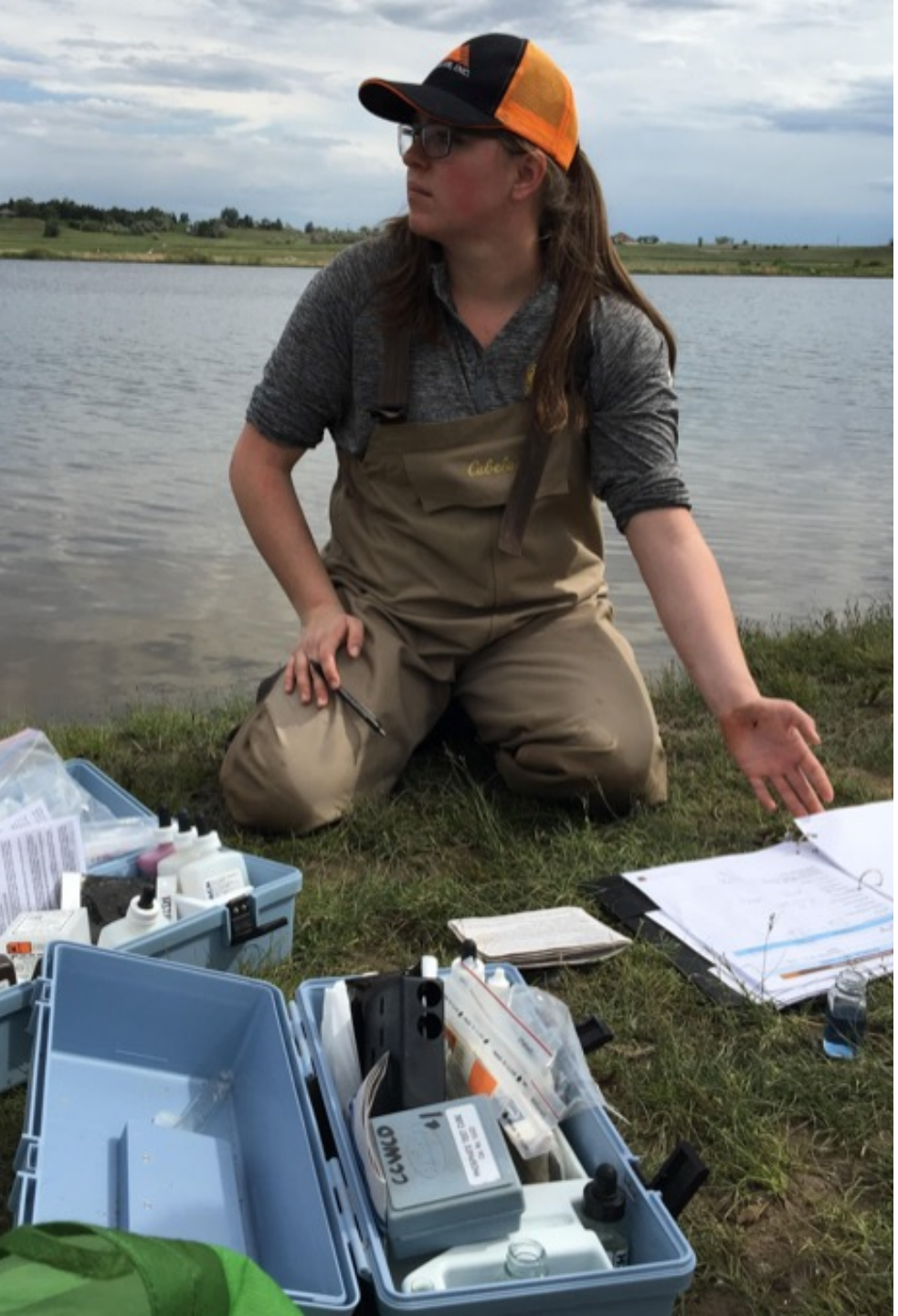
Where to find a research mentor

How to design a doable project

IRB 101 - The Institutional Review Process

Finding funding and advanced opportunities





What does undergraduate research look like?

