Syllabus
Ready for Research: Multidisciplinary Approaches and Opportunities

1 Credit, all majors, meets in person, Wednesdays 3:35-5:00 pm
ENGR2055 (CEAS majors)
PD2055 (all other majors)

Table of Contents

INSTRUCTOR INFORMATION & SMALL GROUP CHECK-INS ................................................................. 1
COURSE DESCRIPTION ..................................................................................................................... 2
PREREQUISITES .................................................................................................................................. 2
COURSE LEARNING OUTCOMES ......................................................................................................... 2
COURSE FORMAT .............................................................................................................................. 3
COURSE MATERIALS .......................................................................................................................... 3
ATTENDANCE POLICY ....................................................................................................................... 3
ASSESSMENTS AND GRADING ......................................................................................................... 4
COURSE CALENDAR ........................................................................................................................... 5

Instructor Information & Small Group Check-Ins
MK LAMKIN, PHD Dr. Lamkin they/she mk.lamkin@uc.edu
GAUTAM PILLAY, PHD Dr. Pillay he/him gautam.pillay@uc.edu

We believe that the learning environment we create is as important as the content we teach. Our awareness of structural ‘isms and our multiple privileged identities influences our approach as educators. We hope to cultivate a classroom experience where everyone actively engages because it’s fun, encouraging, and rewarding to do so.

SMALL GROUP CHECK-INS (max. 3 students each; attend 1 for 10 extra credit points)
Small Group Check-Ins provide time for us to connect as humans and discuss questions/thoughts about this course, achieving a research experience, or anything related to professional pursuits.

Course Description
The University of Cincinnati is a Research-1 institution, which means that professors in all disciplines work “behind the scenes” using research methods to produce new knowledge, new understanding of human experience, and creative & technical innovation. Undergraduate students often work with professors on their research initiatives, either for course credit or pay. Entering research, however, can be tricky. It often relies on student-led outreach to professors and may require a bit of shadowing and skill development before the professor agrees to formally accept someone as a trainee. This 1-credit course is designed to help students across disciplines clarify the research experience they seek and effectively pursue it.

Prerequisites
There are no prerequisites to take this course. This course, however, may be a prerequisite for registering for research credits in your department. After completing this course, you may wish to talk with your academic advisor about getting course credit for unpaid research experiences that are not used to satisfy co-op experiences.

Course Learning Outcomes
After successfully completing this course, you will be able to...

1. Understand what it means to “do research” at the undergraduate level.
2. Use the Research Skills Development Framework to describe your current level of research experience and identify the level you wish to achieve.
3. Use the CliftonStrengths professional development tool to convey strengths you bring to a research team.
4. Identify research labs and centers where you wish to explore potential opportunities.
5. Discuss a research paper by a professor in their area of interest, including identifying the “purpose, process, and outcome” of the project as well as aspects that were unclear.
6. Understand research mentorship as a reciprocal relationship that is productive and mutually supportive.
7. Use effective communication to navigate cross-cultural differences in today’s global workplace.
8. Identify offices and programs that support research activity and ensure compliance with ethical codes of conduct.
9. Orient your resume for a research position.
10. Develop a research interest statement.
Course Format
Weekly “workshop-style” classes include a mix of short lectures, small-group discussions, and large-group debriefs. Students spend ~30-60 minutes per week on pre-work or homework assignments. The best way to succeed is to address the pre-work and homework assignments thoughtfully and come to class ready to share your thoughts. There are no quizzes or exams.

Course Materials
Students need a laptop (or similar device) and access to high-speed internet. Students must also have access to Canvas, Microsoft Teams, and Outlook (UC Email) on their device.

**CLIFTONSTRENGTHS® FOR STUDENTS ($19.99)**
Dr. Lamkin is a Gallup-certified CliftonStrengths® coach and uses the assessment to help individuals and groups leverage their natural abilities to achieve desired outcomes.

If you have taken the assessment previously and know your “Top 5”, you do not need to retake it.

Financial assistance is available to those burdened by the cost (email request to Dr. Lamkin). Otherwise, purchase & complete the assessment here: [https://www.strengthsquest.com/234665/top-clifton-strengths-students.aspx](https://www.strengthsquest.com/234665/top-clifton-strengths-students.aspx)

Attendance Policy
Successful completion of this course is based on attendance and participation. It is understandable that a person may need to miss one or two classes due to illness, etc, but missing three or more will be difficult to make up.

