### Teaching and Mentoring Statement

#### Lin Jiu

"Teaching and learning promote and enhance each other." —The Book of Rite, Warring States period.

This Chinese quote on teaching and learning reveals the mutual benefit between them, as well as between the instructor and students. Although I read it as a teenager, not until 2014, when I first became an instructor, did I finally begin to better understand the nature and connections between teaching and learning. There are several key concepts, such as

- *motivation* and *inspiration*: as William Arthur Ward said "The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.";
- engagement, by, e.g., group discussion, asking and answering questions;
- systematical *training plans* and *course designs*, by organizing materials, setting appropriate homework assignments, quizzes, and tests;
- involvement of student research projects (, as my published my first paper as a junior student) and beyond;
- and finally the cultivation in active pursuing.

For instance, teaching objects are no long restricted to course materials; it is more important to foster a deeper understanding, to cultivate a self-independent learning, and to guide students with problem-solving skills. My ultimate goal is to cultivate the students necessary skills in problem solving, such as critical thinking and communication, and finally to guide the students into becoming self/independent math learners outside the classroom. To fulfill those goals, certain pedagogical strategies are applied.

- 1. Experiential teaching enriches the contents and activities in class. Besides traditional in-class activities, e.g., group discussion on problems with interactions, model tools, such as presentations on simulation demos, can catch the attention and stimulate students to further explore materials. Connecting a real-world problem to mathematical theory, not only encourages interdisciplinary learning for students; but also reveals the process of analyzing and solving real problems.
- 2. Research-driven teaching opens the door of higher-level research projects to graduate, as well as undergraduate, students. Some homework problems, especially in high level courses, are particularly selected. They are either directly from research projects or published papers, to offer the opportunity to the students participating certain projects; or are given in a literature review format, as the opening step to research topics. For example, presentation on topics related but beyond the teaching materials is one of such formats.
- 3. Ed-tech innovative teaching becomes increasingly a major part. The use of software such as Mathematica<sup>1</sup> and SageMath<sup>2</sup> is not restricted in presenting simulations and plots. Programming homework, dynamic notes, etc. always appear in my class.

### 1 Diverse and Abundant Experiences

Throughout all three institutes I have taught: Tulane University, Dalhousie University, and Duke Kunshan University, I experienced from private university, public university to the joint-venture liberal arts college. As shown in Appendix B, up to now, I have lectured (including current teaching ones)

• 24 sections, of 10 different regular math courses, including various levels of calculus, linear algebra, probability, complex analysis, and number theory, at three different institutes;

<sup>&</sup>lt;sup>1</sup>https://www.wolfram.com/mathematica/

<sup>&</sup>lt;sup>2</sup>https://www.sagemath.org/

• 1 miniterm, i.e., a 1-week short course, and 6 independent study, i.e., reading courses, for completely different topics, e.g., combinatorics, analytic number theory, quantum computing, and algebraic geometry.

In general, for basic math courses, e.g. calculus, linear algebra, probability and statistics, I have no preference, as all such courses are essential and important to students majoring in STEM. Meanwhile, as my research topics include several branches, such as combinatorics, number theory, etc., many advanced courses, e.g., complex analysis, abstract algebra, also fit my area perfectly. Take MATH301–Advanced Introduction to Probability at Duke Kunshan University (DKU) as an example. This course was designed by me upon my arrival at DKU. Many ingredients were taken into consideration, including but not restricted to the seven-week session structure at DKU, undergraduate curriculum, related major requirements, and other courses. The course serves as an elective in math major, and also consists of important materials for further courses, such as MATH405—Financial Mathematics. Some research topics, e.g., probabilistic methods, Shor's algorithms in quantum computing are also introduced in the end.

#### 2 Adjustment, Improvement, and Innovation

Teaching and learning is a dynamic process, so adjustment is required almost every single time. I am always willing to modify part of my teaching and adopt new already tested techniques into my course. This continuous adjustment encourages me to constantly reconsider the purpose and aims of the course and my teaching strategies. Moreover, comments on each course's evaluation are also helpful for improvement. The current average of the overall score and some comments show that I am a "good teacher"; still, there is room and space be become a better instructor. In order to constantly improve my teaching, I am also engaged in many activities. For instance, I led two sessions by the *Center for Teaching and Learning* (CTL) of DKU, on the usage of MaxHub³, a digital whiteboard in hybrid teaching; and WeBWorK⁴.

Also facilitated by the CTL, I was selected as one of the two instructors at DKU to conduct the **Gradescope**<sup>5</sup> **Research Project**, awarded a grant of \$2,000. Gradescope is a digital grading system that allows instructors to scan and upload exams, and to grade them online. It reduces the grading time for classes of large size and digitizes the tests. In addition, I was selected as a **member of Faculty Learning Community** (FLC) 2022-2023, across all disciplines, to discuss and learn from each other in teaching.

### 3 Outside the Classroom—Undergraduate Mentoring

As an advisor at DKU, we are assigned **totally 10-16** undergraduate mentees, from each year, so that students can get guide and suggestions from course registrations, major declaration, etc. For instance, every semester before registering courses for the next term, advisees are required to meet the mentor, for discussion.

Undergraduate research has always been a strong part of my academic life; and I have benefited from it myself, by joining seminars and publishing my first 2 papers as an undergraduate student. As the current Discrete Math Seminar<sup>6</sup> organizer, many talks/presentations are given by undergraduate students; and some projects eventually end as papers. Since 2020 at DKU, **each summer**, I have guided **at least 2 students** for summer research projects; in Summer 2024, as a visiting scholar at Dalhousie University, I also co-mentor, with Dr. Karl Dilcher, two undergraduate students. Since an undergraduate thesis, which is called Signature Work project at DKU, is required in China, I have guided **7 in 2023** and **3 in 2024**; among which, **three were based on publish/submitted papers**.

