MAYVILLE STATE UNIVERSITY

Math 443: Algebraic Structures with Programming

MATH 443-01-LEC(10750) on campus face-to-face MWF 10 – 10:50 a.m. in CB105, 3 credits, Fall 2018
MATH 443-02-LEC(10751) online 3 credits, Fall 2018

Instructor: Mary Townsend **E-mail:** mary.townsend@mayvillestate.edu

Given my rank at MSU and my degree, I prefer to be called, **Professor Townsend**. You may call me Miss Townsend or Mrs. Townsend and use female pronouns: she and her. Please do not call me Dr. Townsend; I am working on my doctorate at UND and have not earned the title of doctor yet.

Office Phone Number: (701) 788-4672 **Office Location:** Classroom Building 108A

Hours of Availability: Mondays and Wednesdays from 11 a.m. to noon, Thursdays 10 a.m. to noon, and by appointment

Time Zone: All times indicated throughout this syllabus reflect Central Time (CT).

Instruction Mode: Hybrid: on campus face-to-face and online

Meeting Times/Location: MWF 10 – 10:50 a.m. in CB105 and online

Courses Grouped in Blackboard: The students in this course are grouped in Blackboard with students from both the online and the on campus face-to-face instructional mode. Students will see the names, locations, e-mail addresses, discussion forum postings, and contributions to group activities of all students enrolled in the grouped course within Blackboard for the current semester. Grouping classes in Blackboard allows for access to enhanced course materials, greater diversity of opinions and life experiences in course discussion boards, and expanded class sizes for course activities.

Course Description: Course covers topics in both the linear and abstract algebra. Linear algebra topics of matrix operations, determinants, systems of linear equations, linear transformations, eigenvectors, and vector spaces are covered. Linear programming, solving matrices, and determinants with computer software, and graphing calculators to illustrate applications. Abstract Algebra topics covered: modular arithmetic, groups, isomorphisms, fields, rings, and integral domains are learned through the study of reals, integers, rationals, polynomials, and complex numbers.

Course Prerequisite: Math 165: Calculus I.

Required Texts:

- Pearson's MyMathLab for *Linear Algebra* (4th edition, 2018) by David Lay with Course ID: **townsend29959** Note: The MyMathLab access code includes an online copy of the text at no extra charge.
- *Open Educational Resource (OER) Abstract Algebra Theory and Applications* (2017) by Thomas W. Judson at this link: http://abstract.ups.edu/download/aata-20170805.pdf
- *A Spiral Workbook for Discrete Mathematics* (2015) by Harris Kwong is an OER published by Open Suny Textbooks at this link: https://textbooks.opensuny.org/a-spiral-workbook-for-discrete-mathematics/

Recommended Text: Linear Algebra (hardcopy of 4th edition, 2012) by David Lay. If students desire a hardcover copy of the textbook, the content of the 4th edition is comparable to the 5th edition **at a lower cost.**

Purpose of the Course: Students will understand matrices and everyday applications of matrices, solve systems of linear equations using matrices and determinants, apply linear programming to solve problems, solve abstract algebra problems, use and understand terminology of abstract algebra, prove by math induction, and determine which types of numbers fit in particular algebraic structures including isomorphisms, fields and rings.

Course Objectives for Linear Algebra Topics:

- Solve determinants using/not using a graphing calculator or online calculator.
- Add, subtract, multiply and find inverses of matrices and translate into systems of equations.
- Solve systems of equations yielding parametric solutions to multi-variable linear systems
- Solve application problems, using linear systems of equations and vectors, in the areas of engineering, physics, biology, and computer science.
- Solve and present a real-life problem in a Problem Based Learning (PBL) Project.

Course Objectives for Abstract Algebra Topics:

- Utilize the terminology and symbols of Abstract Algebra to elucidate which number system sets and subsets fit into the algebraic structures of groups, isomorphisms, integral domains, rings, and fields after defining those structures.
- Use the symbols and their understanding of the number system sets of reals, integers, rational numbers, polynomials, and complex numbers to solve problems.
- Construct and analyze Cayley Tables of the subsets of number systems listed above.
- Apply linear programming/graphing to solve problems.