➢ Natural Sciences

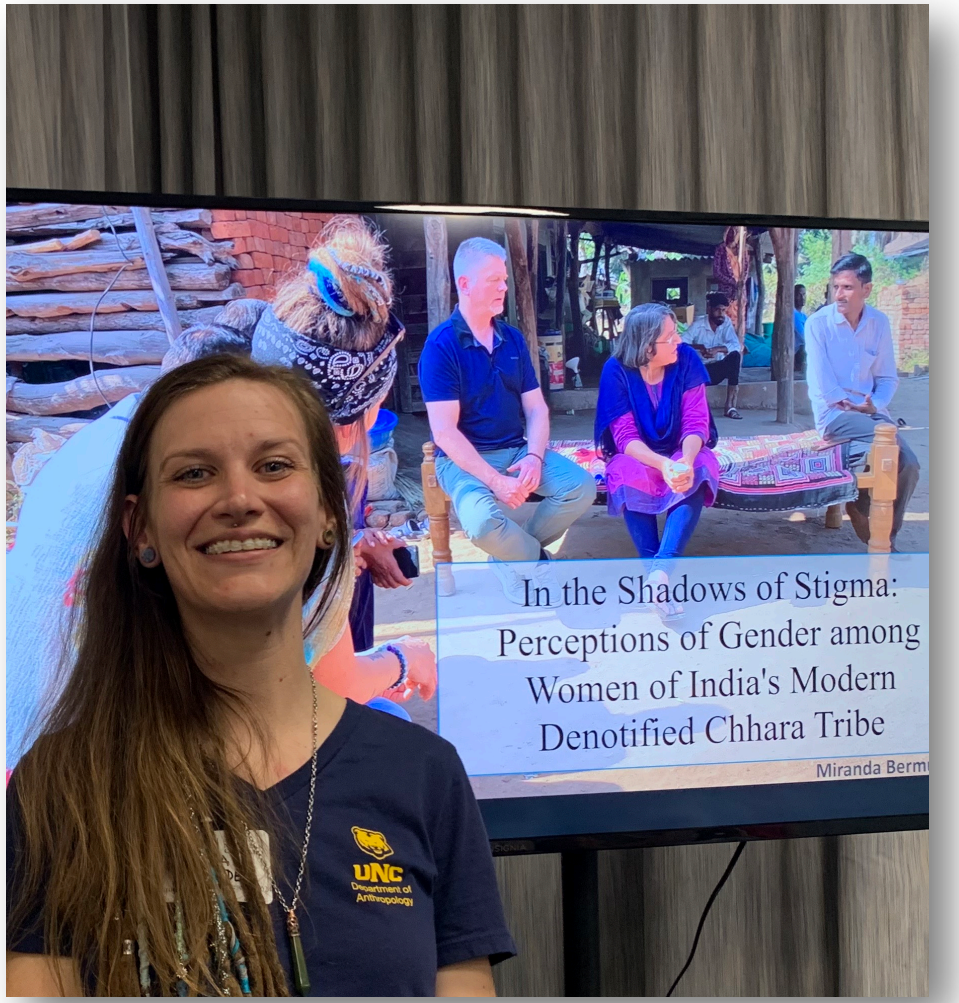
”Bench” research

- Closely connected to a faculty member and/or graduate student in their “Lab”.
- Highly mentored/supervised.
- Usually set protocols and procedures.
- Highly transferrable to needed skills for graduate level research programs.

Field research

- Can be more challenging – more variables (weather, being able to find whatever you are supposed to be researching).
- More variability in level of supervision.

What does undergraduate research look like?



