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SYLLABUS AND COURSE INFORMATION SPRING 2023
MATH 2318 – Linear Algebra
Day and Time: MW 5:00PM-6:15PM   **Room:** Bin329
Meets 1/10/2024 through 5/10/2024,

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Instructor:	Dr. Nikolay Metodiev Sirakov	**Office:**	Bin 322
Office Hours:	M 2:45PM- 4:45PM	**E-mail:**	Nikolay.Sirakov@tamuc.edu
	W 2:45PM- 4:45PM	**Office Phone:**	903 886 5943
	Th 5PM-6PM	**Office Fax:**	903 886 5945
	Friday research meetings, Others by appointment		

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For more information, please visit: URL: http://faculty.tamuc.edu/nsirakov

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COURSE DESCRIPTION

Text: **Linear Algebra and its Applications, 5rd edition, by David C. Lay**

Pre-requisite: MATH 2414 Min Grade C or MATH 192 Min Grade C

Course Content: Chapter 1-except 1.10; Chapter 2 – 2.1-2.3, 2.8, 2.9; Chapter 4: 4.1-4.6; Chapter 5: 5.1-5.3; Chapter 6: 6.1-6.4; **Note:** Sections 6.1-6.4 will be covered upon time permission.

SLOs: **1.**The students will learn the theory of: linear equations, matrix algebra, Vector Spaces, Linearly independent sets, bases, Eigenvalues and Eigenvectors. **2.** The students will know how to apply and solve practical problems with the above theoretical concepts. **3.** The students will learn how to communicate their knowledge.

COURSE EVALUATION
Basis for Evaluation:

In-class exams	- 46%
HW, In-class problems	- 16%
Short quizzes	- 14%
Comprehensive final exam	- 24%

Grading Policy: *A:*   100%- 90% ; *B:* 89% - 80%; *C:* 79% - 70%*; D:* 69% - 60%; *F:* < 59 % The professor reserves the right to reward students for continuous hard work.

Additional Performances: Home Practice Problems; Extra Credit Problems
Course Content & Calendar: *The 1st lecture will take place on January 10, 1st week– intro to the class and basic concepts, 1.1-1.3; 2nd week – 1.4-1.5; 3rd and 4th weeks-1.6 –1.9; 5th and 6th weeks- 2.1-2.3, 2.8; 7th week- 2.9, 4.1; 8th - 10th weeks – 4.2-4.5; 11th week 4.6, 5.1, 5.2; 12th and 13th weeks – 5.3, 6.1, 6.2; 14th and 15th weeks –6.3,6.4. Preparation for the Final Exam.*
During the teaching the instructor will show the links between linear algebra and Machine Learning

Complementary Knowledge: *Applications of Linear Algebra to Machine Learning and Neural Networks will be described during the appropriate lessons. This is NOT our textbook:*
Helpful Book: Linear Algebra and Optimization for Machine Learning, ISBN 978-3-030-40343-0 ISBN 978-3-030-40344-7 (eBook), ©Springer Nature Switzerland AG 2020

Final Test   Sections: all   **Date:** Monday - May 6, 2024   **Time:** 5PM-7PM

COURSE POLICIES
HW: *to be solved at home. No makeup is allowed.*

Short quizzes: *are to be solved independently during the class period. No makeup is allowed.*

Tests: *The two in-class tests will be given roughly at regular intervals. Students will be informed of the test dates around a week in advance. The test will take one class period and will be*

given at the scheduled times only. No opportunity will be given to take the test at earlier or later times except in cases of formal institutional excuses as mentioned above.

Makeup: *Except in the case of a formal institutional excuse, no individual makeup test will be permitted.*

Cheating: HW, test, quizzes, extra credit problems results will be canceled in case of cheating.

AI use policy TAMUC acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course. Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism). Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed. In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources. 13.99.99.R0.03 Undergrad Academic Dishonesty, 13.99.99.R0.10 Grad Student Academic Dishonesty

A&M-Commerce Supports Students' Mental Health, The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services; Texas A&M University-Commerce; Halladay Student Services Building; Room 132 A/D; Phone (903) 886-5150 or (903) 886-5835; Fax (903) 468-8148 StudentDisabilityServices@tamu-commerce.edu

All students enrolled at the U shall follow the tents of common decency and acceptable behavior conducive to a positive learning environment (See Student's Guide Handbook, Polices and Procedures, Conduct).

Texas Senate Bill - 11 *(Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in TAMUC buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to* http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf *and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all TAMUC campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.*

Nondiscrimination Notice **Texas A&M University-Commerce** will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. An environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

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The road that will lead you to find a good job is the road of coding, learning, and developing yourself through accumulating a new knowledge.

Commerce, Texas
December 20, 2023   **Dr. Nikolay Metodiev Sirakov**