Program Student Learning Outcomes (SLOs) Addressed in this Course:

The Academic Program Student Learning Outcomes document can be found in your Blackboard course shell. It contains all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index so you can quickly find the degree you are pursuing.

Mathematics and Mathematics Education Program Student Learning Outcomes (SLOs) Addressed in This Course:

SLO 1: Students will acquire a content knowledge base commensurate with career goals.
SLO 2: Students will communicate mathematics information both orally and in writing.
SLO 3: Students will apply mathematics in context, including at least one experiential situation, to solve problems.
SLO 4: Students will construct and critically analyze mathematical arguments.
SLO 5: Students will integrate technology appropriate to their major into their work.

Course Improvements Based on Most Recent Assessment Findings: The current cycle has ended with a planning year in effect for 2017-18. This course may be assessed in the future, and findings will be reported in the syllabus.

Required and Recommended Materials were listed on page 1 of the syllabus.

Instructional Strategies

- The instructor will provide an overview of each topic using a PowerPoint with examples to help students solve the assigned practice exercises, graded homework, quizzes, journals and exams.
- MyMathLab provides unlimited practice problems and graded homework for Linear Algebra concepts.
- Additional practice problems for both abstract and linear algebra will be provided for each unit with opportunities for students to discuss solutions in class and using a Discussion Board forum in Blackboard.
- Students will be encouraged to contribute sample test problems and solutions in a Discussion Board forum to provide additional practice communicating in both written and oral form.
- Review sheets will be provided in Blackboard prior to each exam (including the final).
- Students will be allowed to work together on quizzes in Blackboard. Unlimited attempts will be allowed on online quizzes in Blackboard.
- Students must work independently on exams. There will be an opportunities for students to do time-consuming portions of the take-home exam 3 and the take-home portion of the comprehensive final exam.

Learning Experiences

- Students will read and practice problems from the texts, PowerPoint presentations, and practice problems on paper, in MyMathLab, and in Blackboard.
- Assignments will be listed in the syllabus and in Blackboard with designated due dates.
- Students will learn by reading, practicing problems, collaborating with peers, and by feedback on journals and exams by the professor.

Instructional Technologies Utilized:

- Blackboard is MSU's learning management system and virtual class environment.
- MyMathLab allows students to practice problems and submit homework using technology.
- Graphing calculators, computer software including Wolfram Alpha, matrix calculators, and online training resources including Atomic Learning and Khan Academy provide ways for students to utilize technology to understand, solve, and graph solutions to problems.
- Students may conference with one another and/or the professor by phone or Skype for Business.

Expectations/Protocols: Becoming proficient in mathematics requires hard work and practice. Students are expected to take notes as they watch the PowerPoint presentations, to ask questions, to do practice problems, to solve graded homework problems using MyMathLab, to thoughtfully write answers to journal questions, to discuss their journal answers in forums and to submit professional answers to journal questions in Blackboard. Students will demonstrate mastery of concepts on scheduled exams, on a take-home final exam, and a proctored final exam.

Students are expected to display academic honesty and respect for themselves, their classmates, their instructor and the Mathematics department. For each unit, students should provide at least one discussion board entry and respond to at least two discussion board questions provided by peers. When students utilize the discussion boards, they tend to be more successful on exams. Students will be required to journal about their learning plans before each exam. Students will also journal about terminology and use higher order thinking skills to make generalizations about abstract concepts.

Students are responsible to:

- Read text and articles, watch PowerPoint presentations, and complete practice problems.
- Complete graded quizzes and homework in Blackboard and MyMathLab by designated due dates.
- Answer journal questions, discussion posts, and exam essay questions using grammatically correct complete sentences in APA format. Students will be sure to answer each question thoroughly.
- Prepare for exams by practicing problems, submitting questions and solutions to discussion posts by showing work, using graphing calculators and computer applications including programming.
- Analyze results of practice problems, assigned work, and exams to learn from mistakes and gain mastery of the course content.

