THE OHIO STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

SOCIAL SCIENCE ANALYTICS SPECIALIZATION (SSAS) UNDERGRADUATE RESEARCH REQUIREMENT

Students who choose the Social Science Analytics specialization within the Data Analytics Major are required to complete an independent research project through enrollment in either a departmental 4998(H) or 4999(H) research course within one of the social science disciplines. This project requires students to demonstrate they can design and carry out a data-focused research project, as well as produce a written report describing the theoretical motivation, research design, and empirical results. The project must have a data component, but it can draw on existing data sets or involve original data collection. Both the Data Analytics Academic Planning Specialist and the faculty member who supervises the research project must approve the project in advance. The faculty member will be responsible for submitting a grade for the research project.

This experience gives SSAS students an opportunity to specialize in a specific area of interest within the social sciences, connect with faculty in a social science discipline, and prepare for graduate school or a career in research and development. This packet covers information that can assist students in finding opportunities in undergraduate research, as well as the possibility of writing a thesis and earning distinction (not required). Please read this thoroughly and, if you have questions, contact the Data Analytics Academic Planning Specialist.

DEFINITION OF RESEARCH

A research project consists of several stages. You might only get involved in one or two stages of an ongoing research project, but nonetheless, **in order for the involvement to receive research credit toward the Social Science Analytics specialization, you should understand the entire generic research process, be able to demonstrate knowledge of the topic area, and make a meaningful contribution to the research.**

The research process. Gathering information on the current understanding of a problem/question is the first step in doing research. It is referred to as a review of the literature (a review of the knowledge others have discovered about the topic). In other words, this is simply coming "up to speed" on the topic of interest.

The essential aspect of research is the creation of new knowledge. This can occur in many ways, including observation, planned investigation, design and analysis.

Some purposes of research include:

- Developing or testing a theory – Why or how did something occur? (Why do apples consistently fall downward from tree to ground?)
- Predicting an outcome – What will happen in the future if current trends hold? (Based on statistical analysis of climate data, a new computational model predicts that the world's oceans will rise X cm by the year 2050.)
- Developing or testing a new method or device – Is there a better way? (Using a new prototype screwdriver required less time and less arm muscle activity but resulted in more defects than using a standard screwdriver.)
- Systematic review - What do all these separate research studies on topic Z say about the topic?

Individuals who conduct research must identify something new to study, review what is already known about the topic, and develop a plan for gathering and analyzing data that will provide information to address the question in an objective way. The final step is disseminating the results through a report, presentation, peer-reviewed journal paper, patent, product, or other means of communication.

Something new to study does not have to be something entirely new. It can include using new technology to study a question that has been studied before, if the new technology is likely to provide new insights, or studying a question in a new population (how does this apply to older adults, to veterans, to first generation college students, etc.), or applying new modeling techniques, etc. **The key is that the information produced by the research is new**. It is also highly desirable that the question studied is interesting and/or useful to someone else.

To reiterate, for the Social Science Analytics specialization, you are not expected to conduct an entire research project. You must, however, make a meaningful contribution to the research in which you engage and demonstrate knowledge of the topic area.

GETTING STARTED

One of the most challenging parts of undergraduate research can be finding a project. Here are a few ways to find a project:

- Reach out to an influential instructor with whom you have had a course. Before doing so, gather information on your own regarding the research this faculty member is currently working on to ensure that it aligns with your interests, and prepare a few questions about her/his research for your initial discussion.
- Search departmental and faculty websites to see what current projects exist in that department or with a specific faculty member. Departments within the Social Sciences include:
    - Anthropology: anthropology.osu.edu/directory
    - Communications: comm.osu.edu/directory
    - Economics: economics.osu.edu/directory
    - Geography (GIS): geography.osu.edu/directory
    - Political Science: polisci.osu.edu/directory
    - Psychology: psychology.osu.edu/directory
    - Sociology: sociology.osu.edu/directory
- Connect with the Office of Undergraduate Research & Creative Inquiry by checking their website (ugresearch.osu.edu), signing up to be on their email listserv, and/or contacting one of their peer researchers.
- Watch out for research opportunities sent by your academic advisor via the Data Analytics listserv.
- Ask a Data Analytics Academic Path Peer who is currently or was previously involved in research how they found their opportunity (data-analytics.osu.edu/advising/academic-path-peers).

