## QUANTITATIVE SOCIAL SCIENCE LDST 249 – Spring 2025

Class Time

Tuesday/Thursday Section 1: 9.00-10.15 pm Section 2: 1.30-2.45 pm Jepson Hall 101

# Location



**Instructor and contacts** 

Guzel Garifullina guzel.garifullina@richmond.edu

Jepson Hall 130 Office hours: Monday 3-5 pm and by appointment Schedule an in-person or Zoom meeting.

Course website: https://blackboard.richmond.edu

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## **Course Description**

Quantitative Social Science is designed to help you build data analysis skills sufficient for interpreting research findings in modern social sciences and conducting your original research. To achieve that goal, we will discuss fundamental statistical concepts and specific procedures during lectures, and practice them during labs. You will have numerous opportunities to work independently and in groups to practice the necessary skills. The course culminates in a final research project, which would require you to come up with a question, do some background research on it, find relevant data, and perform all the necessary steps to analyze and interpret the data. The course fulfills the Quantitative Data Literacy (QDL) general education requirement.

## Learning outcomes

After completing this course, students will be able to independently analyze quantitative data to address questions about society they are interested in. Doing so would involve identifying appropriate data and steps/procedures that will allow one to answer the question - and then conducting the analysis, with a focus on descriptive statistics and data visualization, hypothesis testing, and regression analysis.

- 1. Students will represent information and formulate questions in forms amenable to quantitative analysis, recognizing multiple approaches to communicating quantitative information.
- 2. Students will apply relevant quantitative approaches to solve problems and analyze data.
- 3. Students will evaluate assumptions, limitations, biases in, and/or ethical implications of particular analytical frameworks and/or study designs.
- 4. Students will formulate results, draw appropriate conclusions, and communicate findings using relevant quantitative evidence.

# Prerequisites

This course does not have any prerequisites. We will start with the concept of variables and learn to see the world through the data lens, and then walk through the necessary steps of data analysis (from description to prediction).

To succeed in this course, you need to be comfortable with some basic operations on your computer. If you have doubts about what any of the things below mean or can't perform them on your computer, check the suggested resources on Blackboard and bring up any remaining questions <u>during the first week of classes:</u>

- File extensions, opening files with different extensions
- Exporting/saving files with a specific extension (e.g. using Google Docs to export a file as a Word file or a PDF)
- Archived files, opening archived files and adding files to an archive on your computer
- Folders/directories on your computer, file paths
- File naming conventions
- Downloading files from the Internet and uploading files to online/cloud locations
- Attaching files (not links to them) to an email or Blackboard assignment

## Reading

We will be using one textbook – Imai, Kosuke. Quantitative social science: an introduction. Princeton University Press, 2018 (ISBN: 9780691175461). The textbook is available at the university bookstore. Make sure you have a copy by the first week of class.

You need to do the assigned reading before class. In our first meeting, we will talk about how you would *work through* a stats textbook chapter.

#### Using R for data analysis

We will use  $\mathbf{R}$  – a programming language and statistical environment widely used by data analysts across disciplines and industries. The course does not require any programming experience on your part – we will start by accessing the software in class, and you will practice your  $\mathbf{R}$  skills in weekly labs and at home.

As with any language -R comes with a learning curve. We will use R for several reasons.

- (1) It is free. Whether it's for this class, another project during your time in college, or to analyze some data in a few years you will be able to use R without additional costs to you.
- (2) It is versatile. *R* is open-source, and thousands of people facing a variety of questions continue to contribute to it and develop packages (specific instruments) that are extremely helpful. Whatever your data needs are you can be sure there is a solution in *R*. If you decide to develop that skill further, you might become one of the people who develop new packages for others to use!
- (3) It is a programming language, meaning that to perform the procedures we will be learning, you will need to "spell out" what you are doing. As a result, using it reinforces the statistical knowledge you will be acquiring – with every exercise and homework, with every problem set you will be going through the necessary analysis steps and immediately see, looking back at your code, what you did and why.
- (4) It is extremely popular and widely used both in (social) sciences and outside academia, such as in business analytics. Having that skill can be a real asset.