Instructor/Student Communication: Students may submit questions or concerns by e-mail to the instructor at mary.townsend@mayvillestate.edu or schedule a time to meet with the instructor. E-mail is the preferred method of communication by Professor Mary Townsend. Students are accountable for all academic communications sent to their Mayville State University e-mail address. Students can expect a reply to their e-mailed questions within 48 hours. Any exceptions to this will be posted in Blackboard Announcements.

Evaluation: Grading will be based on graded assignments including a presentation of a problem based learning project utilizing matrices and/or linear programming (25%), quizzes (10%), online discussions/journal postings (5%), four unit exams (40%) and a comprehensive final exam (20%). This grading scale will be used as percentage of total points:

A 90 -100% B 80 - 89% C 70%-79% D 60-69% F 0-59%

- **Exams (60%):** Students will complete 4 one-hour proctored unit exams each worth 100 points and a comprehensive final exam worth 200 points.
    - Three unit exams will be proctored.
        - Students have the option of doing a MyMathLab online exam or a paper and pencil exam for the proctored exam if they opt to have a live proctor or take the exam in class.
        - Students who choose to use ProctorU must do the MyMathLab online exam.
    - The unit 3 exam will be a take-home exam.
    - Students may use one page of notes for each proctored exam and two pages of notes for the proctored final exam.
    - Students may use a graphing calculator (but not a laptop or smart phone).
    - The final exam has a 100 point take home section that must be submitted before the student may take the 100-point proctored final exam.
    - Note: Review problems and sample tests will be posted in Blackboard before each exam. Students are encouraged to work together and to communicate with one another in person, by e-mail and in discussion forums.
- **Graded Homework (25%):** Students will have the opportunity to practice problems before completing graded homework in MyMathLab and in Blackboard. Students may redo problems answered incorrectly to attain 100% on each MyMathLab homework assignment. Additional ungraded problems are available before the exams for students to practice concepts before the unit exam.
- **Quizzes (10%):** Students have the opportunity to do each online quiz as often as they want prior to the exam on that unit. Students on campus will be able to do the quizzes in class or use the Blackboard quizzes.The highest grade on each quiz will be used. Quizzes will remain open throughout the semester for students to practice previous concepts. If needed, additional quizzes will be created for extra credit to provide more opportunities for students to practice concepts not mastered on exams.
- **Online Journals/Discussion Boards (5%):** Students will use complete sentences as they explain how to solve various types of problems in each unit. Students may use the equation editor in Word or insert a photo of work shown using paper and pencil. Students will explain how they plan to prepare for exams and reflect on their performance on exams. Students will communicate to one another via discussion boards asking and answering questions related to course objectives. Students will evaluate online tools and technology designed to provide solutions to linear algebra problems.

Students are encouraged to work ahead of the unit deadlines. Because this is an online course, students may work ahead of the schedule, but they are also encouraged to share their experiences with others to provide more opportunities to master elementary mathematics concepts. Students should expect to spend at least 12 hours per week viewing PowerPoint presentations, doing online homework and quizzes, answering journal questions, participating in discussion forums, and preparing for exams. If you need an extension on any of the deadlines, please submit your request to the instructor by e-mail.

Activity	No. of Occurrences	Points Possible	Percent of Total
Unit Exams	4	400	40%
Final Exam	2	200	20%
Blackboard Quizzes	Best 20	200	10%
Homework	varies	varies	25%
Journals	varies	varies	5%
Total points possible: varies with extra credit options			

Note: Students who struggle to understand elementary mathematical concepts may require more practice to become proficient at solving problems without a calculator. Students may earn up to 110% in the homework category by completing extra credit homework in MyMathLab and Blackboard.

Enrollment Verification: The U.S. Department of Education requires instructors of online courses to provide an activity which will validate student enrollment in this course. The only way to verify that a student has been in this course is if he or she takes an action in Blackboard, such as completing an assignment or a taking a quiz. Logging into Blackboard is **NOT** considered attendance. Please see the enrollment verification activity (the syllabus quiz in the Week 1: Introductions section) and complete it by the date indicated (Friday, 8/24/18 at noon). If it is not complete your enrollment in this course will be at risk.