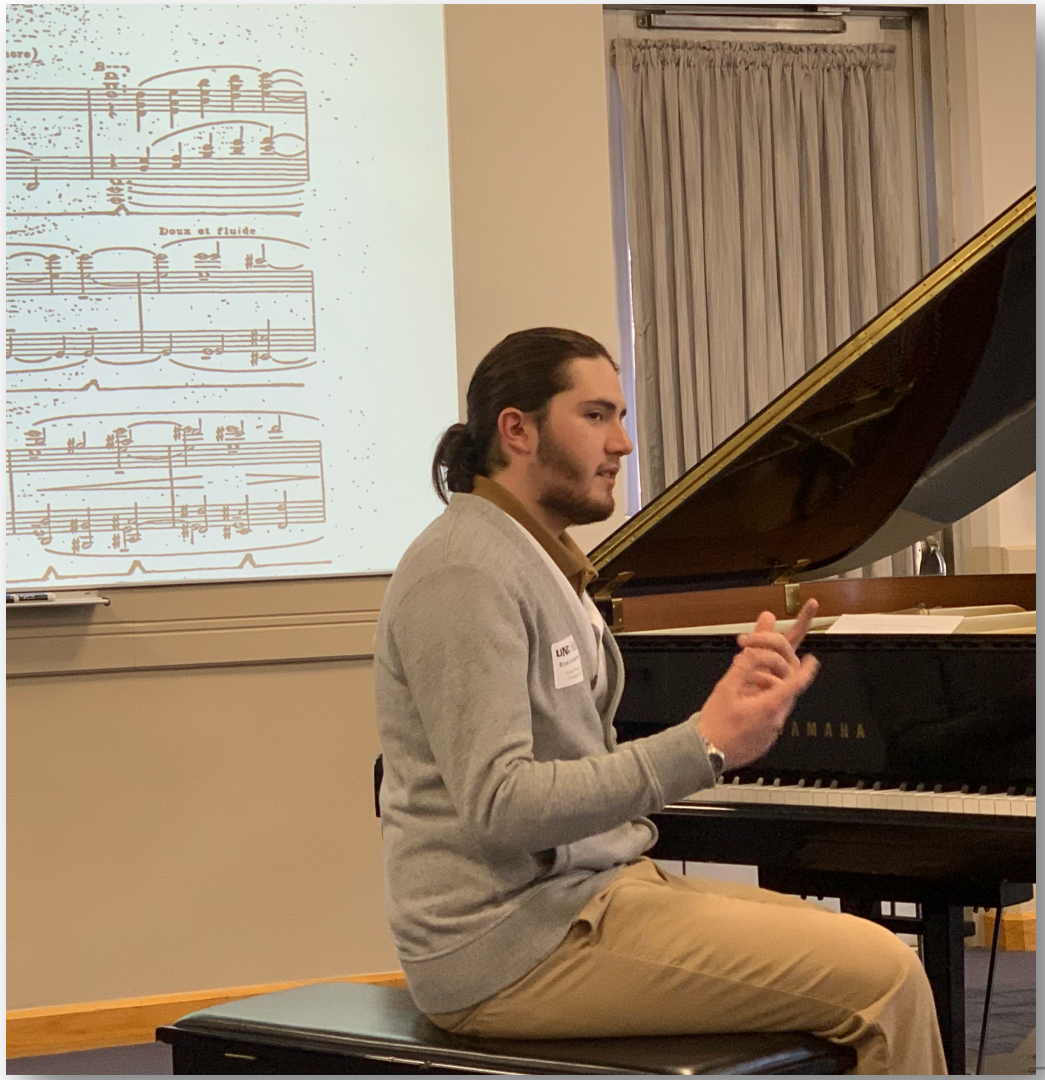
➢ Social Sciences

Quantitative

- Commonly via survey research
- Other data collected that can be quantified – such as test results, participant demographics, media analysis, etc.
- Can use “instruments” already designed and tested (common in psychology)
- Often uses statistics, but you do not need to be a stats expert!
- Many resources on campus to help you design so that you can obtain usable data: Research Consulting Lab

Qualitative

- Can answer larger, less defined questions; exploratory research; holistic research
- Most common methods: Interviews & Observation
- Use of “lenses” or theoretical models is common (e.g. feminist lens, critical race theory lens).



What does undergraduate research look like?