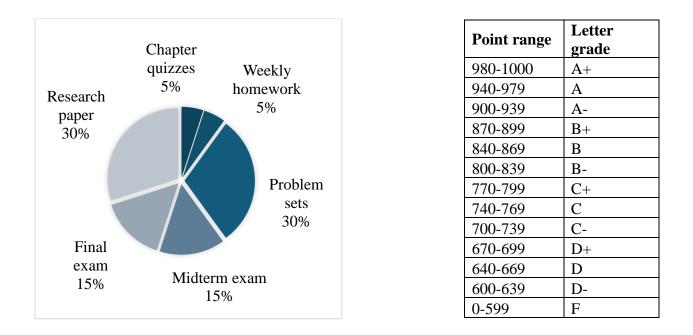
After this course, you will have an understanding of  $\mathbf{R}$ 's fundamental logic and will be able to perform a selected set of operations required for your analysis. Your knowledge will be sufficient to understand basic tutorials and  $\mathbf{R}$ -focused introductory courses if you decide to develop that skill further.

# What to expect in this course

The most important thing about any course focusing on quantitative skills is that it is **cumulative**. That is, knowledge builds on previous knowledge – this is true both for the statistical elements and applied analysis in R. It is therefore harder to catch up if you missed something. I will expect you to work consistently throughout the semester and will provide many opportunities to ask questions in class and outside the classroom. Use these opportunities to make sure you are confident about one week's material before we proceed to the next. We will have two weekly meetings – a lecture on Tuesday and a lab on Thursday. In lectures, we will work through the key elements of the week's topic, focusing on understanding the concepts and the logic behind the statistical operations. In labs, we will work on applied problems and exercises in R, reinforcing the concepts we discussed in the lecture. There will be weekly assignments (see below) to make sure you stay on top of readings and exercises.

To help you stay on track, I will hold weekly walk-in office hours. Stop by with any questions or doubts you have, whether it's your homework, something in the chapter, or the problem set. I am also available for one-on-one meetings, you will just need to schedule those using the link in the syllabus.

#### Assignments and grading



All assignments add up to 1000 points – that is the maximum you can earn throughout the semester. There are no extra credit assignments. Your final course grade will be calculated by adding up the points you earn for each of the assignments throughout the semester. I will use the scale above to convert this final number into a letter grade. You need to cross the threshold to earn a specific grade (e.g. 979 is an "A", but 980 is an "A+").

#### 1. Weekly assignments

There will be weekly quizzes and homework. These are designed to help you test your understanding of the class material. Use them to see what you missed or need help with, and to ask follow-up questions in class. These are graded on submission, so as long as you submit them on time, you get full points. There are no extensions or make-up options on these. Weekly quizzes and homework assignments are also a low-key way of practicing before graded assignments. Skills you practice in homework will be necessary for the problem sets (see below). A random subset of questions from the quizzes will be included in the final exam.

a. Reading quiz (due Monday 11.59 pm): 50 points A portion of the textbook chapter will be assigned for each lecture. You will work through the chapter, doing all the included calculations and tests in R. Once you're done with the assigned portion for that week – go to Blackboard and take the quiz. The quizzes consist of multiplechoice and short-answer questions and focus on the major statistical concepts introduced in the text.

You will receive feedback on the quiz immediately after submission. See what you got wrong - and check with the chapter to clarify things you missed. Note any remaining questions to ask in class.

b. Homework (due Wednesday 11.59 pm): 50 points

Weekly homework will be similar to the exercises you see in the textbook chapter. It will include a series of tasks you need to perform in R. As with the quiz – note any questions or problems you have. Submit your homework on Wednesday and bring the questions to our Thursday class.