Late Arrivals: The grading system for students adding this course after the first day of instruction will not be modified. Students will be graded on all the activities regardless of the date of enrollment in the course. Students will not be penalized for late assignments if enrollment occurs after the due date of the assignment, but the students are still responsible for completing the course material that was covered during their initial absence. Arrangements can be made for new due dates.

Proctor Notification: This course requires a proctor for exams. A proctor is an individual who will monitor you while taking an exam to ensure academic integrity. To be approved as a proctor, a proctor must be a disinterested professional with a valid business office, telephone, and email address (Yahoo or Hotmail addresses are not acceptable). Examples of potential proctors include university faculty and staff members, testing centers, library staff, elementary or secondary teachers or administrators, law enforcement or military officers, and human resource or workforce development staff. Friends, family members, and other students are not allowed as proctors. You should speak to your potential proctor and ensure that he or she understands the time commitment and responsibilities before submitting his or her name for approval with Extended Learning. Your proctor information should be submitted at the start of the semester and must be submitted at least 10 days prior to the first proctored exam. Failure to have a proctor secured by exam time may result in a zero grade. More information on submitting proctors for approval can be found on the Submit a Proctor page of the MSU website.
As the student, it is your responsibility to provide your proctor with the following information. In this course, there will be:

- Three one-hour proctored unit exams are due by midnight as follows:
  - Proctored Exam 1 is due Friday, September 14.
  - Proctored Exam 2 is due Friday, October 26.
  - **Take Home Exam 3 is due Wednesday, November 16.**
  - Proctored Exam 4 is due Friday, November 30.
- A take home final exam is due by midnight on Friday, December 7.
- A two-hour proctored final exam due at 5 p.m. on Wednesday, December 12.

Exams are due on or before the due dates. Each unit exam is one hour long and will be taken as a paper and pencil exam with a proctor, who will scan the exam and submit it by e-mail to the instructor. Students on campus may take the exams during class time on the day the exam is due. Proctors are expected to provide a quiet location with a clock for students to gauge how much time has passed. Students may use one page of notes and a graphing calculator on unit exams, but they are not allowed to work with others or use phones or laptops during proctored exams. If technical issues arise, please contact me immediately (my cell phone is 218 779 2321).

Also, some proctors may charge a fee to proctor an exam. Students are responsible for paying for any exam proctoring charges, and should discuss payment options directly with the proctor.

Instructional technologies utilized in this course:

- **Blackboard** is a learning management system and virtual class environment. This is where you will find the syllabus, assignments, PowerPoint presentations, and online quizzes.
- **Atomic Learning** is an online training resource with hundreds of videos that are available 24/7 and open to ALL Mayville State students, staff and faculty using their Connect ND credentials.
- **Wolfram Alpha** is a computational, knowledge engine that may be used to verify student's results and provide more information regarding additional methods of solving problems.
- Students will be encouraged to use other online technology to solve problems in this course.

Important Student Information: Important student information can be found on the Blackboard page for this course under the "Important Student Information" link.

- ✓ Academic Grievance Concerns and Instructor English Proficiency
- ✓ Starfish - Student Success System
- ✓ Students with Documented Disabilities
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Diversity Statement

Academic Grievance Concerns and Instructor English Proficiency
If you have a grievance or concern regarding your instructor or your instructor's English proficiency, please 1) Discuss the situation with the instructor to reach a resolution. 2) If after you have discussed the situation with the instructor, and the problem is unresolved, contact the instructor's division chair for assistance (Dr. Robert Miess is the chair for the science and mathematics division). 3) Situations still not resolved after discussing the situation with both the instructor and the chair of the division should be brought to the vice president for academic affairs, Dr. Keith Stenehjem.

Starfish is the Student Success and Early Alert System at Mayville State University used to report feedback on your academic performance, attendance, etc. If you receive a Starfish notification (sent to your @mayvillestate.edu e-mail from the Director of Student Success), please read it immediately.
As your instructor, I will send Kudos (messages of congratulations for doing great) or flags (messages of concern that you are not performing to expectations) using Starfish. Periodically, I will use Starfish to provide students with grade reports throughout the semester during the second week, before the final day to drop a course, and when other progress reports are due. You and your support team (your advisor, your athletic coach, the director of student success, and the other faculty who are teaching you this semester) will be able to see these messages. You are also able to raise flags with "I have a question" or "I need help." You are also able to e-mail me directly with your questions at mary.townsend@mayvillestate.edu.