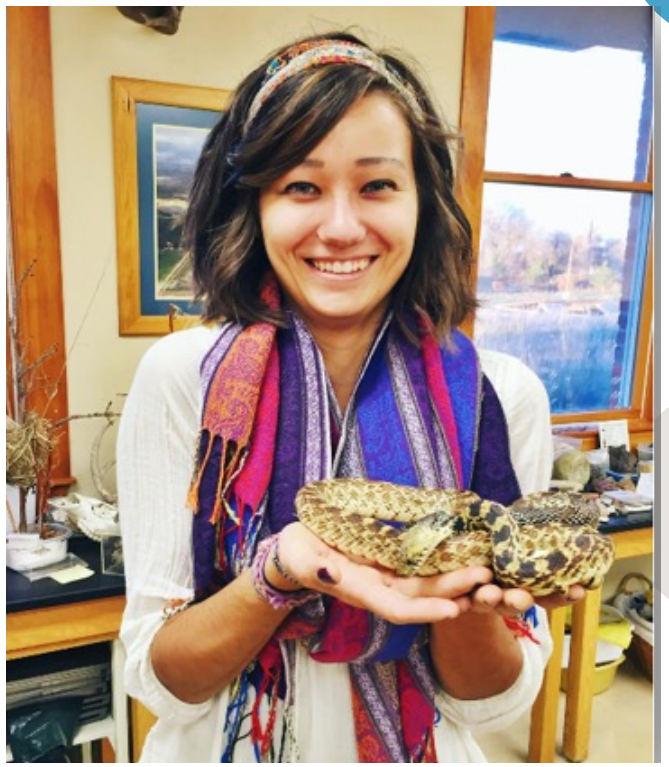
- Humanities & Arts

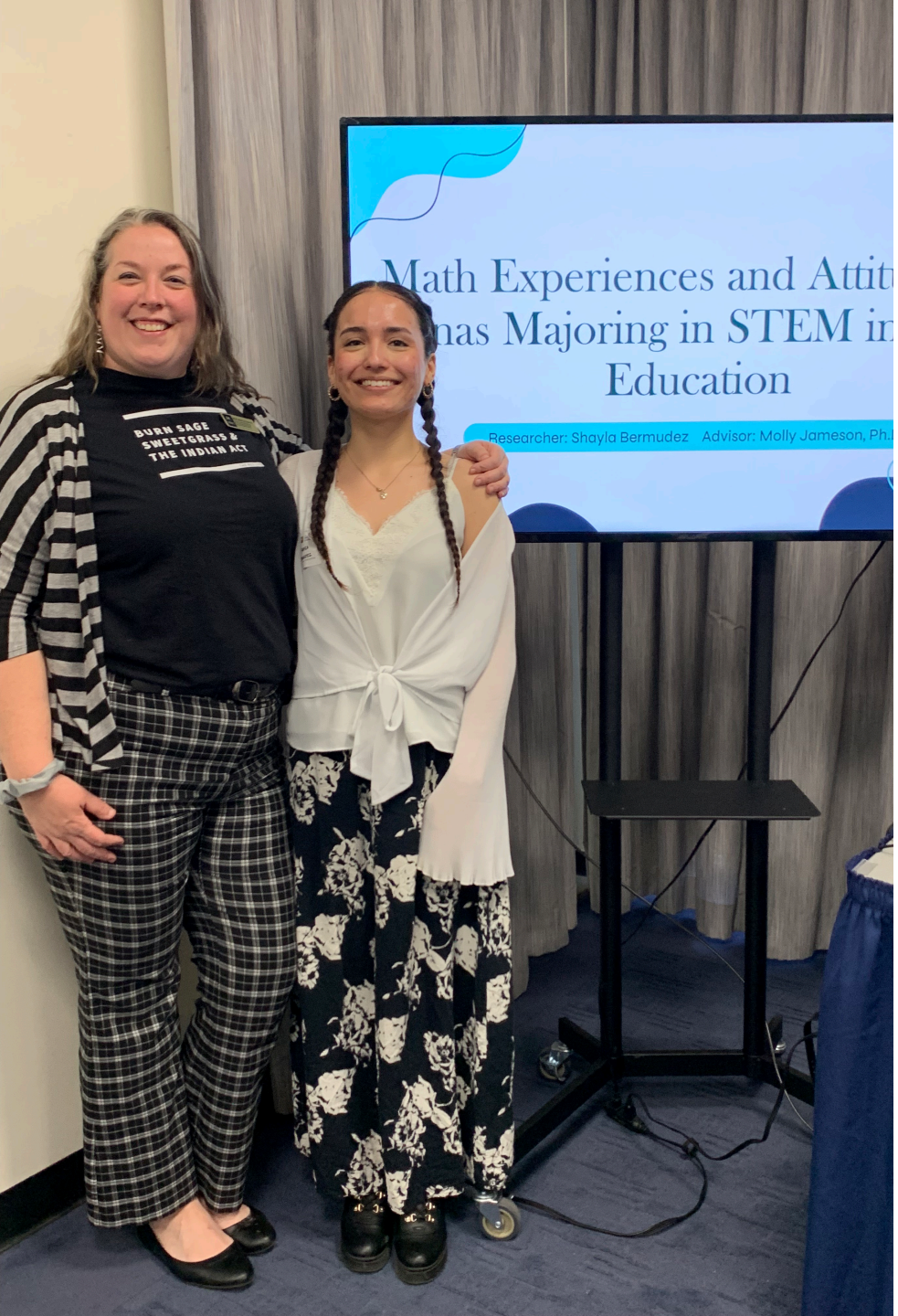
- Historical methods
- Legal Analyses
- Philosophical theses
- Literature or Artist analysis
- Art based-methods
- Creative projects: Art, Music, Writing

Where does undergraduate research happen?

Usually mentored by faculty member or graduate student.

- Classwork (rarely at UG level)
- Labs
- Directed Studies (eg. SOC422)
- Research Programs (McNair, LEAP, RM-AMP, Honors)
- Summer Programs (REUs)