# What happens if I don't submit a weekly assignment? Can I do it later?

These assignments can't be made up. Their goal is to ensure that you keep up with the weekly workload of this course.

There are no extensions available for them either because it's essential that you do those as we are working on a specific topic.

Every weekly assignment you don't submit on time will affect your grade proportionally – but the weight of these assignments is set to be relatively low so having one busy/bad week will not be detrimental to your course grade.

If you can't complete a weekly assignment – talk to me right away, and I will do everything to help you catch up and stay on track.

#### 2. Problem sets: 300 points

There will be 3 (three) problem sets throughout the semester. Each problem set is worth 100 points. These assignments test your practical understanding of concepts and analysis methods covered in a specific section of the course. You will need to submit an R file and a text document with a detailed explanation of your analysis for grading.

You can work on the problem sets in groups -I will randomly assign you into groups early in the semester, and I encourage you to discuss the problems and work on the solutions together (you can, if you want, work on your own as well). The assignments are submitted and graded individually.

At the end of the semester, you can pick ONE problem set that you want to re-do and resubmit it during the exam week. That resubmission needs to include a detailed discussion of previous mistakes and justification for new solutions.

# What happens if I don't submit a problem set? Can I do it later?

You can submit a problem set late. 10 points (out of 100 for a problem set) will be deducted for each 24-hour period that the assignment is late. If the problem set is submitted less than 24 hours late, the reduction will be proportional.

Extensions for problem sets need to be discussed at least 48 hours before the original deadline. I reserve the right to grant extensions on a case-by-case basis.

At the end of the semester, you can either resubmit one problem set that you want to re-do for a higher grade (see above) – or submit one problem set you weren't able to submit on time.

**3. Final project: 300 points** This is an independent data analysis project, in which you will answer a question of your choice using data.

The assignment is scaffolded and includes several elements:

Element	What it is	Due date	Point value
Paper assignment 1 <u>template</u> *	Your causal research question, a brief summary of 4-5 relevant studies that help you formulate your expectations, your expectations (tentative answer to your question), and a discussion of the variables that will allow you to answer your question.	February 24 <sup>th</sup> , 11.59 pm	30 points
Paper assignment 2 <u>template</u> *	<ul> <li>2-3 pages</li> <li>Summary of your variables. Start with a data dictionary and describe each variable using appropriate statistics and visualizations.</li> <li>Conclude by explaining your next steps that will allow you to answer your research question.</li> <li>2-3 pages</li> </ul>	March 24 <sup>th</sup> , 11.59 pm	40 points
and talk to the in	<ul> <li>detailed feedback on each of the preliminary assign astructor if you have any questions. Make the necess and descriptive analysis before integrating these par Prepare 3-5 slides. Explain your main findings to the class (5 minutes). Be ready to answer questions about the analysis you conducted. I will take your presentation into account when grading your final papers.</li> </ul>	ary changes to y	our
Final paper <u>template</u> *	<ul> <li>The final paper combines your revised research question, literature review, and relevant descriptive analysis with the inferential statistical analysis you conduct to answer your causal research question. You demonstrate your understanding of the data you have and your ability to pick appropriate tests and interpret their results.</li> <li>7-10 pages, including graphs and tables integrated into your text</li> </ul>	April 28 <sup>th</sup> , 11.59 pm	200 points
	You submit 2 additional files with your final paper: a complete R code and the dataset file.		

#### What happens if I don't submit a paper assignment? Can I do it later?

You can submit a paper assignment late. 10% of the assignment point value will be deducted for each 24-hour period that the assignment is late. If the paper assignment is submitted less than 24 hours late, the reduction will be proportional.

You also have ONE no-penalty 24-hour extension to use on any paper assignment. You do not need to ask me or explain anything – just put a written note in your submission indicating that you chose to use one of your extensions. These extensions are available to all, because life happens.

Additional extensions for paper assignments need to be discussed at least 48 hours before the original deadline. I reserve the right to grant extensions on a case-by-case basis.