Students with documented disabilities such as learning disabilities, orthopedic, hearing, visual, speech, psychological, ADD / ADHD, health-related or other disabilities may request accommodations to ensure full access to academic opportunities at Mayville State University. In order to receive these services, students must disclose their disabilities and request accommodations by providing documentation to Katie Richards, the director of student success and disability support services, by e-mail at Katie.richards.2@ mayvillestate.edu. Any information shared will remain confidential.
Academic honesty means that students will do their own work without cheating. Academic dishonesty consists of plagiarism (representing the words or ideas of another person as your own), copying work from another student, cheating on tests, quizzes, presentations or other course activities, or failing to give proper credit when any source, book, periodical, database, or computer program has been used to formulate an answer. Students are allowed to collaborate on practice problems and homework. If you work with another student or a tutor, you should indicate that you had help when you submit written work. Students are not allowed to collaborate with anyone on a take home exam. If you have questions, you should e-mail the instructor for clarification.

The consequences for committing academic dishonesty in this course will include the raising of a Starfish flag for academic dishonesty for each infraction. For the first infraction, the student will receive a grade of F with a maximum of 59% on the assignment with no opportunity to redo the assignment. For a second infraction, the student will receive an F for the course. If a third infraction occurs, the student will be referred to the vice president of academic affairs for further disciplinary action.

Students have the right to participate in the emergency notification system (ENS) and to leave ENS registered cell phones on during class to receive emergency notifications unless instructed otherwise by faculty. Students with ENS registered cell phones should make arrangements with the instructor for scheduled exams and what the protocol will be if an emergency occurs during an exam. The instructor and/or proctor will have access to campus e-mail during scheduled exams.

Continuity of academic instruction for a pandemic or emergency may result in the temporary suspension of classes or an early ending to the semester. You will be notified of changes by e-mail and/or by the campus learning management system (LMS), which in this course is Blackboard.

The Family Educational Rights and Privacy Act of 1974 (FERPA) requires that Mayville State University has information available regarding student and graduation records it maintains. Note that students must sign a FERPA consent form to allow parents to have access to grades or communication with faculty. More information is available in the Mayville State University Academic Catalog at http://mayvillestate.smartcatalogiq.com/.

Diversity: Diversity issues will be addressed whenever appropriate. This classroom and online environment is a place where students will be treated with respect, and the course instructor welcomes individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability, and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. Mayville State University is committed to providing a safe learning environment, free of harassment and discrimination as articulated in our university polices at http://www.mayvillestate.edu/about-msu/consumer-information/title-ix/. The policies at Mayville State require faculty members to share information about incidents of gender-based discrimination and harassment with the Title IX coordinator regardless of whether the incidents are stated in person or shared by students as part of their coursework.

The full list of course activities will be in Blackboard. There will be a folder for each due date and a summary of the activities and due dates at the top of each folder. Students are encouraged to complete work as it is assigned. There will typically be a full week between the assignment and the due date with a few exceptions such as the introductions folder (which is due on Friday of the first week of class).

Note assignments are listed using abbreviations: LA = Linear Algebra and AA = Abstract Algebra.

Week	Dates	Math 443 Tentative Fall 2017 Schedule
1	8/20 – 8/24	**Enrollment Activities:** 6 Critical Questions, Introduction Forum, Syllabus Quiz, Orientation to Using MyMathLab. **Unit 1:** Watch PowerPoint presentations and complete graded homework assignments, journals and quizzes from LA 1.1 Systems of Linear Equations, and AA1 Math Induction (chapters 1-2).
2	8/27 – 8/31	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from LA 1.2 Row Reduction and Echelon Forms, 1.3 Vector Equations and AA2 Sets, Classifications of Numbers, and primes
3	M 9/3	Labor Day: No scheduled classes.