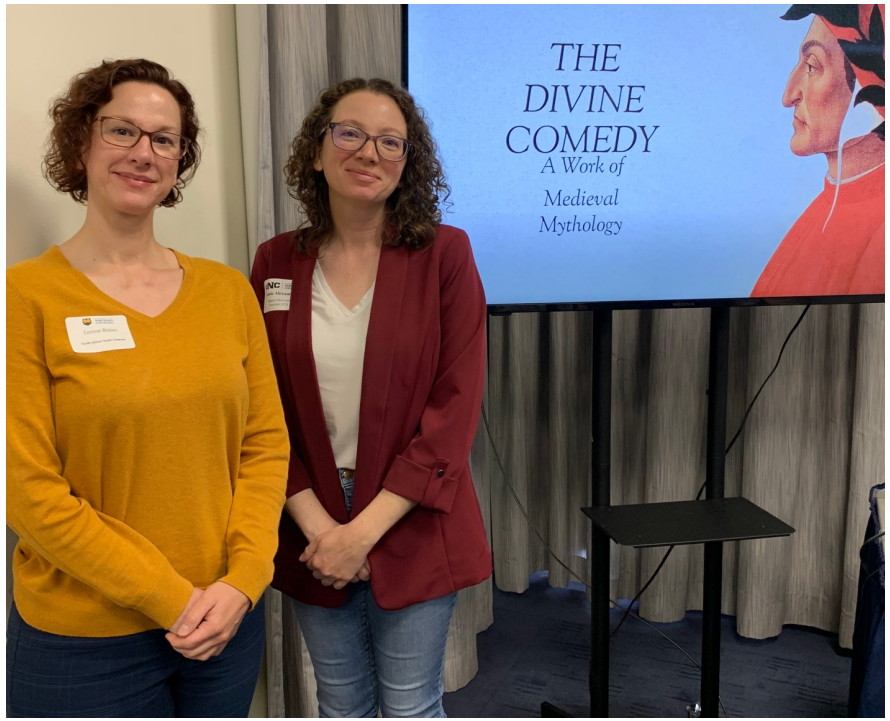




How to find a research mentor

- Office of Undergraduate Research – Faculty Database via consultation meetings
- Instructors and Department Chairs
- Honors Capstone Program
- Honors liaisons
- McNair Scholars Research Program

How to design a doable project



How much time do you have available?

Choose something you have a high level of interest in learning more about or a direct connection.

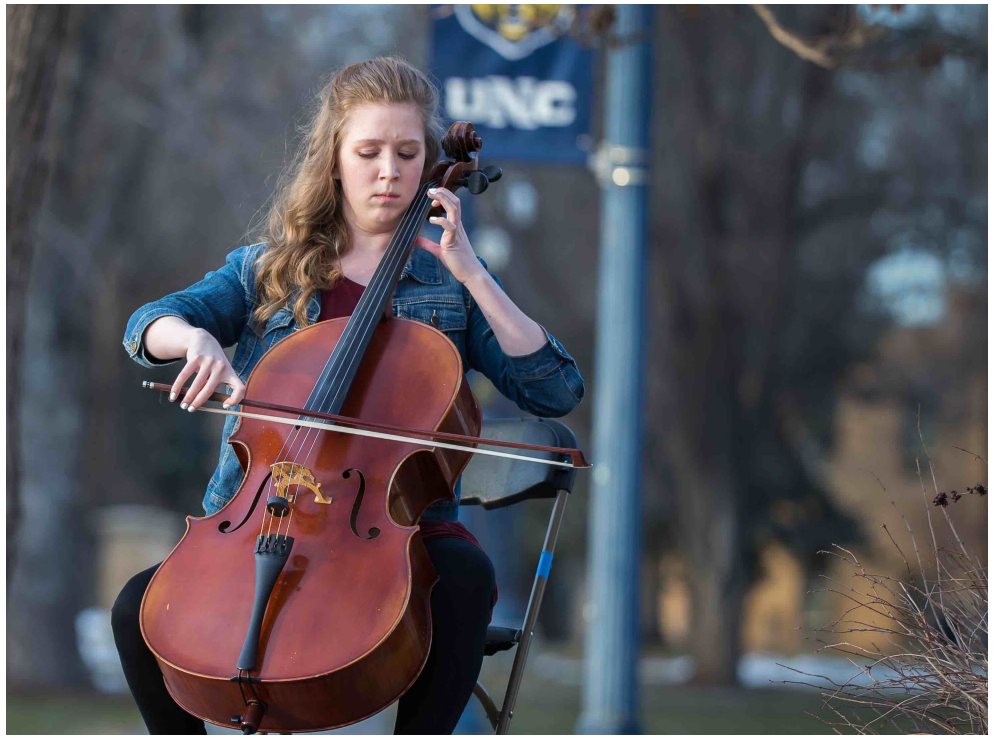
Narrow your questions.