## 4. Midterm exam: 150 points

The midterm exam will be in person, in-class and will consist of two parts:

• an **R** exercise

Similarly to your weekly homework and the problem sets, you will need to answer a set of questions by performing operations in  $\mathbf{R}$ . You can have all the  $\mathbf{R}$  code files from the previous homework assignments and problem sets open on your computer when working on this exercise. No outside sources or help are allowed. You will need to submit an  $\mathbf{R}$  code with detailed comments.

• Your interpretation of a piece of **R** code

These chunks of code will come from your own previous homework/problem sets. You will need to explain what the code is doing. This part will be hand-written, and you won't have access to your laptops with previous assignments while completing it.

# 5. Final exam: 150 points

The final exam will be in person, in-class and will consist of two parts:

- Conceptual knowledge questions. Can you explain the central limit theorem or confidence intervals in your own words? Can you identify the types of variables in a dataset? Drawing largely from the weekly quizzes you've been completing throughout the semester, the final exam will consist of multiple-choice and short-answer questions and will be completed in class and on paper.
- Your interpretation of a piece of **R** code

It is a closed book and closed notes exam focusing on the fundamentals of what we've covered in this course.

# **Course Schedule**

Weeks	Lecture date	Lecture (Tuesday)	Lab date	Lab (Thursday)
1	14-Jan-25	Course introduction. How can we use data to answer questions? READ: Course syllabus (on Blackboard)	16-Jan-25	Variables. R 100: Intuitive Programming WATCH: <u>Variables and types of variables</u> <u>R for Social Science: A Big Picture Introduction</u> <b>READ</b> <u>Why learn a programming language as a non- programmer?</u>
2	21-Jan-25	Causal and descriptive questions. Internal and external validity. R 101: Basics of R Navigating R on Spiderweb WATCH What is a dataset? READ Writing Good Quantitative Research Questions Research Methods for the Social Sciences (Pelz) – Chapter 5. Research Designs	23-Jan-25	Opening and using data in R. Types of variables and operations with variables in R. READ: Imai. Chapter 1 (pp. 10-27)

3	28-Jan-25	Describing individual variables. Surveys	30-Jan-25	Practice: Describing survey results (univariate
				data) in R.
		READ:		REVIEW:
		Imai. Chapter 3 (pp.75-96)		Imai. Chapter 3 (pp.75-96)
4	4-Feb-25	Describing pairs of variables. Cross-	6-Feb-25	Practice: Describing and visualizing bivariate
		tabulation and correlation		relationships. Correlation.
		WATCH:		
		Correlation: The Basic Idea Explained		REVIEW:
		READ:		Correlation: The Basic Idea Explained
		Imai. Chapter 3 (97-107)		Imai. Chapter 3 (97-107)
5	11-Feb-25	Causality. Causal inference, factual and	13-Feb-25	Causality. Causal inference with observational
		counterfactual outcome. Experiments and		data. Confounding bias. Difference-in-difference
		causality.		designs.
		WATCH:		WATCH:
		Randomized Trials: The Ideal Weapon		Observational vs Experimental Studies
		READ:		READ:
		Imai. Chapter 2 (pp.32-54)		Imai. Chapter 2 (pp.54-69)
6	18-Feb-25	Prediction. Simple linear regression. The	20-Feb-25	Practice: simple linear regression in R.
		logic of a linear regression.		Interpreting regression coefficient and R
		WATCH:		squared.
		Introduction to Simple Linear Regression		
		READ:		REVIEW:
		Imai. Chapter 4 (139-161)		Introduction to Simple Linear Regression
				Imai. Chapter 4 (139-161)
7	25-Feb-25	Prediction. Multivariate regression and	27-Feb-25	Practice: multiple linear regression in R.
		interaction terms.		Interpreting regression coefficients.
		WATCH:		REVIEW:
		Multiple Regression - Dummy or indicator		Multiple Regression - Dummy or indicator
		variables		variables