Admittedly, there is always a distance from being a great teacher, and I am willing to constantly improve in teaching. As my experience growth, my teaching will be more effective, diverse, and innovative. My enthusiasm and commitment will never decrease.

<sup>&</sup>lt;sup>3</sup>https://www.maxhub.com/

<sup>&</sup>lt;sup>4</sup>https://openwebwork.org/

<sup>&</sup>lt;sup>5</sup>https://www.gradescope.com/

<sup>&</sup>lt;sup>6</sup>https://sites.duke.edu/kits\_team\_101\_48585/

### **Appendix**

### A TEACHING GRANTS AND AWARDS

2022.12-2024.06	Faculty Learning Community Grant	Duke Kunshan University
2022.01-2022.12	Gradescope Research Project Grant	Gradescope
	Facilitated by Center for Teaching and Learning at Du	ıke Kunshan University
	Gradescope for math courses.	
2012-2013	Excellent Graduate Student Teacher	Math Dent Tulane Univ

### **B** Teaching Experience

2025 Winter	MATH 6200	Integer Partitions and <i>q</i> -Series	Dalhousie University
2024 Fall	MATH 307	Complex Analysis	Duke Kunshan University
2023 Fall	MATH 105	Calculus	Duke Kunshan University
	MATH 202	Linear Algebra	Duke Kunshan University
	MATH 105	Calculus	Duke Kunshan University
	MATH 301	Advanced Introduction to Probability	Duke Kunshan University
2023 Spring	MATH 205	Probability and Statistics	Duke Kunshan University
	MINITERM 102	Experimental Mathematics and Symbolic	Duke Kunshan University
		Computation	
2022 Fall	INDSTU 391	Introduction to Algebraic Geometry	Duke Kunshan University
	MATH 105	Calculus	Duke Kunshan University
	MATH 306	Number Theory	Duke Kunshan University
	MATH 301	Advanced Introduction to Probability	Duke Kunshan University
2022 Spring	INDSTU 391	Variational Quantum Algorithms	Duke Kunshan University
	MATH 201	Multivariable Calculus	Duke Kunshan University
	MATH 301	Advanced Introduction to Probability	Duke Kunshan University
	MATH 201	Multivariable Calculus	Duke Kunshan University
2021 Fall	MATH 105	Calculus	Duke Kunshan University
	INDSTU 391	Riemann Zeta-Function	Duke Kunshan University
	INDSTU 391	Quantum Algorithm	Duke Kunshan University
	MATH 306	Number Theory	Duke Kunshan University
	INDSTU 391	Combinatorics	Duke Kunshan University
2021 Spring	MATH 205	Probability and Statistics	Duke Kunshan University
	MATH 301	Advanced Introduction to Probability	Duke Kunshan University
2020 Fall	MATH 105	Calculus	Duke Kunshan University
	MATH 201	Multivariable Calculus	Duke Kunshan University
2019 Summer	MATH 1030	Matrix Theory and Linear Algebra I	Dalhousie University
2019 Winter	MATH 3080	Introduction to Complex Variables	Dalhousie University
2016 Spring	MATH 1060	Long Calculus II	Tulane University
2015 Fall	MATH 1310	Consolidated Calculus	Tulane University
2015 Spring	MATH 1210	Long Calculus I	Tulane University
2014 Summer	MATH 1160	Long Calculus II	Tulane University

### C Sampled Course Syllabi and Evaluations

#### MATH 202 Section 002

### **Linear Algebra**



#### Fall 2023, Session 2

Dates / Synchronous meeting time: MoWe: 12:00—14:30 ROOM: IB 1047

Recitation Tu: 16:15—17:30 Zoom: **997 5192 0472** PASS: **MATH202** 

Academic credit: 4

Course format: Lectures, Recitations

#### **Instructor's Information**

Dr. Lin Jiu Assistant Professor in Mathematics Email: lin.jiu@dukekunshan.edu.cn

Office: WDR 3004

Office Hours: Tu 13:00—14:30, We: 10:00—11:30, or **by appointment** 

My main research area is number theory and combinatorics in mathematics. Some other projects involve computations, such as symbolic computation, i.e., computer proofs. Please check my personal website for more information: https://jiulin90.github.io/index.html

#### **Teaching Assistant Information**

Lanze Liu Lanze.Liu@dukekunshan.edu.cn

Office Hours: Th: 13:00—14:00 Zoom: 949 8505 9527 PASS: MATH202

#### What is this course about?

This is an introduction to linear algebra for students in the first or second year of university. Linear algebra is the study of systems of linear equations, vector spaces, and linear transformations. Solving systems of linear equations is a basic tool in mathematics used for solving problems in science, engineering, business, and many other fields. Main topics of this course include systems of linear equations and elementary row operations, Euclidean n-space and subspaces, linear transformations and matrix representations, Gram-Schmidt orthogonalization process, determinants, eigenvectors and eigenvalues, and applications. The content of this course is essential to almost all areas of mathematics, engineering, computer science and other data-focused sciences and research.

#### What background knowledge do I need before taking this course?

Prerequisite: Math 101 or Math 105.

#### What will I learn in this course?

 Perform matrix algebra, apply Gaussian elimination, interpret the resulting matrix and describe the solution set to a system of linear equations.

