

SYLLABUS: GRADTDA 5626 SEMINAR IN RESEARCH METHODS SPRING 2022 (FULL TERM)

1 Credit Hour

Online

Course information

Instructor

Instructor: Professor Joseph Verducci

Email address: verducci.1@osu.edu

Phone number: 614-507-8464

Office hours: Virtual Hours via Carmen Zoom: TBD and by appointment.

Prerequisites

Prerequisites: GRADTDA 5401 and 5625

Corequisite: GRADTDA 5402

Teaching Assistant

TA: Lun Li

Email address: li.9515@osu.edu

Office Hours: Thursdays from 4:00pm to 5:00pm via zoom

Join Zoom Meeting

<https://osu.zoom.us/j/96967506407?pwd=STZIMGIrNzlrZnZoVko0ZE9lUjAzdz09> (Links to an external site.)

Course description

This course will provide a high-level overview of general research methods that are common across many disciplines. Topics covered will range from formulating a research question to conducting specific analytical methodologies to writing/presenting results. Course enrollment restricted to graduate students enrolled in MTDA program.

Course learning outcomes

By the end of this course, students should successfully be able to:

- Be aware of ethical challenges that may arise during the research process and understand how to resolve such challenges.
- Formulate a research question and conduct a literature review to understand the current knowledgebase.
- Understand quantitative approaches to research, including design, sampling, data collection, and analysis.
- Be able to summarize research results in writing and via visualizations, and then present results to an informed audience.
- Understand how to protect intellectual property.

How this course works

Mode of delivery: This course is 100% online. There is a required synchronous (real-time) session in Zoom approximately once per month on Wednesdays from 7:15-8:10p.m. The rest of your work is found in Carmen and can be completed around your own schedule during the week.

Pace of delivery: The course will use a mix of **synchronous** and **asynchronous** activities, organized into two-week modules.

Required **synchronous** activities will take place live over CarmenZoom during a subset of scheduled meeting times. These will typically occur every fourth week, as noted in the tentative schedule below and listed on the course website. Students are expected to attend and participate in these live, online class meetings.

Required **asynchronous** activities will be posted to the course Carmen site the Friday prior to the start of a new module. Deadlines will be explicitly noted on the Carmen website. These activities should typically be completed by the second Wednesday of the module (for activities needed for discussions either online or during synchronous sessions) or the Wednesday following the close of the module (for activities submitted for grading). Module activities may include:

- Reading assignments from the textbook
- Videos and similar short activities
- Quizzes that must be completed on Carmen and assess comprehension of reading and asynchronous video content
- Discussion posts
- Individual homework assignments
- Project-related activities

Students are encouraged to attend the instructor's weekly office hours via CarmenZoom as listed on the course Carmen site. These office hours will be conducted in a community format, where many students may join the videoconference at the same time. Students wishing to discuss a private matter should contact me to schedule a separate time to meet. Students are encouraged to participate on Carmen discussion boards.

Credit hours and work expectations: This is a 1 credit-hour course. According to [Ohio State bylaws on instruction](http://go.osu.edu/credithours) (go.osu.edu/credithours), students should expect around 1 hour per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 2 hours of homework (reading and assignment preparation, for example) to receive a C grade.

Attendance and participation requirements: Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- **Attending online, synchronous class meetings: USUALLY ONCE PER MONTH**
Students are expected to attend and participate in the online, synchronous Wednesday class meetings.
- **Logging in: AT LEAST ONCE PER WEEK**
Be sure you are logging in to the course in Carmen each week, including weeks with holidays. You will need to log in to Carmen to complete quizzes, view video content and upload homework assignments. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Discussion forums: USUALLY ONCE PER WEEK**
As part of your participation, each week you can expect to post at least once as part of our substantive class discussion on the week's topics.
- **Office hours: OPTIONAL OR FLEXIBLE**
Attending office hours and participating in discussion forums are encouraged, but optional. Individual office hour appointments outside of regularly scheduled times should be made at least 24 hours in advance whenever possible.

Course materials

Required

Selected readings posted to the course website or available for free download via the University Libraries.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

- CarmenZoom
- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 10+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Necessary software

- This class requires you to use the statistical software package called R (The R Project for Statistical Computing; <http://www.r-project.org/>). This software package is available as Free Software.
 - You can download R for Windows, Mac, and Linux, from the CRAN archive at <https://cran.r-project.org>.
 - An in-depth introduction to R is available at <http://cran.r-project.org/doc/manuals/R-intro.pdf>
 - Hands-on tutorials are available in the Swirl system, which you can learn about at <http://swirlstats.com/>. In particular, “R Programming: The basics of programming in R” is an appropriate first tutorial for students who have never used R.
- An easier to use interface to R is available in the software package RStudio. This package is available for Windows, Mac, and Linux and can be downloaded for free from <http://rstudio.org>. **Note that RStudio requires R to be installed.**

- [Microsoft Office 365 ProPlus](#) All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

Grades

Assignment or category	Percentage
Homework	60%
Quizzes	5%
Participation	10%
Project Report and Presentation	25%
Total	100%

See tentative course schedule, below, for due dates

Descriptions of major course assignments

Homework will be assigned for each of the first 6 modules. Assignments will be posted to the course Carmen site on the Friday prior to the start of a module and are typically due on Wednesday of the week following the close of the module. Students should compile all homework solutions into a single .pdf file in accordance with specific homework instructions, and upload it to the course Carmen site. You are encouraged to work together on homework; however, each student must produce their own assignment to be handed in. Do not copy any part of another student's homework.