Streamline and simplify the research design (in conjunction with your mentor recommendations)

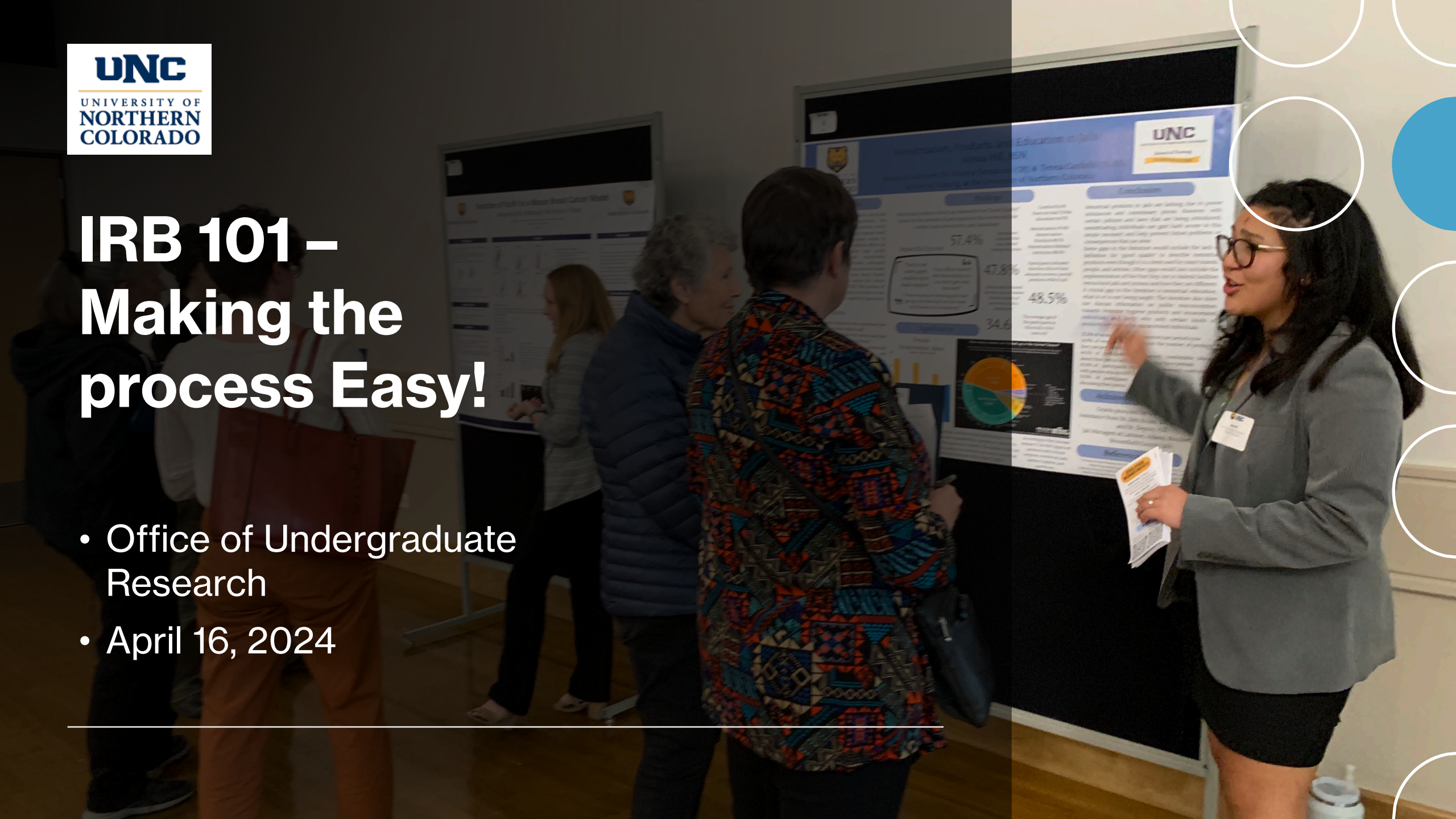
Think about each step: how much time is needed to conduct the experiments or transcribe the interviews or collect other types of data, etc.

Be realistic!

Where to find funding and opportunities



UNC Office of Undergraduate Research	Academic year and summer grants unco.edu/our
REUs	reufinder.com
Fellowships	Profellow.com



IRB 101 – Making the process Easy!

- Office of Undergraduate Research
- April 16, 2024

IRB 101 - Do you need IRB?

Do you need to go through the IRB approval process?

- Does your research include live people?
- If yes, you likely need IRB approval.

STEP 1: Complete required trainings: CITI and request a student Streamlyne account.

STEP 2: Finalize your research design

- Purpose of research project (why?)
- Research Question(s) & Methodology/approach (what?)
- Data Collection “methods” (how?)
- Data Analysis and Data storage (more “how?”)
- Determine participants (who?)

IRB 101 – Know your Participants

STEP 3: Solidify your participant plan.

Who?