- State, interpret, and apply key definitions and theorems, including vector spaces, subspaces, linear independence, basis, dimension, linear transformations and corresponding matrix representations, the Invertible Matrix Theorem, the Rank and Nullity Theorem, etc.
- Understand definition and properties of determinants and compute the determinant of a given matrix.
   Use Cramer's Rule to solve certain systems of linear equations, based on the calculations of determinants.
- Find eigenvalues and eigenvectors, and diagonalize matrices.
- Apply orthogonality and projections to solve geometric or algebraic problems, including Gram-Schmidt orthogonalization and least squares solutions.
- Use properties and results of matrix algebra, vector spaces, linear transformations, etc., to construct short proofs of statements in abstract settings.

#### What will I do in this course?

- You will attend two lectures per week.
- You will attend one recitation per week, except for Week 3 and Week 5, when we schedule two midterms.
- You will finish 6 sets of homework assignments via WeBWorK
- You MUST attend the two midterm tests and the final exam.
- Office hours, tutors from Academic Resource Center (see below on campus resources) will provide help on any questions.

#### What required texts, materials, and equipment will I need?

Free textbook: (uploaded to Sakai)

Matrix Theory and Linear Algebra, Peter Salinger

https://www.mathstat.dal.ca/~selinger/linear-algebra/downloads/LinearAlgebra.pdf

#### What optional texts or resources might be helpful?

Any textbook in linear algebra

#### How will my grade be determined?

Test I	20%	Nov. 7 <sup>th</sup> IB 1047 Coverage: Week 1 + Week 2
Test II	20%	Nov. 21 <sup>st</sup> IB 1047 Coverage: Week 3 + Week 4
Final Exam	40%	Dec. 13, AB 2103.
Homework Assignments	20%	See the description below

**Tests**: There are two tests during the recitation time of Weeks 3, and 5. Each is worth 20%.

Final Exam: Scheduled by the Registrar's Office, which is a 3-hour exam.40%

**Homework Assignments**: There are 6 sets of homework assignments, on WeBWorK. Each is worth 4% and the lowest will be dropped.

**Formula Sheet**: For **each midterm test**, you are allowed to bring **ONE A4 size formula sheet** (**double sided**) and for the **final exam**, you are allowed to bring **TWO pieces**.

```
A+= 98% - 100% A = 93% - 97.99%; A-= 90% - 92.99%; B+= 87% - 89.99%; B= 83% - 86.99%; B-= 80% - 82.99%; C+= 77% - 79.99%; C= 73% - 76.99%; C-= 70% - 72.99%; D+= 67% - 69.99%; D= 63% - 66.99%; D-= 60% - 62.99%; F= 59.99% and below
```

As you can see, the final percentage will be rounded DOWN to the closest integer.

Your course grade will not be lower than your final exam percentage. For example, if you obtained an A in the final exam; but overall course calculation, from the table above, shows an A-, you will still receive an A, not an A-.

Your grades will NOT be curved.

#### What are the course policies?

Language: English

The official language in this course is English.

- Communications during or after the class on course materials should use English
- Your answers to tests should be in English. Each time, if I see another language other than English
  appearing in your answers, I will take 1% off from your COURSE GRADE.

In case of documented illness or family emergency or documented University sponsored trips, you may miss the test, but the supporting documentation must be submitted to the instructor in advance. With the document, your missing midterm score can be counted as the same as your final. Do remember: let me know BEFORE the exam. An unexcused absence from any exam will be counted as a zero.

#### **Academic Integrity:**

As a student, you should abide by the academic honesty standard of Duke Kunshan University. The DKU Community Standard states: "Duke Kunshan University is a community comprised of individuals from diverse cultures and backgrounds. We are dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Members of this community commit to reflecting upon and upholding these principles in all academic and non-academic endeavors, and to protecting and promoting a culture of integrity and trust." For all graded work, students should pledge that they have neither given nor received any unacknowledged aid.

Please also include an indication of your typical penalties for an academic integrity violation (such as resubmitting for a reduced grade, 0 on the problem or the assignment, etc.). While the actual penalty might depend on the details of the specific situation, including some indication will help students understand that DKU takes academic integrity seriously. Please also be clear about your policies regarding the use of any online resources, including language translation tools, problem-solving tools, **artificial intelligence**, etc.

#### **Academic Policy & Procedures:**

You are responsible for knowing and adhering to academic policy and procedures as published in the University Bulletin and Student Handbook. Please note, an incident of behavioral infraction or academic dishonesty (cheating on a test, plagiarizing, **unauthorized use of online tools**, etc.) will result in immediate action from me, in consultation with university administration (e.g., Dean or Associate Dean of Undergraduate Studies, Student Conduct, Academic Advising). Please visit the Undergraduate Studies website for additional guidance related to academic policy and procedures. Academic integrity is everyone's responsibility.

#### **Academic Disruptive Behavior and Community Standard:**

Please avoid all forms of disruptive behavior, including but not limited to: verbal or physical threats, repeated obscenities, unreasonable interference with class discussion, making/receiving personal phone calls, text messages or pages during class, excessive tardiness, leaving and entering class frequently without notice of illness or other extenuating circumstances, and persisting in disruptive personal conversations with other class members. Please turn off phones, pagers, etc. during class unless instructed otherwise. Laptop computers may be used for class activities allowed by the instructor during synchronous sessions. If you choose not to adhere to these standards, I will take action in consultation with university administration (e.g., Dean of Undergraduate Studies, Student Conduct, Academic Advising).