- Students who need to miss class should inform Dr. Lamkin and Dr. Pillay as soon as possible.
- Students will have 2 weeks after a missed class to make up assignments.
Assessments and Grading
Grades are calculated as the total number of points earned out of a total of 500 points. There are no exams. Grades will be posted on Canvas as soon as they are graded or 1 week after the due date.
Grades are based on the following:

PARTICIPATION AND PREPARATION (30%: 15 @ 10 points each = 150 points)
Students should complete pre-class assignments and provide constructive contributions during class (e.g., asking clarifying questions and sharing honest, thoughtful perspective in response to prompts). See course calendar for pre-work assignments.

RESEARCH INTEREST STATEMENT (40%: draft @ 50 points; final @ 150 points = 200 points)
Students will submit a 300-500-word statement indicating their research interests and career goals; how research experience would support those goals; and the technical and transferable skills they would contribute to a research team. We will use the Research Skills Development Framework, CliftonStrengths® professional development tool, reflections, peer review, and other activities to help students develop their statement. The statement is something the student will be able to use as they apply for research opportunities.

RESEARCH RESUME (30%: draft at 50 points; final at 100 points = 150 points)
Students will submit a 1 or 2-page résumé oriented for a research position. We will use the Research Skills Development Framework, reflections, peer review, and VMOCH software to ensure a competitive resume.
Course Calendar
If we need to modify the syllabus in response to emerging needs, we will communicate changes in class and Canvas.

Complete the following to prepare for the first day of class (~20 minutes):
1. Review syllabus, paying particular attention to the course learning objectives and course calendar. (5 min)
2. Use the Group Behaviors & Ground Rules Worksheet to identify your most common constructive & destructive group behaviors. Reflecting on group behaviors, add one or more ground rules we could adopt to co-create psychological safety in our class. (10 min)