		Multiple Regression - Interpreting		Multiple Regression - Interpreting coefficients
		coefficients		Understanding Interaction Effects in Statistics
		READ:		Understanding interaction Effects in Statistics
		Understanding Interaction Effects in		
		Statistics		
8	4-Mar-25		6-Mar-25	Midterm exam
8	4-Mar-25	Can regression prove causality?	6-Mar-25	Mildterm exam
		Confounding bias, heterogenous effects,		
		and regression discontinuity designs.		
		WATCH:		
		Using Regression to Get Causal Effects		
		READ:		
		Imai. Chapter 4 (pp. 161-181)		
SPRING	BREAK			
9	18-Mar-25	Probability. Conditional probability	20-Mar-25	Practice: Using probability and conditional
				probability.
		READ:		REVIEW:
		Imai. Chapter 6 (pp.244-247 [section		Imai. Chapter 6 (pp.244-247 [section 6.1.2] and
		6.1.2] and 254-266)		254-266)
				Class handout
10	25-Mar-25	Probability. Random variables and their	27-Mar-25	Practice: Using random variable distribution to
		distributions. Laws governing random		make sense of the world and data
		variables.		
		WATCH:		REVIEW:
		The Central Limit Theorem, Clearly		Random Variable: Discrete & Continuous
		Explained!!!		The Central Limit Theorem, Clearly
		READ:		Explained!!!
		Random Variable: Discrete & Continuous		Imai. Chapter 6 (pp.300-306)
		Imai. Chapter 6 (pp.300-306)		The second se
11	1-Apr-25	Uncertainty. Population and sample	3-Apr-25	Practice: Estimation error for population
	-	estimates. Confidence intervals.	-	parameters. The use of confidence intervals.

		WATCH:		REVIEW:
		Population and Estimated Parameters,		Population and Estimated Parameters, Clearly
		Clearly Explained!!!		Explained!!!
		READ:		Standard error
		Standard error		Confidence Intervals: Interpreting, Finding &
		Confidence Intervals: Interpreting, Finding		Formulas
		<u>&amp; Formulas</u>		
12	8-Apr-25	Uncertainty. Hypothesis testing.	10-Apr-25	Practice: Hypothesis testing. T-tests.
		WATCH:		
		Hypothesis Testing and The Null		REVIEW:
		Hypothesis, Clearly Explained!!!		Hypothesis Testing and The Null Hypothesis,
		READ:		Clearly Explained!!!
		Imai. Chapter 7 (pp. 342-363)		Imai. Chapter 7 (pp. 342-363)
13	15-Apr-25	Linear regression and uncertainty.	17-Apr-25	Practice: Plotting predicted values and
		Coefficients and predicted values.		confidence intervals in R.
		WATCH:		
		Confidence intervals for regression		REVIEW:
		coefficients		Confidence intervals for regression coefficients
		READ:		Imai. Chapter 7 (pp.370-375)
		Imai. Chapter 7 (pp.370-375)		How to Interpret P-values and Coefficients in
		How to Interpret P-values and Coefficients		Regression Analysis
		in Regression Analysis		
14	22-Apr-25	Final project presentations	24-Apr-25	Final review

## Resources

If you experience difficulties in this course, do not hesitate to consult with me. There are also other resources that can support you in your efforts to meet course requirements.

## Quantitative Resource Center

Want to talk through a statistical concept or struggling with R? While I will always be available to help you, sometimes a different approach or explanation, or talking to someone with a different level of experience is exactly what you need for it all to make sense. I encourage you to seek out resources and help that work for you – and that includes the University's new Quantitative Resource Center (qrc.richmond.edu).

