PRECALCULUS

Math-2412-002

KNOWLEDGE IS POWER

Dr. Sheyleah Harris-Plant
(she, her, hers)
DR. HP

Welcome to Precalculus

Meets on Tuesday and Thursday at 8:30 a.m. in the Agriculture building room 103 in Levelland, TX

Are you ready to explore the integrated algebra, trigonometry, and analytic geometry skills used in Calculus? As your instructor, I am looking forward to providing you the opportunity to acquire and practice the math skills needed to be successful in Calculus.

Student Help Sessions (A.K.A. Office Hours)
Lubbock Downtown Center (B001):
Mondays and Wednesdays 5:30 pm - 6:30 pm

Levelland Campus (Math Building M120A):
Tuesdays and Thursdays 3:00 pm - 4:00 pm

Online (Virtual) (Link on Blackboard):
Tuesdays 1:00 pm - 2:00 pm
Wednesdays 8:00 am - 9:00 am
Thursdays 8:00 pm - 9:00 pm
Fridays 1:30 pm - 2:30 pm
          or **by appointment**
(scan QR code or use the link to make an appointment)
Schedule an appointment

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MATH BUILDING 120A

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What are we required to do for this class?

Our classroom is flipped. This means the lecture is completed outside of class, and discussion, practice, and assignments occur during class.

This format allows for us to personalize the speed of the lecture for our learning styles and practice with the instructor present to answer questions.

Practice problems (homework problems) will not be collected for a grade because the amount of practice each person needs is individual to their learning style and mathematical history.

To get the most out of a flipped classroom, before arriving for the class meeting, we should have:
1. worked through the notes and videos for that week's lessons, and
2. completed **some** of the assigned exercises

Upon arriving at the class meeting, we will
1. answer questions over exercises,
2. work through exercises, and
3. submit assignments and quizzes.

COURSE LEARNING GOALS

At the end of the semester, we will be able to:
- Apply knowledge of properties of functions.
- Solve algebraic and transcendental equations.
- Apply graphing techniques to algebraic and transcendental functions.
- Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
- Prove trigonometric identities.
- Solve right and oblique triangles.

SUPPLIES & OPTIONAL TEXTS

Writing Utensil

8.5 inch x 11 inch paper

Non-Programmable Scientific Calculator (No Graphing)
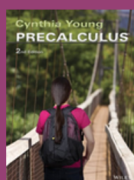
Precalculus, 2nd ed. OpenStax ISBN 9781951693398

Precalculus, 8th ed. Ron Larson ISBN 9781439045770

Good Internet Connection

Web Camera

Precalculus, 2nd ed. Cynthia Young ISBN 9780470904138

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What are the assignments for this class?

Weekly Lecture Notes (Worth 0.50 points each)
Each week, lecture notes are available to print, and lecture videos cover the notes. The lecture notes will be submitted on Blackboard and graded on completion. There will be 15 notes, with five (5) notes being extra credit. Any missed lecture notes will not be allowed to be taken after the due date.

Memory Quizzes (Worth 0.50 points each)
Free response assessment that will be completed using your memory. Notes or calculators are not allowed to be used. The assignment is administered and submitted weekly to Gradescope in class. The assignment will be graded as correct or incorrect. There will be 14 quizzes, with four (4) quizzes being extra credit. Any missed Memory Quiz will not be allowed to be taken after the due date.

Mastery Assessments (Worth 0.5 points each)
Free response assessment that you can use your notes. The purpose of the assignment is to give us a snapshot of the mastery of the course material for that week. The assignment is administered and submitted weekly to Gradescope in class. There will be 15 assessments, with five (5) assessments being extra credit. Any missed Mastery Assessment will not be allowed to be taken after the due date.

Learning Reflections (Worth 0.5 points each)
Answer questions on Blackboard weekly to reflect, review mistakes, and learn from them. The assignment will be graded by completion. There will be 15 assignments, with five (5) assignments being extra credit. Any missed Learning Reflection will not be allowed to be taken after the due date.