#### **Academic Accommodations:**

Duke Kunshan University makes reasonable academic accommodations for qualified students with disabilities. All undergraduate accommodations must be approved through the Student Accommodation Services. Students requesting accommodation for this course should forward their official accommodation letter to the instructor and ask to schedule a time to meet and discuss the implementation of their accommodation(s). It is the student's responsibility to meet, discuss, and provide an electronic copy of the Instructor Accommodation Letter to each instructor. Accommodation will not be granted retroactively. Accommodations for test, quiz, or exam taking must be arranged with the professor at least a week before the date of the quiz, test, or exam, including finals.

What campus resources can help me during this course?

**Academic Resource Center** 

The Academic Resource Center provides tutoring services, and there will be tutors especially for our MATH202 course: https://www.dukekunshan.edu.cn/academics-advising/tutoring-service/

#### **Academic Advising and Student Support**

Please consult with me about appropriate course preparation and readiness strategies, as needed. Consult your academic advisors on course performance (i.e., poor grades) and academic decisions (e.g., course changes, incompletes, withdrawals) to ensure you stay on track with degree and graduation requirements. In addition to advisors, staff in the Academic Resource Center can provide recommendations on academic success strategies (e.g., tutoring, coaching, student learning preferences). Please visit the <a href="Office of Undergraduate Advising website">Office of Undergraduate Advising website</a> for additional information related to academic advising and student support services.

#### **Writing and Language Studio**

For additional help with academic writing—and more generally with language learning—you are welcome to make an appointment with the Writing and Language Studio (WLS). You can register for an account, make an appointment, and learn more about WLS services, policies, and events on the <u>WLS website</u>. You can also find writing and language learning resources on the <u>Writing & Language Studio Sakai site</u>.

#### **IT Support**

If you are experiencing technical difficulties, please contact IT:

- China-based faculty/staff/students 400-816-7100, (+86) 0512-3665-7100
- US-based faculty/staff/students (+1) 919-660-1810
- International-based faculty/staff/students can use either telephone option (recommend using tools like Skype calling)
- Live Chat: <a href="https://oit.duke.edu/help">https://oit.duke.edu/help</a>
- Email: <a href="mailto:service-desk@dukekunshan.edu.cn">service-desk@dukekunshan.edu.cn</a>

#### What is the expected course schedule?

We will cover most of the following materials from the textbook (<u>Tentatively, may up to some perturbation</u>).

Week 1	Systems of Linear Equations (Chapter 1)
	• Geometric and Algebraic view of System of equations.(1.1, 1.2)
	• Elementary Operations (1.3)
	<ul> <li>Gaussian and Gauss-Jordan Elimination (1.4, 1.5)</li> <li>Homogeneous Systems (1.6)</li> </ul>

	• Uniqueness of the Reduced Echelon Form (1.7)
Week 2	Vectors in n-dim space (Chapter 2)
	• Points and Vectors (2.1)
	• Vector addition, scalar multiplication, linear combination (2.22.4)
	• Length of a vector (2.5)
	• Dot product (2.6.12.6.4)
	Matrices (Chapter 4)
	• Definition, Matrix addition, scalar multiplication (4.1—4.3)
	Matrix Multiplication (4.4)
	• Matrix Inverse (4.5.1, 4.5.2)
Week 3	• Matrix Inverse (4.5.3, 4.5.4)
	• Elementary matrices (4.6)
	• Transpose (4.7)
	Trace: Definition
	Spans, Linear Independence and Bases in $\mathbb{R}^n$ (Chapter 5)
	• Spans (5.1)
	• Linear Independence (5.2)
	Midterm I: Coverage: Week 1 + Week 2
Week 4	• Subspaces of $R^n$ (5.3)
	• Basis and Dimension (5.4)
	• Null Spaces, Column Spaces, and Linear Transformations (5.5)
	• Orthogonal and Orthonormal Basis (11.2, 11.3 but only for $\mathbb{R}^n$ )
	Linear Transformations (Chapter 6)
	• Definition (6.1)

	• The Matrix of a Linear Transformations (6.2)
	<ul> <li>Properties of Linear Transformations (6.4)</li> </ul>
Week 5	Determinants (Chapter 7)
Week 3	
	• 2*2 and 3*3 (7.1)
	• Determinants of a Triangular Matrix (7.3)
	• Determinants and Row Operations (7.4
	• Minors and Cofactors (7.2)
	• A formular for the Inverse of a Matrix (7.6)
	• Properties of Determinants (7.5)
	• Cramer's Rule (7.7)
	Midterm II: Coverage: Week 3 + Week 4
	Eigenvectors and Eigenvalues (Chapter 8)
	• Eigenvectors and Eigenvalues (8.1)
	• The Characteristic Equation, Find Eigenvalues and Eigenvectors (8.2)
Week 6	• Diagonalization (8.4)
	• Matrix Powers (8.5)
	• Properties of Eigenvalue and Eigenvectors (8.9)
	• Quadratic Form (11.9)
	• Trace
	Jordan Canonical Form
Week 7	Selected Topics
	• Review

Final Exam: Dec. 13<sup>th</sup>, 2023 15:30—18:30 @ AB 2103

**Course:** 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

1 - Please rate the following stater	nents on a scale o	f 5 (strongly a	agree) to 1 (	trongly	disa	agree).						
The course learning objectives stated in the syllabus were clear to me.												
Response Option	Percent	Perce	ent R	lespon	ses	Means						
Strongly Agree	(5)	19	90.48%					4.90				
Agree	(4)	2	9.52%									
Neutral	(3)	0	0.00%	]								
Disagree	(2)	0	0.00%	]								
Strongly Disagree	(1)	0	0.00%	]								
				0 2	25	50	100	Question				
Res	sponse Rate				N	/lean			STD	Median		
21/	41 (51.22%)			4.90					0.30	5.00		