Week	Dates	Math 443 Tentative Fall 2018 Schedule
3	9/4 – 9/7	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from AA3 Boolean Algebra and Lattices, LA 1.4 Matrix Equation Ax = b, LA 1.5 Solution Sets of Linear Systems. **Review 1: (LA 1.1 – 1.5, AA 1 – 3).**
4	9/10 – 9/14	**Unit 2:** Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from AA4 Programming with Java Basic and Excel to Find Primes and Analyze Truth Tables, LA 1.6 Applications of Linear Systems, LA 1.10 Linear Models in Business, Science and Engineering
4	**F 9/14**	**Proctored Exam 1 (LA 1.1 – 1.5; AA 1 – 3) is due by midnight**
5	9/17 – 9/21	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from AA5 Groups, LA 1.7 Linear Independence, LA 1.8 Linear Transformations
6	9/24 – 9/28	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from AA6 Rings, AA7 Complex Numbers, LA 1.9 Matrix of a Linear Transformations,
7	10/1 – 10/5	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from AA8 Modular Arithmetic, Caylay Tables, AA9 Use Technology to Create Caylay Tables, LA 2.1 Matrix Operations, LA 2.2 Inverse of a Matrix
8	10/8 – 10/12	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from LA 2.3 Characteristics of Invertible Matrices, **Review 2: (LA 1.6 – 1.10, 2.1 – 2.3; AA 4 – 9).**
9	10/15 – 10/19	**Unit 3:** LA 2.8 Subspaces of Rn, LA 2.9 Dimension and Rank, AA10 One-to-one Functions, Onto Functions, and Isomorphisms
9	W 10/17	Assessment Day: No scheduled classes
10	10/22 – 10/26	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from LA 3.1 Introduction to Determinants, LA 3.2 Properties of Determinants, LA 3.3 Cramer's Rule and Linear Transformations, AA11 Inverse and Composition of Functions
10	**F 10/26**	**Proctored Exam 2 (LA 1.6 – 1.10, 2.1 – 2.3; AA 4 – 9) is due by midnight**
11	10/29 – 11/2	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from LA 4.1 Vector Space, LA 4.2 Null Spaces, Column Spaces, and Linear Transformations, LA 4.3 Linearly Independent Sets, Bases, AA12 Spanning Sets of Vectors
12	11/5 – 11/9	**Review 3: (LA 2.8 – 2.9, 3.1 – 3.3, 4.1 – 4.3; AA 10 – 12)**, **Unit 4:** LA 5.1 Eigenvectors and Eigenvalues, LA 5.2 The Characteristic Equation.
13	M 11/12	Veteran's Day: No scheduled classes
13	11/13 – 11/16	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from 5.3 Diagonalization, 5.4 Eigenvectors and Linear Transformations, 5.5 Complex Eigenvalues, AA13 Applications of Abstract Algebra to Eigenvectors and Linear Transformations
13	**F 11/16**	**Take Home Exam 3 (LA 2.8 – 2.9, 3.1 – 3.3, 4.1 – 4.3; AA 10 – 12) is due.**
14	11/19 – 11/21	Watch PowerPoint presentations, complete practice problems and graded homework assignments, journals and quizzes from LA 6.1 Inner Product and Orthogonality, LA 6.2 Orthogonal Sets, Review 4
14	11-22/11-23	Thanksgiving/Black Friday: No scheduled classes

Week	Dates	Math 443 Tentative Fall 2018 Schedule
14	11/26 – 11/30	Review for Final Exam and Work on Proctored Final Exam.
14	**F 11/30**	**Proctored Exam 4 (LA 5.1 – 5.5, 6.1 – 6.2, AA 13) is due by midnight.**
15	12/3 – 12/7	Review for Final Exam and Work on Proctored Final Exam.
15	**F 12/7**	**Take Home Final Exam 4 (is due by midnight).**
16	**Finals Week**	**The Proctored Final Exam is due on Wednesday, December 12 at 5 p.m.** Phones and computers will not be allowed during the proctored section of the final exam. The exam will likely take more than an hour and less than two hours. Students will not have a time limit; however, students must complete the proctored final exam in one sitting.