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic (with course learning outcomes supported)</th>
<th>Daily Learning Objectives</th>
<th>In-class activities</th>
<th>Prepare for next week</th>
</tr>
</thead>
</table>
| 1    | MKL + GP co-lead                             | Introduction & Co-creating an inclusive learning environment  
Course Learning Outcomes: 1, 2, 6, 7, 8 | 1. Understand class expectations  
2. Reflect on actions that cultivate a culture of psychological safety | 1. Course overview  
2. (a) Introductions;  
(b) Self-identify constructive & destructive group behaviors  
(c) Co-create ground rules  
(d) Discuss case Studies | Complete the CliftonStrengths® assessment & submit Top 5 to Dr. Lamkin before next class.  
(No need to retake if you have taken it previously) |
Course Learning Outcomes: 1, 2, 4, 6, 8 | 1. Define research & research process  
2. Identify interest areas using online resources.  
3. Distinguish between an apprenticeship-style experience and apprenticeship experience.  
4. Identify 3 steps to access research. | 1. Reflect & discuss: what is research.  
2. Explore the research directory & more to identify areas of interest/opportunity.  
3. Reflect & discuss: experience you have + experience you seek (use Research Skills Development Framework).  
4. Reflect & discuss: steps to achieve the experience you seek. | Review your CliftonStrengths Signature Theme and Insight reports. Highlight statements that resonate. Reflect on how well the results describes you. |
<table>
<thead>
<tr>
<th>Week</th>
<th>Subject</th>
<th>Course Learning Outcomes</th>
<th>Weekly Objectives</th>
<th>Additional Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>MKL leads</td>
<td>Leveraging Natural Talents to Self-Advocate for a Research Role</td>
<td>1. Describe how your strengths help you understand who you are/will be as a researcher.&lt;br&gt;2. Describe how diverse/inclusive research environments support creativity and productivity.</td>
<td>Write ~2 sentences describing research skills and ~2 sentences describing strengths you would bring into a research environment. Submit into canvas as an assignment.</td>
</tr>
<tr>
<td>4</td>
<td>GP leads</td>
<td>Understanding the Research Ecosystem &amp; Clarifying Research Interests</td>
<td>1. Understand what it means to be a R-1 institution.&lt;br&gt;2. Identify research support offices or programs.&lt;br&gt;3. Clarify your research interest and goals.</td>
<td>Draft an email to the PI of the research center or lab where you would like to work. Try to integrate the statements you wrote to prepare for this week. Bring a copy to class next week.</td>
</tr>
<tr>
<td>5</td>
<td>MKL &amp; GP co-lead</td>
<td>Debrief Day: Reflect and Discuss how to apply content covered so far</td>
<td>1. Reflect &amp; Discuss: why (or why not) research?&lt;br&gt;2. Reflect &amp; Discuss: your research interests&lt;br&gt;3. Reflect &amp; Discuss: your skills (technical and transferrable)&lt;br&gt;4. Small group feedback on outreach letters using the CARE approach to peer review.</td>
<td>Send your final email to 3-5 faculty whose research interests you. Submit 1 draft into Canvas.</td>
</tr>
<tr>
<td>6</td>
<td>No class</td>
<td>Identify a research publication by a professor whose work interests you. Read it well enough to explain the purpose, process, and outcome &amp; provide your opinion of the paper in small groups.</td>
<td>A great time for small group consultation (bring a draft resume)</td>
<td></td>
</tr>
</tbody>
</table>
| 7 | MKL & GP Co-Lead, MK creates flow  
(figure out how to integrate discussion on research ethics) | Paper Discussion I  
Course Learning Outcomes: 4, 5, 6, 7 | 1. Develop research communication confidence and skills | 1. (a) Form groups of 3-4 students with similar research interests.  
(b) Within these groups, each pitches their research paper as one for the group to read.  
(c) After the paper is selected, professors will facilitate a reading and discussion activity. | Read the paper elected by your small group and be prepared to discuss the purpose, process, and outcome as well as aspects that were unclear. Submit purpose, process, and outcome statements into Canvas. |
|---|---|---|---|---|---|
| 8 | MKL & GP Co-Lead, GP creates flow | Paper Discussion II  
Course Learning Outcomes: 4, 5, 6, 7 | 1. Develop research communication confidence and skills | 1. Paper discussion: present the purpose, process, and outcome of the paper your group read to another group. Each person in the listening group should ask 1 question of the presenting group and then switch. | Prepare 2 questions for the student research panel next week. Submit into Canvas. |
| 9 | Each coordinates 2 panelists | Student Research Panel | We will gather students with research experience in a range of disciplines to answer your questions. |  |  |
| 10 | GP leads | Resumes & CVs  
Course Learning Outcomes: 10 | 1. Distinguish between a résumé and a CV  
2. Customize your résumé/CV for a research position. | 1. Review templates.  
2. (a) Develop bullet points using the research skills development framework  
(b) Evaluate sample resumes/CVs  
(c) Ensure access to VMOCH | 1. Revise your resume to orient it for a research role. Submit draft to Canvas Week 11 before normal class time. |
<p>| 11 | No class, small group check-ins, bring resume/research interest statement | No class, small group check-ins, bring resume/research interest statement | Use the framework and rubric provided to develop a research interest statement. Submit draft. |  |  |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>GP &amp; MKL Leads</th>
<th>Course Learning Outcomes</th>
<th>Research Interest Statement Peer Reviews</th>
<th>1. Practice being supportive through constructive feedback. Gain valuable insights on how to improve your research interest statement.</th>
<th>Submit final draft of your resume and research interest statement Week 13.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>GP &amp; MKL co-lead, MK creates flow</td>
<td>Research Ethics &amp; Codes of Conduct</td>
<td>1. Understand link between ethical principles and codes of conduct. 2. Identify various offices responsible for upholding research integrity. 3. Deepen personal commitment to research integrity.</td>
<td>1. Lecture 2. Review web pages of UC’s Office of Research Integrity &amp; answer worksheet questions 3. Discuss misconduct case studies.</td>
<td>Submit final drafts of resume and research interest statements.</td>
</tr>
<tr>
<td>13</td>
<td>GP leads</td>
<td>1. Identify resources to support your research journey. 2. Discuss best practices in research mentorship. 3. Complete course evaluations.</td>
<td>1. Share programs or resources you have discovered along the way. 2. Case Studies 3. Course evaluations</td>
<td>Happy Thanksgiving! No class</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td>Are you ready for research?</td>
<td>1. Share programs or resources you have discovered along the way. 2. Case Studies 3. Course evaluations</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>MKL Leads</td>
<td>1. Identify resources to support your research journey. 2. Discuss best practices in research mentorship. 3. Complete course evaluations.</td>
<td>1. Share programs or resources you have discovered along the way. 2. Case Studies 3. Course evaluations</td>
<td>Apply for research opportunities! Let us know if you have any questions or need additional guidance. We are part of your support network!</td>
<td></td>
</tr>
</tbody>
</table>