SYLLABUS: HONR 497
WVU SURE 2021 Research Experience

Course:
HONR 497-H02 (CRN #: 52741)
HONR 497-H03 (CRN #: 52752)
HONR 497-H04 (CRN#: 52753)

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Title: Undergraduate Research
Credit Hour(s): 1

Course Objectives: Honors 497 will be taught in collaboration with the SURE experience. The virtual class will help participants reflect on their growth as researchers while also providing them with training to improve their responsible conduct of research, communication, collaboration, and technical presentation skills. Speakers working in both public and private sectors will offer career advice prompting participants to consider their academic and professional futures. Participation in this course also provides for access to all West Virginia University libraries and relevant virtual research needs.

Course Pre-requisites/Co-requisites: Students enrolled in Honors 497 (H02, H03 & H04) must be participants in the WVU SURE program.

Course Requirements: Participants must have an active West Virginia University MIX account and access to WVU's eCampus platform (https://ecampus.wvu.edu/). Any required readings will be provided electronically. Participants are required to complete all virtual assignments by the specified due dates and participate fully in all online activities. **Attention to e-mail and eCampus is key. Participation depends on students having access to adequate computer resources and access to dependable internet.**

Mutual Expectations: It is the intent of the instructors of this class to establish and maintain a positive learning environment based upon communication and mutual respect. Any suggestions as to how to further such an environment will be appreciated and given serious consideration. The class will be conducted in accordance with the University's commitment to social justice and academic honesty. Therefore, the policies and procedures outlined in the *WVU Campus Student Code* (https://studentconduct.wvu.edu/campus-student-code) apply throughout the course.

Grading: Grades will be determined by three factors:
a. **Attendance:** Participant attendance is required for a minimum of ten (10) of the weekly and biweekly workshops, speakers, and networking social events. Participants are welcome and encouraged to attend more than the minimum number of events. Dates and times for these events have yet to be determined, but most are scheduled for before or after the normal research day. Participant attendance is also required at the one-day training (Tuesday June 1) and at the "Virtual" Summer Undergraduate Research Symposium (late July, week of July 26-30). In addition, participants must meet weekly with their faculty research mentor and/or laboratory group to discuss their research and assess their performance to date on their research project.

b. **Participation:** All assignments will be electronic and may require participant comments, feedback and/or discussion. All participants should actively and constructively engage with the required assignments, while adhering to a code of mutual respect.

c. **Assignments:** Participants should complete written/online assignments by their due dates. These assignments should reflect clarity, organization, and mastery of the subject material. <u>Late work will be assessed a 10% per day numerical deduction or deduction of one letter grade per day. Late work will not be accepted 48 hours past the due date.</u>

d. **Final grades** will be calculated as shown below. Associated letter grades are A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F < 60%.

Calculation of Final Grade	Due Date	Percent
Training Day	June 1	4%
Mentor-Mentee Agreement	June 4	2%
Participant Mid-Program Meeting w/TA (30 min.)	mid-program	2%
Biweekly Research Reports (2% each, except 1% for last one)	June 13 & 27; July 11 & 25; Aug 1	9%
Discussion: Audio Elevator Pitch	June 15 (audio due) & June 17 (peer feedback due)	2%
Reflection: Planned Use of Enrichment Funds	June 25	2%
Discussion: Rough Draft of Abstract Discussion	July 13 (rough draft due) & July 15 (peer feedback due)	4%
Weekly and Biweekly Workshops (10 minimum; 3% each)	Throughout	30%
Project Part 1: Final Abstract	July 16	6%
Project Part 2: ID of Research Journal or Conference	July 16	1%
Project Part 3: Query Letter & Resume	July 16	6%
Discussion: Audio Research Pitch	July 20 (audio due) & July 22 (peer feedback due)	2%
Attendance at Virtual Symposium (8 minimum; 0.5% each)	TBD (late July, week of July 26-30)	4%
Preparation and Presentation of Research at Virtual Symposium	TBD (late July, week of July 26-30)	26%
Maximum Final Numerical Grade		**100%**

Preparation for and presentation at the culminating undergraduate research symposium is equivalent to the final exam for the HONR 497 course. Any participant who does not prepare and present in the symposium event will have failed the final exam and will earn a final grade of "F", regardless of his/her other averages.