Define requirements to be in the participant pool. (Geographic, Demographic, specific criteria).

How? How are you going to find and recruit these participants?

The answer to this question can make or break your ability to complete your project!

When and Where?

How confidential can it be? Does it need to be confidential?

If your participants are all part of a specific institution (school, program, center, etc.)

- Need letter of site approval from the institution
- Obtain letter right away!

IRB 101 – Answer the questions

STEP 4: Begin your IRB application

- Determine if you have an exempt or expedited IRB review.
  - If you have less time – design your project to be exempt (does not mean you do not have to file your protocol with IRB however! It's just faster and easier).
- Then pull up the IRB Questionnaire!
  - www.unco.edu/research
- Complete all questions on **the Questionnaire** in a stand-alone document (e.g. Word doc).
- Send to your research faculty mentor for their review. Your mentor will need to digitally approve your IRB application.
  - NOTE: Mentors must also complete CITI training for mentors and have a Streamlyne account. Discuss this in advance and make certain that your mentor has the time and interest in these aspects of mentoring your project!

IRB 101 – Is it Exempt?

- Category 1: Will your research be conducted in an established or commonly accepted educational setting, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction? **Research involving minors as participants is acceptable under Category 1.
- Category 2: Will your research only include interactions involving educational tests, survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) where at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review. **When research involves minors as participants, Category 2 is ONLY applicable under (i) and (ii) when the research involves educational tests or the observation of public behavior when the investigator(s) do not participate in the activities being observed. Item (iii) may not be applied to research involving minors.

IRB 101 – Is it Exempt?

- Category 3: Will your research include benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and at least one of the following criteria is met: (A) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (B) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (C) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review. **This exemption cannot be used if any participants are minors.

IRB 101 – Is it Exempt?

- Category 4: Will your study by using secondary research data for which consent is not required? Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met: (i) The identifiable private information or identifiable biospecimens are publicly available; (ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects; (iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or (iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for non-research activities.
- Category 5: Will your study include research and demonstration projects that are conducted or supported by a Federal department or agency, or otherwise subject to the approval of department or agency heads, and that are designed to study, evaluate, improve, or otherwise examine public benefit or service programs?
- Category 6: Will your research include taste and food quality evaluation and consumer acceptance studies (without additives or safety questions)?
- Will your research include any procedures that do not fit into one of the six categories above?

The IRB questionnaire for exempt

1) **Give details of the procedures that relate to the subjects' participation.**
2) **Describe the recruitment and enrollment procedures.** State the mode of communication and a[illegible] a final copy of any recruitment letter, advertisement, e-mail, transcript of verbal recruitment announcement, audio/video recording, etc. in the Notes & Attachments section.
3) **Describe the process for obtaining consent from participants.** Projects eligible for Exempt Review must include the following four disclosures to participants unless there is justification for not doing so: (1) a statement that the study involves research, (2) the procedures of the study, (3) contact information for the researcher (and advisor, if applicable), and (4) that participation is voluntary. Describe how consent will be obtained or provide justification for why consent will not be obtained. While documentation of consent is not required, projects involving (but not limited to) interactions with participants must include a consent process. **Please attach all consent materials in the Notes & Attachments section.**
4) **Will the study involve recording identifiable information**, including direct identifiers (such as name, date of birth, Bear number, etc.) or indirect identifiers (such as demographics sufficient to identify individuals considering the study population)?
5) **Describe provisions to protect the privacy of participants** during the course of the study, including recruitment and data collection activities. For example, might participants be publicly identified or embarrassed (i.e., "outed"), or during the conduct of the study, might participants' responses be overheard or observed by individuals outside the research team (e.g., might participants see other participants' responses on a survey in a crowded classroom or overhear interview responses)?
6) Is there any additional information you would like to provide?

IRB 101 – Prepare “notes & attachments”

STEP 5: Prepare consent and other needed documents

USE THE CONSENT TEMPLATES! You may be able to build in the consent form as question 1 of your survey, depending on nature the study.

Surveys – you must have all the questions developed for your survey

Interviews: Structured, Semi-Structured, or Unstructured

IRB 101 – Submitting to Streamlyne

STEP 6: Now you are ready to enter your info into Streamlyne!

- You should have already requested access in Step 1 (Do not ask for access the same day you are trying to submit!)
- Use the step by step instructions!

STEP 7: Submit it.

- Make sure you really, actually, truly submitted the protocol.
- A notice will be sent to the faculty/research mentor you listed. They might not see it though!!

STEP 8: Email you mentor to tell them!