Quizzes will be administered weekly online, through Carmen. These short quizzes are meant to motivate you to complete the assigned activities and keep up with the asynchronous content. The quizzes are open book / open notes but should be completed without any external help or communication. Quizzes may be attempted twice, where the highest score is recorded.

Participation will be assessed via student participation on course discussion boards, where students will be expected to post their own work and comment on their peers' work.

One comprehensive **project** will be due during exam week, as noted in the course schedule. Students will submit a final summary report and 5-minute video overview in the style of a "speed session" conference presentation. Interim project-related activities will be incorporated into homework assignments throughout the course.

Late assignments

Generally, late homework assignments are not accepted. Please plan your time so that you can complete assignments far enough in advance to avoid any last-minute problems uploading your completed work. If exceptional circumstances (sudden onset of illness, unexpected family situations, etc.) arise, contact the instructor to discuss the possibility of an extension.

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

Grading and feedback

For large weekly assignments, you can generally expect feedback within **7 days**.

E-mail

I will reply to e-mails within **48 hours on school days**. Specific questions about the course material that require significant back-and-forth communication are not well suited for e-mail; while I will do my best to answer such questions, I may ask that you attend virtual office hours (either scheduled or by appointment) if your question isn't easily answerable over email. Also, though both will be answered on the same time scale, I will typically answer questions posted to the discussion board before answering questions submitted via email.

Discussion board

I will check and reply to messages in the discussion boards every **48 hours on school days**. Though both will be answered on the same time scale, I will typically answer questions posted to the discussion board before answering questions submitted via email.

Other course policies

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online. I will provide specific guidance for discussions on controversial or personal topics.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.
- **Synchronous sessions:** During our Zoom sessions I ask you to use your real name and a clear photo of your face in your Carmen profile. During our full-group lecture time, you may turn your camera off if you choose. When in breakout rooms or other small-group discussions, having cameras and mics on as often as possible will help you get the most out of activities. You are always welcome to use the [free, Ohio State-themed virtual backgrounds](https://go.osu.edu/zoom-backgrounds) (go.osu.edu/zoom-backgrounds). Remember that Zoom and the Zoom chat are our classroom space where respectful interactions are expected.]

Academic integrity policy

Policies for this online course

- **Quizzes:** Quizzes are open book / open notes. However, you must complete the quizzes yourself, without any external help or communication.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow a standard research style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build

on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for collaboration with your classmates. While study groups and peer-review of homework and project assignments is encouraged, remember that comparing answers on a quiz is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university’s *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- *Ten Suggestions for Preserving Academic Integrity* (go.osu.edu/ten-suggestions)

Student Services and Advising

University Student Services can be accessed through BuckeyeLink. More information is available here: <https://contactbuckeyelink.osu.edu/>

Contact <https://tdai.osu.edu/education/masters-translational-data-analytics>

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](https://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at [614- 292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](https://www.suicidepreventionlifeline.org) (suicidepreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](https://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

Accessibility Accommodation

Land Acknowledgement

We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greeneville and the forced removal of tribes through the Indian Removal Act of 1830. I/We want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land.

More information on OSU's land acknowledgement can be found here:

<https://mcc.osu.edu/about-us/land-acknowledgement>

Your mental health

As a student you may experience a range of issues that can cause barriers to learn, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, on-demand resources are available at go.osu.edu/ccsondemand. You can reach an on-call counselor when CCS is closed at 614-292-5766, and 24-hour emergency help is also available through the 24/7 National Prevention Hotline at 1-800-273-TALK or at [suicidepreventionlifeline.org](https://www.suicidepreventionlifeline.org). The Ohio State Wellness app is also a great resource available at go.osu.edu/wellnessapp.

Accessibility Accommodations for Students with Disabilities

Requesting Accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with [Student Life Disability Services \(SLDS\)](#). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

Disclaimer

This syllabus should be taken as a fairly reliable guide for the course content. However, you cannot claim any rights from it and in particular we reserve the right to change due dates or the methods of grading and/or assessment if necessary. Any changes will be communicated to you through official course announcements.

Course schedule (tentative)

The following tentative course schedule is subject to change. The schedule, assigned activities and due dates for each module will be posted on Carmen on the Friday before the first day of the module.

Week	Dates	Topics	Synch. Meetings
1	1/10-1/16	Module 1: Research Process Research purpose, ethics and integrity	1/19
2	1/17-1/23		
3	1/24-1/30	Module 2: Research Context Forming research questions, conducting a literature review	None
4	1/31-2/6		
5	2/7-2/13	Module 3: Quantitative Methods Quantitative designs, measurement error, reliability, validity	2/16
6	2/14-2/20		
7	2/21-2/27	Module 4: Quantitative Data Collection and Analysis Sampling and data collection, quantitative data analysis	None
8	2/28-3/6		
9	3/7-3/13	Module 5: Data Interpretation Interpreting results, visual representations of results	3/23
10	3/14-3/20 (Spring Break)		
11	3/21-3/27		
12	3/28-4/3	Module 6: Writing a Research Report	None
13	4/4-4/10		
14	4/11-4/17	Module 7: Presenting Research Protecting intellectual property, presenting your findings (telling your research story), publishing process	4/20
15	4/18-4/24		
16	4/25		
	4/29		