The course expectations were clear to me.												
Response Option Weight Frequency Percent					ent R	lespoi	nses	Means				
Strongly Agree	(5)	20	95.24%					4.95				
Agree	(4)	1	4.76%									
Neutral	(3)	0	0.00%	1								
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
	•			0	25	50	100	Question				

1 - Please rate the following statements	1 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
This course had clear grading criteria.													
Response Option Weight Frequency Percent						Respor	ıses	Means					
Strongly Agree	(5)	20	95.24%					4.95					
Agree	(4)	1	4.76%										
Neutral	(3)	0	0.00%	1									
Disagree	(2)	0	0.00%	1									
Strongly Disagree	(1)	0	0.00%	1									
				0	25	50	100	Questi	on				
Response	Rate					Mean				STD	Median		
21/41 (51.2	2%)					4.95				0.22	5.00		

1 - Please rate the following statemen	ts on a scale o	f 5 (strongly a	agree) to 1 (	stron	gly dis	agree	).						
This course was well organized.													
Response Option Weight Frequency Percent					rcent	Respo	nses			Means			
Strongly Agree	(5)	20	95.24%					4	.95				
Agree	(4)	1	4.76%										
Neutral	(3)	0	0.00%	1									
Disagree	(2)	0	0.00%	1									
Strongly Disagree	(1)	0	0.00%										
	•			0	25	50	100	Qu	uestion				
Respor	se Rate					Mean				STD	Median		
21/41 (	51.22%)			4.95						0.22	5.00		

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

1 - Please rate the following statements	on a scale o	f 5 (strongly a	agree) to 1 (	strongly	disagre	∍).						
The course workload was appropriate for the credits earned.												
Response Option	n Weight Frequency Percent				nt Respo	onses		Means				
Strongly Agree	(5)	20	95.24%				4.95					
Agree	(4)	1	4.76%									
Neutral	(3)	0	0.00%	1								
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
				0 25	50	100	Question					
Response	Rate				Mean			STD	Median			
21/41 (51.	22%)				4.95			0.22	5.00			

1 - Please rate the following state	I - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
I understood the language used	I understood the language used in the instruction and course materials.												
Response Option	Percent	Perc	ent R	Respor	ises	Means							
Strongly Agree	(5)	20	95.24%					4.95					
Agree	(4)	1	4.76%										
Neutral	(3)	0	0.00%	1									
Disagree	(2)	0	0.00%	1									
Strongly Disagree	(1)	0	0.00%	1									
	•			0	25	50	100	Question					
R	esponse Rate				ı	Mean			STD	Median			
2	1/41 (51.22%)					4.95			0.22	5.00			

1 - Please rate the following statements of	1 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).													
had as many opportunities as the current situation allowed to interact with my classmates.														
Response Option Weight Frequency Percent Percent Responses Means														
Strongly Agree	(5)	18	85.71%					4.76						
Agree	ree (4) 1 4.76%													
leutral (3) 2 9.52%														
Disagree	(2)	0	0.00%	1										
Strongly Disagree	(1)	0	0.00%	1										
				0	25	50	100	Question						
Response I	Rate					Mean			STD	Me	edian			
21/41 (51.2	2%)					4.76			0.62	Ę	5.00			

1 - Please rate the following state	1 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).													
interacted with students from diverse backgrounds during this course.														
Response Option	Response Option Weight Frequency Percent Percent Responses Means													
Strongly Agree	(5)	18	85.71%					4.76						
Agree	ree (4) 1 4.76%													
Neutral														
Disagree	(2)	0	0.00%											
Strongly Disagree	(1)	0	0.00%	1										
	•			0	25	50	100	Question						
Re	sponse Rate					Mean			STD	Me	edian			
21	21/41 (51.22%) 4.76 0.62 5.00													

Course: 7W2-MATH-202-002: Linear Algebra

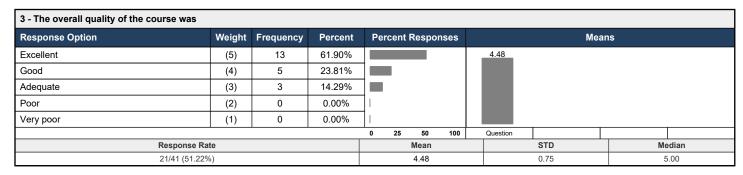
Instructor: Lin Jiu \*

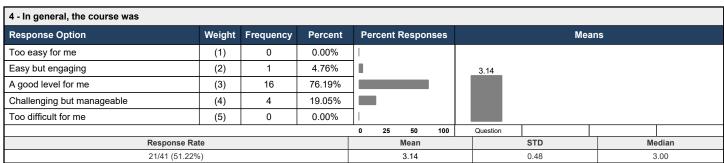
**Response Rate:** 21/41 (51.22 %)

1 - Please rate the following statements of	n a scale o	f 5 (strongly a	agree) to 1 (	strongly	y dis	agree)					
The course was intellectually stimulating											
Response Option	Weight	Frequency	Percent	Perce	ent F	Respor	nses		Mea	ans	
Strongly Agree	(5)	19	90.48%					4.90			
Agree	(4)	2	9.52%								
Neutral	(3)	0	0.00%	1							
Disagree	(2)	0	0.00%								
Strongly Disagree	(1)	0	0.00%								
				0	25	50	100	Question			
Response F	ate				ı	Mean			STD	Me	edian
21/41 (51.22	2%)					4.90			0.30		5.00

2 - How many hours per week, on average, did you spend in and out of class for this course (including attending synchronous/live meetings and office hours, as well as working on homework/assignments, course recordings, and course materials)?