Assignments & Responsibilities:
Pre- & Post- Surveys on Research Experience: Pre-surveys will be given to participants to evaluate their previous research and mentoring experience prior to participation in the SURE experience. Post-surveys will include program evaluations and space for the participant to provide analysis of the program.

Reflection: Participants will write at least one short academic reflection, including a budget and budget justification, on the topic of planned/hypothetical use of enrichment funds (e.g., conferences, equipment, personnel) and how this funding would be allocated.

On-line Discussion: There will be at least three eCampus based on-line discussions. Each participant will post to the discussion. Participants should read over/listen to eight (8) different peer posts and post eight (8) replies that provide specific, constructive feedback for improvement(s).

Biweekly Research Reports: On a biweekly basis, the SURE participant will submit a report of research hours and research-oriented activities through an online portal provided by SURE. The report submission (due biweekly by 11:59 pm on Sundays) will trigger an automatic email to the faculty research mentor. The mentor is required to review the report and reply to the email with confirmation of hours/activities or rejection with feedback (due the following Wednesday by 4 pm). If the SURE program has not received an approval from the mentor by Wednesday at 4 pm, the SURE participant must solicit for their mentor's approval. SURE participants should keep emailed copies of each biweekly report as evidence of submission and for re-forwarding to the faculty mentor for confirmation (if needed). Reporting aids SURE and the faculty mentor in monitoring progress in research.

For input into the biweekly report, SURE participants should keep track of hours devoted to research and their research activities. The report requires input of (i) daily research hours, (ii) short list of research-oriented activities, and, in journal form, identification of those activities that (iii) took the most time and (iv) were most beneficial to the participant or participant's research and why.

Research activities include: resolving unexpected problems in research, planning for the next step in research with the mentor or alone, helping other group members with their project/research, researching and reading literature related to the research project, working on research assignments (research timeline, oral presentation, graphs or artifacts for research presentations, etc.), attending group meetings, discussing research with the faculty mentor or with secondary mentors (or others), performing research alone or under the guidance of a mentor, watching a mentor as the mentor explains and conducts research, designing experiments on own or with guidance from a mentor, preparing a presentation for a group meeting and presenting it, troubleshooting, reading laboratory protocols, obtaining training to further the research, etc. These are just some suggestions as to activities considered to be research and that should be included and detailed on biweekly reports.

Project: The project will help participants focus on how to set and achieve research goals. For the first part of the project, participants will **(1)** complete an **abstract assignment** in which they will write an abstract based on their research. This has two parts: the rough draft and the final draft. The rough draft will be submitted for discussion on eCampus for review by peers. Participants will revise their abstracts based on peer feedback and submit the final drafts for their project grade. The abstract will then be used for the final presentation at the undergraduate research symposium. After completing a final draft of their abstract, Participants will **(2) research and identify a reputable publication or conference** that would align with their research as outlined in their SURE project abstract. Then, participants will **(3) draft a query letter to the editor or a conference proposal** for their research to the publication/conference selected in part 2 of the project. An **updated resume** must also be

included. The resume should highlight the participant's undergraduate research and inherent skills gained by doing research (ability to deal with setbacks, communicate results, and discuss the premise and intellectual merit of your research).

Workshops, Speakers, and Networking Events: There will be a series of virtual speakers who will be presenting on research and careers in academic, industry, and government sectors. There will also be a series of workshops (e.g., prestigious scholarships, preparing your research for presentation) and networking events. Participants are required to attend ten (10) of the workshops, speakers, and networking events.

Virtual Research Presentation: Participants are required to prepare and present their research for virtual presentation at the Undergraduate Research Symposium at the end of July (TBD, week of July 26-30, 2021). Participants need to effectively present their research findings in either poster or oral form. More information on the symposium will be given during the July workshop on preparing a research presentation. At the symposium, participants will be judged on the effectiveness of both their presentation visuals and their ability to communicate and explain their research. Participants are encouraged to invite family, friends, and faculty, graduate student, and postdoctoral mentors to the virtual symposium.