Your next step should be to contact faculty members who are conducting research in areas of interest to you so you can identify someone who is willing to serve as your research advisor. Here are a few strategies for contacting faculty:

- Be formal. When contacting faculty through email, be clear in your request and formal in your writing. Be ready to provide a current resume and Advising Report. Make sure you send the email from your Ohio State email account.
- Be patient. Faculty members are busy people. Not only do they have teaching responsibilities for multiple classes, but they have research and service responsibilities as well. It may take up to a week to receive a response, so plan ahead.
- Understand that some faculty members may not have room in their lab or may not be willing to advise undergraduate students. Try not to take this personally, and keep looking for an advisor.

Once you find a faculty member to serve as your advisor, you will need to **register for 3-credit hours of research credit within that faculty member's department. 4998(H) is the course number for non-thesis research.** If you decide to pursue research distinction or honors research distinction, you will take 4999 or 4999H.

RESEARCH DISTINCTION

Research that culminates in the production of an undergraduate research thesis allows you to receive the designation of "*Graduation with Research Distinction*" or "*Graduation with Honors Research Distinction*" on your diploma upon graduation from Ohio State. The requirements for earning either research distinction or honors research distinction are listed on artsandsciences.osu.edu/academics/current-students/advising-academics/graduation. You can earn this designation as an honors student or as a non-honors student.

RESEARCH PROPOSAL

After you determine your project topic and research advisor and you have started the initial steps of your research project, you must submit a 4-page proposal to the Data Analytics Academic Planning Specialist. The proposal should include the following information:

- **Page One: Title Page –** Project Topic, Name, Date, Faculty Advisor, Faculty Advisor's Department
- **Page Two: Abstract**
  - Summary of the research project objectives
    - Describe the theoretical motivation, research design, and empirical results you hope to achieve as part of this project. In other words, what will you be doing, when will you be doing it, and what do you hope to learn?
    - The project must have a data component, but it can draw on existing data sets or involve original data collection. Will you be collecting your own data or analyzing an existing data set?
    - If you will be working in a research group or lab with multiple investigators, indicate your individual contribution to the project.
    - How many hours per week will you be working on your project? (Should be at least 10 hours per week over the course of one semester in order to earn 3 credit hours).
- **Page Three: Collaborative Institutional Training Initiative (CITI) human research course (Social and Behavioral Research track) Certificate of Completion**
  - Given the importance of research ethics in conducting social science research, students must complete the Collaborative Institutional Training Initiative (CITI) web-based human research course (Social and Behavioral Research track), available at orrp.osu.edu/irb/training-requirements/citi.
  - Print and include with your proposal a copy of the completion certificate you receive at the end of this training. The training itself should take a few hours.
- **Page Four: Signatures of Student and Faculty Advisor**
  - Print and sign the form on page four of this document and attach it to your Title Page, Abstract, and CITI Certificate of Completion.

Once all portions of your proposal are complete, submit the entire 4-page document electronically to the Data Analytics Academic Planning Specialist (Advisor).

RESEARCH FINAL REPORT

At the conclusion of your research project, you must submit a report summarizing the results and findings of your research project (2-page minimum). This report should include information about your project's theoretical motivation, research design, and empirical results. This report will assist your research advisor in assigning a grade for your research course and give you a chance to reflect on your research experience.

A copy of this report must be submitted electronically to the Data Analytics Academic Planning Specialist (Advisor) before the end of the semester during which the research project was completed.

SIGNATURE DOCUMENT

This is to certify that _____ has registered for

three credit hours of research credit 4998(H) or 4999(H) within the Department of

_____.

As the assigned instructor for this course, I have discussed with the student the research project objectives (as outlined in the student's abstract) and the requirements he/she must complete in order to earn a Satisfactory grade in the research course.

Sincerely,

Faculty Advisor

_____	_____	_____	
Name Printed	Department	Signature	Date