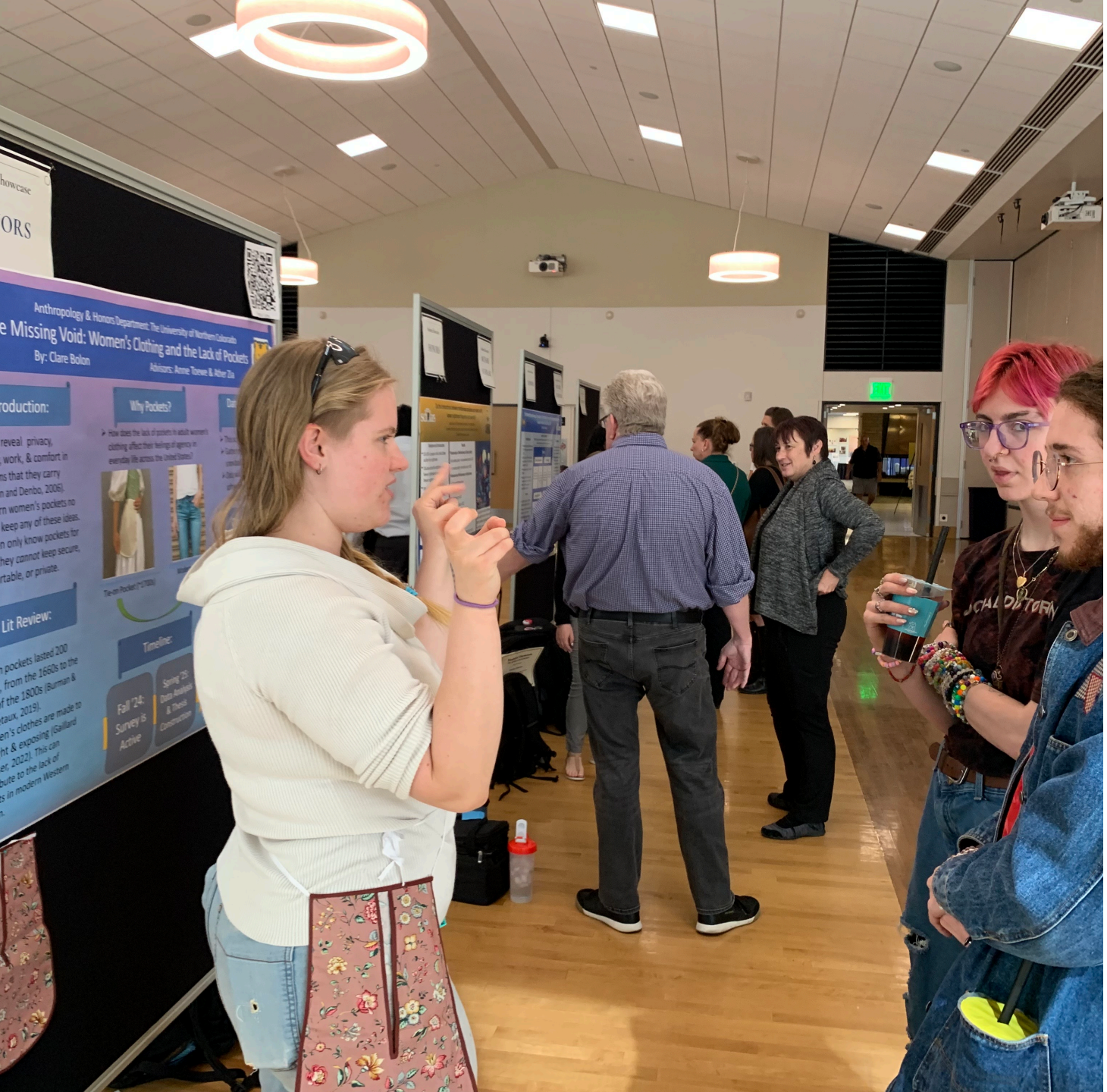
- Send them the document that tells them how to approve found here:
- Faculty Mentor approval- Tip Sheet

STEP 9: Follow-up with IRB office to ensure they have everything.

- Recommend giving 48 hours after faculty mentor has approved to follow up once.
- Then, if you haven't heard anything after about 3 weeks for exempt protocol follow up again, until you know where you stand.
- Protocols can take 4-8 weeks to be approved, if there are no issues, or longer if revisions are needed.

STEP 10: APPROVAL or request for revisions. You will receive an email.

- If you have to make changes, follow the instructions in the email carefully and completely. Then resubmit.



Questions?

- Office of Undergraduate Research & Creative Works
- www.unco.edu/our
- Our@unco.edu

- Loree Crow, Executive Director U-Engage
- Brooke Welsh, OUR Coordinator
- Krista Caufman, McNair Scholars Research Program