					•						
Response Option	Weight	Frequency	Percent	Pe	rcent	Respon	ses		Mea	ıns	
4-8 hours	(1)	0	0.00%	1							
8-12 hours	(2)	4	19.05%								
12-16 hours	(3)	7	33.33%								
16-20 hours	(4)	6	28.57%					3.62			
20-24 hours	(5)	2	9.52%								
24-28 hours	(6)	1	4.76%								
More than 28 hours	(7)	1	4.76%								
				0	25	50	100	Question			
Response Ra	te					Mean			STD	Me	edian
21/41 (51.22%	6)					3.62			1.32	:	3.00

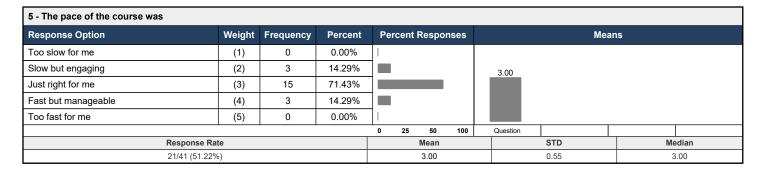




Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

**Response Rate:** 21/41 (51.22 %)



### 6 - Which assignment or activity would you most recommend the instructor to use again when teaching the course in the future and why?

**Response Rate** 7/41 (17.07%)

- Webwork is a great way of providing homework.
- Weekly homework. It can help me practice what I learn in class and better prepare for the exams.
- no
- HW6, interesting
- · Exams are ok
- The recitation in Week7, it gives me a new sight of the course.
- · practice exercises

#### 7 - Which assignment or activity could be improved and how?

**Response Rate** 8/41 (19.51%)

- The only assignments were homework and exams, so there is not much feedback to provide in terms of improving such assignments. I do wish that the class was spread out to 1.25 hours per day instead of 2.5 hours per two days.
- Maybe you can give more attempts to multiple choices questions in homework?
- In-class Q&A session. Professor can sometimes pause a little bit and ask if students have any questions
- no
- · all perfect
- · final exam could be easier
- Recitation, the handwriting of TA is a little confusing.
- all good

8 - Please use a five-point scale	(5="A great deal", 1	="Nothing") t	o indicate h	ow m	uch yo	ou lear	ned fro	om tl	his course	in general.		
Response Option	Weight	Frequency	Percent	Pe	rcent	Respoi	nses			Mea	ins	
A great deal	(5)	14	66.67%						4.62			
A lot	(4)	6	28.57%					ш				
A moderate amount	(3)	1	4.76%					ш				
A little	(2)	0	0.00%	1				ш				
None at all	(1)	0	0.00%									
	•			0	25	50	100		Question			
	Response Rate					Mean				STD	Me	edian
	21/41 (51.22%)					4.62				0.59	į	5.00

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

9 - Please rate the following statements or	n a scale o	f 5 (strongly	agree) to 1 (s	trongly di	sagree).					
This course helped me gain factual knowle	edge.									
Response Option	Weight	Frequency	Percent	Percent	Response	s		Mea	ans	
Strongly Agree	(5)	21	100.00%				5.00			
Agree	(4)	0	0.00%							
Neutral	(3)	0	0.00%							
Disagree	(2)	0	0.00%	1						
Strongly Disagree	(1)	0	0.00%	1						
Not applicable	0.00%	1								
				0 25	50 1	00	Question			
Response R	ate				Mean			STD	Me	edian
21/41 (51.22	%)				5.00			0.00	Ę	5.00

9 - Please rate the following statem	ents on a scale o	f 5 (strongly a	agree) to 1 (	strongly disagree).			
This course helped me understand	fundamental con	cepts and pri	inciples.				
Response Option	Weight	Frequency	Percent	Percent Responses		Mea	ns
Strongly Agree	(5)	21	100.00%		5.00		
Agree	(4)	0	0.00%	1			
Neutral	(3)	0	0.00%	1			
Disagree	(2)	0	0.00%	1			
Strongly Disagree	(1)	0	0.00%	1			
Not applicable	(0)	0	0.00%				
	•	0 25 50 100	Question				
Resp	onse Rate			Mean		STD	Median
21/4	1 (51.22%)			5.00		0.00	5.00

9 - Please rate the following statements on	a scale o	f 5 (strongly a	agree) to 1 (	strongly	disagree)					
I learned how to integrate knowledge.										
Response Option	Weight	Frequency	Percent	Perce	nt Respor	ises		Mea	ans	
Strongly Agree	(5)	17	80.95%				4.85			
Agree	(4)	3	14.29%							
Neutral	(3)	0	0.00%	1						
Disagree	(2)	0	0.00%	1						
Strongly Disagree	(1)	0	0.00%	1						
Not applicable	(0)	1	4.76%							
				0 2	5 50	100	Question			
Response Ra	ite	•			Mean			STD	Me	edian
21/41 (51.229	<b>%</b> )				4.85			0.37	Ę	5.00