It provides assistance to students with diverse quantitative needs. This encompasses support in quantitative courses such as calculus, economics, and chemistry, as well as assistance with programming software and languages like Excel, Python, and R. Peer consultants can be accessed by appointment or during open drop-in sessions. In addition to general academic support, the QRC offers statistical assistance for research projects. For information on additional support options, contact Dr. Erica Modeste at <a href="mailto:erica.modeste@richmond.edu">erica.modeste@richmond.edu</a>.

## Academic Skills Center (asc.richmond.edu):

Assists students in assessing their academic strengths and weaknesses; honing their academic skills through teaching effective test preparation, critical reading and thinking, information conceptualization, concentration, and related techniques; working on specific subject areas (e.g., calculus, chemistry, accounting, etc.); and encouraging campus and community involvement. Tutors will be available virtually. The on-call peer tutors available for these appointments are listed in the Box file: On-Call Online Tutors

(https://richmond.box.com/s/dpe37chr2zodr3o1amtj8omjk72v2ktb). Email Roger Mancastroppa (rmancast@richmond.edu) and Hope Walton (hwalton@richmond.edu) for appointments in academic and life skills to request a Zoom conference.

# Boatwright Library Research Librarians: (library.richmond.edu/help/ask/ or 289-8876):

Research librarians help students with all steps of their research, from identifying or narrowing a topic to locating, accessing, evaluating, and citing information resources. Librarians support students in their classes across the curriculum and provide library instruction, tutorials, research guides, and individual help. All research support will be provided online or by appointment and students can contact a librarian for help via email (library@richmond.edu), text (804-277-9ASK), chat, or Zoom (by appointment).

#### Career Services: (careerservices.richmond.edu or 289-8547):

Can assist you in exploring your interests and abilities, choosing a major or course of study, connecting with internships and jobs, and investigating graduate and professional school options. We encourage you to schedule an appointment with a career advisor early in your time at UR.

#### Counseling and Psychological Services (caps.richmond.edu or 289-8119):

Assists currently enrolled, full-time, degree-seeking students in improving their mental health and well-being, and in handling challenges that may impede their growth and development.

Services include brief consultations, short-term counseling and psychotherapy, skills-building classes, crisis intervention, psychiatric consultation, and related services.

# Disability Services (disability.richmond.edu)

The Office of Disability Services works to ensure that qualified students with a disability (whether incoming or current) are provided with reasonable accommodations that enable students to participate fully in activities, programs, services, and benefits provided to all students. Please let your professors know as soon as possible if you have an accommodation that requires academic coordination and planning.

# Speech Center (speech.richmond.edu or 289-6409):

Assists with preparation and practice in the pursuit of excellence in public expression. Recording, playback, coaching, and critique sessions offered by teams of student consultants trained to assist in developing ideas, arranging key points for more effective organization, improving style and delivery, and handling multimedia aids for individual and group presentations. Remote practice sessions can be arranged; we look forward to meeting your public speaking needs.

# Writing Center (writing.richmond.edu or 289-8263):

Assists writers at all levels of experience, across all majors. Students can schedule appointments with trained writing consultants who offer friendly critiques of written work.

#### **Course Policies**

#### Academic Integrity and Collaboration

Discussion and the exchange of ideas are vital for any intellectual community. For the oral or written assignments in this course, you are encouraged to consult with your classmates on the choice of paper topics or seek advice from your peers. However, you should ensure that any written work you submit is the result of your own research and writing. You should also adhere to standard citation practices in the discipline by properly citing any written works that you reference in your assignments. You will be expected to pursue your academic studies with integrity and must follow the Honor Code. The shortened version of the honor pledge is the following: "I pledge that I have neither received nor given unauthorized assistance during the completion of this work."

All assignments are expected to be the student's original work. The Jepson School follows the provisions of the Honor System as outlined by the School of Arts and Sciences. This means that no student is to use, rely on or turn in work that was paid-for, copied, excessively summarized without citation, created in collaboration (without permission), produced by AI, or is otherwise not the original work of the student for the specific assignment (without explicit permission).

