COURSE FORMAT	Weekly research meetings scheduled individually (Dawson 223 or Online) Group Seminar: Mo 3:00–4:30pm (Dawson 106 or Online) Social Activities (Summer Math Tea): Tu 3:00 - 3:30 (Dawson Lobby) See TRIO-McNair Canvas page for other McNair activities

INSTRUCTOR INFORMATION

Sungju Moon, PhD

Primary Contact: We will be using Slack (dedicated channel) for communications
Email: sungju.moon @ nevadastate.edu
Office Phone: (702) 992-2725
Office Location: Dawson 223

Please note that all official University communication is conducted using Nevada State University-issued email addresses (e.g., @students.nevadastate.edu) in order to comply with the Family Educational Rights and Privacy Act (FERPA). If you need assistance finding or accessing your NSU email account, please see the Policies & Student Responsibilities page.

OFFICE HOURS

Summer office hours by appointment only

E-MAIL & CLASSROOM RESPONSE TIME

You can generally expect a response to e-mails within 24–48 hours (or slightly longer over weekends or holidays). Feedback for completed discussions, quizzes, and assignments depends on the length and complexity of the activity and could take up to 10 days. For questions on the status of a completed assignment, discussion, or test please contact me.

COURSE DESCRIPTION

Undergraduate research in mathematics. This summer, we have three main agenda items:

1. Student-driven independent reading of an advanced undergraduate text
2. Summer research project as outlined in the participating student's McNair Summer Research Institute (SRI) proposal
3. Full participation in TRIO-McNair summer programs including presenting ongoing research at a McNair conference (UCLA or U. at Buffalo)

REQUIRED TEXT(S)

Advanced undergraduate textbook of participating student's choice:

- Nigel—*Networks* by M. Newman
- Carlos—*A Biologist's Guide to Mathematical Modeling in Ecology and Evolution* by S. P. Otto & T. Day

LEARNING OUTCOMES

After finishing this course, you will be able to:

- Apply dynamical modeling tools to conduct original research in your chosen field.
- Independently locate, evaluate, and synthesize scholarly references relevant to your research topic.
- Develop a clear and sustainable research agenda to guide your work during the upcoming Fall semester and throughout your participation in the McNair Scholars Program.

| COURSE SCHEDULE | This is a student-driven, self-paced course no fixed schedule. We will meet individually at designated times to review and discuss progress in research and assigned readings. Student is expected to participate in all required McNair summer activities as well as the group research activities including Group Seminar (Research Progress Presentations & Paper Review), and optional social activities such as Summer Math Tea. |

Project Titles (Summer 2025)
- Nigel—A Dynamical Model for Learning: How Does Student Enthusiasm Affect Learning Outcomes?
- Carlos—A Dynamical Model of Algae Growth; Algae as a Renewable Energy Source (Carlos)

| ASSIGNMENT DESCRIPTION & DUE DATES | **Research/Reading Outcomes (100%):** Students will establish their own milestones at the start of the semester and work toward achieving them. Progress will be assessed based on the effort and outcomes demonstrated in relation to these milestones over the course of the semester. |

| EXAM DESCRIPTION | This course does not include any exams. |

| LATE WORK POLICY | When students miss work for medical and/or personal reasons, they should access the Student Absence Notification System. |

There may be days you do not to attend classes or leave early due to past or ongoing crises or distressing circumstances. Disclosure of specific reasons or details is not expected, but it will be helpful if you could communicate with me about instances of missed sessions or work; this is because (1) frequent or prolonged inactivity with regard to course contents will negatively impact your learning, and (2) open communication will help us reformulate missed assignments to suit your situation. Missing five consecutive class sessions or assignments without prior or follow-up notice will prompt me to check in with you for a 'pulse check'. Please know that I am available to provide resources and connect you to support services.

| GRADING CRITERIA | Your grade will be determined by the following rubric: (Course Point Totals)—100% |

- Research/Reading Outcomes (100%)

Grading Scale (Letter Grade and Point Range):

A	93% or higher	B-	80%–82.99%	D+	67%–69.99%
A-	90%–92.99%	C+	77%–79.99%	D	63%–66.99%
B+	87%–89.99%	C	73%–76.99%	D-	60%–62.99%
B	83%–86.99%	C-	70%–72.99%	F	less than 60%

Accessing Grades and Instructor Feedback

To access your grades and find all of the instructor's feedback, click on Grades in the course navigation menu. Scroll through the list until you find the new graded assignment (indicated by the blue dot to the left of the assignment name). Then click on the assignment name. You will see your grade. Below it you can click on Show Rubric to see the marked up rubric. Click on the paper title if you want to download the original document. (The instructor's marks or comments will not appear on the downloaded document.) Click on the box to the right of the paper title to see the Turnitin report. Click on View Feedback to see the paper marked up with the instructor's comments/corrections in DocViewer. The instructor's feedback is on the right. Accessing Grades will take you step-by-step through how to find all instructor feedback and see the marked-up paper and rubric.

POLICIES & STUDENT RESPONSI-BILITIES

Students are responsible for reading, understanding, and abiding by the policies listed on the Student Responsibilities page. This page contains information about conduct, plagiarism, cheating, and Turnitin, among other important policies related to this course, LASB, and NSU.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Use Only With Acknowledgement. Students are allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Bard) on assignments in this course if that use is properly documented and credited. For example, text generated using ChatGPT version 4 (ChatGPT-4) should include a citation such as:

ChatGPT-4. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. https://chat.openai.com/

Material generated using other tools should follow a similar citation convention. Students are responsible for ensuring the accuracy of any information provided by an AI tool.

Source: Adapted from the University of Delaware:
https://ctal.udel.edu/advanced-automated-tools/

STUDENT SUCCESS RESOURCES

At some point this semester, you may require help or support from various services on campus to help you be successful in your classes. On the Student Support & Resources page, you will find information about services like tutoring, library resources, advising, and help with writing assignments.