9 - Please rate the following statement	s on a scale o	f 5 (strongly	agree) to 1 (	strongly	disagree	).				
I learned about methods of inquiry du	ing this cours	e.								
Response Option	Weight	Frequency	Percent	Percei	nt Respo	nses		Me	ans	
Strongly Agree	(5)	18	85.71%				4.90			
Agree	(4)	2	9.52%							
Neutral	(3)	0	0.00%	1						
Disagree	(2)	0	0.00%	1						
Strongly Disagree	(1)	0	0.00%	1						
Not applicable	(0)	1	4.76%							
	•			0 25	5 50	100	Question			
Respons	se Rate				Mean			STD	M	edian
21/41 (5	1.22%)				4.90			0.31		5.00

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

9 - Please rate the following st	atements on a scale o	f 5 (strongly a	agree) to 1 (s	stron	gly di	sagree).					
I learned how to analyze and e	valuate ideas and arg	uments.									
Response Option	Weight	Frequency	Percent	Pe	rcent	Respon	ses		Mea	ins	
Strongly Agree	(5)	16	76.19%					4.79			
Agree	(4)	2	9.52%								
Neutral	(3)	1	4.76%								
Disagree	(2)	0	0.00%								
Strongly Disagree	(1)	0.00%									
Not applicable	(0)	9.52%									
	·			0	25	50	100	Question			
	Response Rate					Mean			STD	Me	edian
	21/41 (51.22%)	•				4.79	,		0.54	5	5.00

10 - Please rate the following statements	0 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).											
I learned how to work in a team.												
Response Option	Weight	Frequency	Percent	Percent Responses		Mea	ins					
Strongly Agree	(5)	13	61.90%		4.53							
Agree	(4)	3	14.29%									
Neutral	(3)	3	14.29%									
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
Not applicable	(0)	2	9.52%									
				0 25 50 100	Question							
Response R	ate			Mean		STD	Median					
21/41 (51.22	%)			4.53		0.77	5.00					

My oral communication skills in	mproved during the c	ourse.						
Response Option	Weight	Frequency	Percent	Percent Responses		Mea	ins	
Strongly Agree	(5)	14	66.67%		4.58			
Agree	(4)	2	9.52%					
Neutral	(3)	3	14.29%					
Disagree	(2)	0	0.00%	]				
Strongly Disagree	(1)	0	0.00%	]				
Not applicable	(0)	2	9.52%					
	•			0 25 50 100	Question			

10 - Please rate the following state	0 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
My writing skills improved during	My writing skills improved during the course.												
Response Option	Weight	Frequency	Percent	Percent Responses Means									
Strongly Agree	(5)	14	66.67%				4.53						
Agree	(4)	1	4.76%										
Neutral	(3)	4	19.05%										
Disagree	(2)	0	0.00%	1									
Strongly Disagree	(1)	0	0.00%	1									
Not applicable	(0)	2	9.52%										
	•			0 25	50	100	Question						
Response Rate					Mean			STD	Me	edian			
21		4.53				0.84	5.00						

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

10 - Please rate the following statements of	10 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
I learned how to generate my own ideas th	I learned how to generate my own ideas that reflect how I think about the world.												
Response Option	Weight	Frequency	Percent	Perce	ent Resp	onses			Me	ans			
Strongly Agree	(5)	16	76.19%				4.74						
Agree	(4)	1	4.76%										
Neutral	(3)	2	9.52%										
Disagree	(2)	0	0.00%										
Strongly Disagree	(1)	0	0.00%										
Not applicable	(0)	2	9.52%										
				0 :	25 50	100	Questi	on					
Response Ra		Mean			STD		Median						
21/41 (51.22		4.74			0.65			5.00					

10 - Please rate the following statement	10 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
I learned knowledge of my own and/or o	I learned knowledge of my own and/or other cultures' worldviews.												
Response Option	Weight	Frequency	Percent	Percent Responses	Means								
Strongly Agree	(5)	14	66.67%		4.58								
Agree	(4)	2	9.52%										
Neutral	(3)	3	14.29%										
Disagree	(2)	0	0.00%	I									
Strongly Disagree	(1)	0	0.00%	ı									
Not applicable	(0)	2	9.52%										
				0 25 50 100	Question								
Response Rate				Mean		STD	Median						
21/41 (51.		4.58		0.77	5.00								

11 - Please rate the following statements of	n a scale	of 5 (strongly	agree) to 1	(strongly disagree).									
I learned some things in the course that ar	I learned some things in the course that are applicable to other courses.												
Response Option Weight Frequency Percent Percent Responses Means													
Strongly Agree	(5)	21	100.00%			5.00							
Agree	(4)	0	0.00%		Ш								
Neutral	(3)	0	0.00%		Ш								
Disagree	(2)	0	0.00%	]	Ш								
Strongly Disagree	(1)	0	0.00%	]	Ш								
Not applicable	(0)	0	0.00%	]									
				0 25 50 100		Question							
Response Ra		Mean	STD			Me	dian						
21/41 (51.22%) 5.00 0.00 5.00													

11 - Please rate the following s	tatements on a scale	of 5 (strongly	agree) to 1	(stror	ngly d	isagree	:).					
I learned how to apply what I learned to real-life situations or problems.												
Response Option	Weight	Frequency	Percent	Pei	rcent l	Respon	ises			Mea	ns	
Strongly Agree	(5)	18	85.71%					4.	90			
Agree	(4)	2	9.52%									
Neutral	(3)	0	0.00%	1								
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
Not applicable	(0)	1	4.76%									
				0	25	50	100	Que	estion			
Response Rate					Mean			STD		STD	Median	
21/41 (51.22%)					4.90			0.31			5.00	

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

11 - Please rate the following s	11 - Please rate the following statements on a scale of 5 (strongly agree) to 1 (strongly disagree).												
I learned some things in the course that are applicable to my life and/or my future career.													
Response Option	Weight	Percent	Percent	Responses	;		Mea	ans					
Strongly Agree	(5)	20	95.24%				4.95						
Agree	(4)	1	4.76%										
Neutral	(3)	0	0.00%	]									
Disagree	(2)	0	0.00%	]									
Strongly Disagree	(1)	0	0.00%	]									
Not applicable	(0)	0	0.00%	]									
	·			0 25	50 10	0	Question						
Response Rate					Mean			STD	Median				
21/41 (51.22%)					4.95	,		0.22	5.00				

12 - Please provide additional comme	12 - Please provide additional comments about the course if not covered by the previous questions.										
Response Rate	3/41 (7.32%)										
• no											
Nothing											
• NO more.											