#### Awarding of Credit

To be successful in this course, a student should expect to devote 10-14 hours each week, including class time and time spent on course-related activities. registrar.richmond.edu/services/policies/academic-credit.html

#### **Disability Accommodations**

The University of Richmond's office of Disability Services strives to ensure that students with disabilities and/or temporary conditions (i.e., concussions & injuries) are provided opportunity for full participation and equal access. Students who are approved for academic accommodations must complete the following steps to implement their accommodations in each class:

1) Submit their Disability Accommodation Notice (DAN) to each of their professors via the Disability Services Student Portal available at this link: sl.richmond.edu/be.

2) Request a meeting with each professor to create an accommodation implementation plan. Disability Services is available to assist, as needed.

It is important to complete these steps as soon as possible because accommodations are never retroactive, and professors are permitted a reasonable amount of time for implementation. Students who are experiencing a barrier to access due to a disability and/or temporary condition are encouraged to apply for accommodations by visiting <u>disability.richmond.edu</u>. Disability Services can be reached at <u>disability@richmond.edu</u> or 804-662-5001.

#### Honor System

The Jepson School supports the provisions of the Honor System. The shortened version of the honor pledge is: "I pledge that I have neither received nor given unauthorized assistance during the completion of this work."

https://studentdevelopment.richmond.edu/student-handbook/honor/index.html

#### **Religious Observance**

Students should notify their instructors within the first two weeks of classes if they will need accommodations for religious observance. registrar.richmond.edu/planning/religiousobs.html

#### Addressing Microaggressions on Campus

Microaggressions are the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, that communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership<sup>1</sup>. Recent research has found that, when professors do not address microaggressions in class, microaggressions foster alienation of marginalized groups<sup>2</sup>. Furthermore, both students and faculty who are exposed to microaggressions more often are more likely to have depressive symptoms and negative affect (a negative view of the world)<sup>3</sup>. A comfortable and productive environment where meaningful learning happens can be collectively created through actions, words, or environmental cues that promote the inclusion and success of marginalized members, recognizing their embodied identity, validating their realities, resisting sexism, ableism, and racism<sup>4</sup>.

The University of Richmond is committed to building an inclusive community. To this end, the Student Center for Equity and Inclusion (SCEI) was created in 2021 and offers ongoing support and assistance for a diverse student body.<sup>5</sup> With this in mind, as a community member at the University of Richmond, I pledge to address microaggressions in the classroom by holding myself, other students, and faculty accountable for what is said and being receptive to criticism when perpetuating these slights, snubs, or insults.

https://doi.org/10.1002/j.1556-6676.2014.00130.x

<sup>&</sup>lt;sup>1</sup> Sue, S., Zane, N., Nagayama Hall, G. C., & Berger, L. K. (2009). The Case for Cultural Competency in Psychotherapeutic Interventions. *Annual Review of Psychology*, *60*(1), 525–548. https://doi.org/10.1146/annurev.psych.60.110707.163651

<sup>&</sup>lt;sup>2</sup> Bergom, I., Wright, M.C., Brown, M.K. and Brooks, M. (2011), Promoting College Student Development through Collaborative Learning: A Case Study of Hevruta. *About Campus*, *15*, 19-25. <u>https://doi.org/10.1002/abc.20044</u>

<sup>&</sup>lt;sup>3</sup> Nadal, K. L., Griffin, K. E., Wong, Y., Hamit, S., & Rasmus, M. (2014). The Impact of Racial Microaggressions on Mental Health: Counseling Implications for Clients of Color. *Journal of Counseling & Development*, *92*(1), 57–66.

<sup>&</sup>lt;sup>4</sup> Rolón-Dow, R. (2019). Stories of Microaggressions and Microaffirmation: A Framework for Understanding Campus Racial Climate. *NCID Currents*, *1*(1). http://dx.doi.org/10.3998/currents.17387731.0001.106

<sup>&</sup>lt;sup>5</sup> <u>https://inclusion.richmond.edu/</u>