Symposium Attendance: Participants are required to attend the Virtual Summer Undergraduate Research Symposium at the end of July. The Symposium includes research presentations by peers - from WVU and from across the state. SURE participants are required to view the presentations of at least eight (8) peers, provide feedback, make comments and post questions. More information on symposium attendance will be provided.

SURE Philosophy: Scholarly activities (e.g., research and creative work) are unique educational experiences that allow undergraduates to apply what they learn in class to projects that do not have a defined answer or endpoint. As such these opportunities are not accompanied by defined research hours (weekly or in totality) to bring a project to completion. These activities are available to all participants with the interest and drive to seek them out and engage in them. However, the one-on-one placement opportunities offered by SURE cannot be afforded to all participants as this would undermine the one-on-one nature of the experience. We expect undergraduate researchers to think of these placements as long-term commitments. Undergraduate researchers gain more from the research experience in terms of moving their education forward (e.g., disciplinary training in research methods, equipment and instrumentation, and networking and mentoring) than the faculty member or research group. Initially, the experience is front-loaded with training and initiation to the research environment and the undergraduate researcher is wholly dependent on the faculty mentor and secondary mentors (graduate student, post-doc, advanced undergraduate students). As the training moves forward and the research experience proceeds, the undergraduate is expected to contribute in a meaningful way that moves the undergraduate researcher toward independence and a contribution that goes above and beyond research training. Undergraduate researchers get as much from the experience as they put into the experience. A minimum effort will result in minimal output and a less than optimal experience for both the undergraduate and the faculty mentor and mentor's research group.

There is no set maximum number of research hours for an experience like this, but for administrative purposes and for accounting of effort related to the SURE experience, the required minimum number

of research hours is 40 hours per week for 8 weeks (minimum of 320 hours averaged over the 8 weeks). However, undergraduate researchers are encouraged and may be expected to research more than the minimum hours, but not to the detriment of their health or overall social well-being. An undergraduate researcher who is not actively moving toward research independence may be terminated from the program. Actions leading to termination could be: not showing up for weekly and agreed upon research hours, lack of effort and general lack of interest in the research and overall SURE experience.

Academic Integrity: The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, instructors will enforce rigorous standards of academic integrity in all aspects and assignments of their courses. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the West Virginia University [Academic Standards Policy](http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification) (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification). Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

Inclusivity Statement: The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in your classes, please advise your instructors and make appropriate arrangements with [the Office of Accessibility Services](https://accessibilityservices.wvu.edu/). (https://accessibilityservices.wvu.edu/). More information is available at the [Division of Diversity, Equity, and Inclusio](https://diversity.wvu.edu/)n (https://diversity.wvu.edu/) as well. [adopted 2-11-2013]

Notice of Class Recording Policy: Meetings of a course at West Virginia University (WVU), whether online or in-person, may be recorded. Recordings are not guaranteed, and are intended to supplement the planned class session. Recordings will be made available to class participants, which may include students, assistants, guest lecturers, and co-facilitators. Recordings may be shared by the instructor or institution in accordance with WVU Rules and policies. The Recordings are owned by and contain intellectual property of WVU. The Recordings may not be shared, copied, reproduced, redistributed, transferred, or disseminated in any form or by any means without the prior written consent of authorized officials of WVU.

COVID-19 Syllabus Statement: WVU is committed to maintaining a safe learning environment for all students, faculty, and staff. Should campus operations change because of health concerns related to the COVID-19 pandemic, it is possible that this course will move to a fully online delivery format. If that occurs, students will be advised of technical and/or equipment requirements, including remote proctoring software. In a face-to-face environment, our commitment to safety requires students, staff, and instructors to observe the social distancing and personal protective equipment (PPE) guidelines set by the University at all times. While in class, students will sit in assigned seats when applicable and wear the required PPE. Should a student forget to bring the required PPE, PPE will be available in the building for students to acquire. Students who fail to comply will be dismissed from the classroom for the class period and may be referred to the Office of Student Conduct for further sanctions. If a student becomes sick or is required to quarantine during the semester, they should notify the instructor. The student should work with the instructor to develop a plan to receive the necessary course content, activities, and assessments to complete the course learning outcomes.

Disclaimer: The schedule, policies, and assignments within this syllabus are subject to change in the event of extenuating circumstances.