13 - This question is about Prof. Lin JiuPlease rate the following statements about Prof. Lin Jiu on a scale of 5 (strongly agree) to 1 (strongly disagree)												
Ideas and concepts were explained by the instructor clearly.												
Response Option	Weight	eight Frequency Percent Percent Responses Means										
Strongly Agree	(5)	18	85.71%				1.86					
Agree	(4)	3	14.29%									
Neutral	(3)	0	0.00%	I								
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
				0 25	50 100	Q	uestion					
Response Rate					Mean			STD	Me	edian		
21/41 (51.229		4.86				0.36	5.00					

I was encouraged to participate	in course discussio	ns and activit	ies.								
Response Option	ponse Option Weight Frequency Percent Percent Responses Means										
Strongly Agree	(5)	17	80.95%		4.71						
Agree	(4)	3	14.29%								
Neutral	(3)	0	0.00%								
Disagree	(2)	1	4.76%								
Strongly Disagree	(1)	0	0.00%								
	•			0 25 50 100	Question						
		Mean		STD	Median						
21/41 (51.22%)			4.71		0.72	5.00					

Course: 7W2-MATH-202-002: Linear Algebra

Instructor: Lin Jiu \*

Waight		The class atmosphere was comfortable and my contribution was respected.												
ponse Option Weight Frequency Percent Percent Responses Means														
(5)	19	90.48%		4.90										
(4)	2	9.52%												
(3)	0	0.00%												
(2)	0	0.00%												
(1)	0	0.00%												
•			0 25 50 100	Question										
	(4) (3) (2)	(4) 2 (3) 0 (2) 0 (1) 0	(4) 2 9.52% (3) 0 0.00% (2) 0 0.00% (1) 0 0.00%	(4) 2 9.52% (3) 0 0.00% (2) 0 0.00% (1) 0 0.00%	(4) 2 9.52% (3) 0 0.00%   (2) 0 0.00%   (1) 0 0.00%	(4) 2 9.52% (3) 0 0.00% (2) 0 0.00% (1) 0 0.00% 0 25 50 100 Question	(4) 2 9.52% (3) 0 0.00% (2) 0 0.00% (1) 0 0.00% 0 25 50 100 Question							

13 - This question is about Prof. L	in JiuPlease rate t	he following s	statements a	bout Pro	f. Lin Jiu o	n a sca	ale of 5 (stro	ngly agree) to 1	(strongly disag	ree)		
I received helpful and timely feed	I received helpful and timely feedback from the instructor on my coursework as much as the current situation allowed.											
Response Option	Weight	Frequency	Percent	Percen	t Respons	es		Mea	ans			
Strongly Agree	(5)	19	90.48%				4.90					
Agree	(4)	2	9.52%									
Neutral	(3)	0	0.00%	1								
Disagree	(2)	0	0.00%	1								
Strongly Disagree	(1)	0	0.00%	1								
	·			0 25	50	100	Question					
Response Rate				Mean				STD	Median			
21		4.90				0.30	5.00					

13 - This question is about Prof. Lin JiuP	lease rate t	he following s	statements a	about Prof. Lin Jiu on a	scale	of 5 (stro	ngly agree) to 1	(strongly disag	ree)			
I had the opportunity to get help from the	I had the opportunity to get help from the instructor outside of the normal class time online and/or via email as much as the current situation allowed.											
Response Option	Weight	Frequency	Percent	Percent Responses			Mea	ıns				
Strongly Agree	(5)	19	90.48%		4	4.90						
Agree	(4)	2	9.52%									
Neutral	(3)	0	0.00%	1								
Disagree	(2)	0	0.00%	]								
Strongly Disagree	(1)	0	0.00%	1								
				0 25 50 100	Q	uestion						
Response Rate				Mean	STD			Median				
21/41 (51.2		4.90	0.30			5.00						

14 - This question is about Prof. Lin JiuAny other comments or suggestions for Prof. Lin Jiu? -	
Response Rate	7/41 (17.07%)
• Prof. Jiu was an effective instructor for this course, and his lectures were not too difficult to understand. Due to the class's straightforward nature, I don't have much feedback to provide Prof. Jiu specifically.	
• Excellent!	
• no	
excellent teacher and excellent course	
Nice professor	
Great! I learned a lot from your office hour,	
• really like his teaching style	

Course: 7W2-MATH-202-002: Linear Algebra

**Instructor:** Lin Jiu \*

**Response Rate:** 21/41 (51.22 %)

#### 15 - About Online LearningPlease provide comments and/or suggestions on any aspects of your online learning experience this term.

Response Rate

5/41 (12.2%)

• N/A

• no

• Same efficiency as onsite learning

Nothing

• The zoom meeting on week 7 has some problem when using the white broad, but it is ok.