Unit Exams (Worth 10 points each)
Free response assessment that you can not use your notes or practice problems. Any missed exam will not be allowed to be taken after the due date. The purpose of the assignment is to give us a snapshot of the mastery of the unit material at that time. The assignment is administered and submitted to Gradescope in class. There will be six (6) exams with no extra credit assignments.

Final Group Project (Worth 10 points)
Each group will create and record a lecture from a skeleton lecture provided on skills directly applicable to Calculus and use the Class ScreenPal feature in Blackboard to record the lecture. The instructor will assign the groups. The project grade will be part of each student's final exam grade and will consist of multiple parts. The lecture presentation will be worth 5 points, the self-reflection activity will be worth 2 points, the peer evaluations will be worth 2 points, and the submission of the team contract will be worth 1 point. Due to this format, each student in the group can receive a different grade according to the amount of work and collaboration each member does. So it is important to work together and communicate.

Written Final Exams (Worth 10 points)
Comprehensive free-response assessment that you can not use your notes or practice problems. If you do not attempt the Written Final Exam, you will earn an F for the class even if enough points to pass have been earned. There will only be one assignment at the end of the semester.

ASSIGNMENT WEIGHTS

The 100 point system is used for grading and will the highest grade reported at the end of the semester. All assignments will add up to 100 points.

89.5 and above earn an A
79.5 - 89.49 earn a B
69.5 - 79.49 earn a C
59.5 - 69.49 earn a D
59.49 and below earn an F

- Weekly Lecture Notes: 5 points
- Memory Quizzes: 5 points
- Mastery Assessments: 5 points
- Learning Reflections: 5 points
- Unit Exams: 60 points
- Written Final Exam: 10 points
- Final Group Project: 10 points

Memory Quizzes   Mastery Assessments
Learning Reflections   Unit Exams
Written Final Exam   Final Group Project
Weekly Lecture Notes
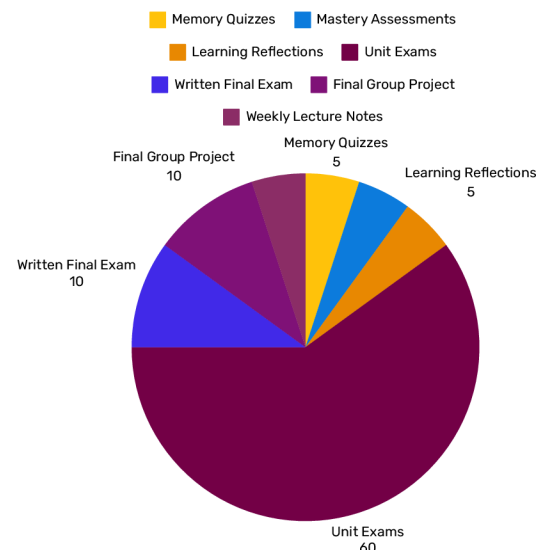
To find the relative (percentage) grade, divide the total points by the possible points and multiply by 100.

Participation Expectations

Accountability
If you miss class or fall behind for any reason, all notes presented in class will be on the Class OneNote Notebook for you to access. Unfortunately, I cannot repeat material or change the schedule for the entire class. Late coursework is not accepted, nor will be allowed to be taken or submitted after the due date.

Communication
Communication is key. If you have an emergency, please let me know by email or phone **immediately**. Letting me know the following day or later makes it difficult for me to discern and assess your situation. Therefore, this makes it harder to help and work with you.

Integrity
The focus of higher education is to foster learning and encourage critical thinking. While taking shortcuts to save time or earn a grade may seem like a good idea, the results usually are lower scores and losing the opportunity to learn material. The consequences of being caught cheating could be between a zero on the assignment to being expelled from South Plains College.

Reasonable Flexibility
Extra credit points are available for all students. If you should miss an assignment deadline those extra credit points can "replace" the missed points.

EXPECTATIONS OF INSTRUCTOR

- Show up, as scheduled.
- Provide notice of any schedule changes.
- Keep Blackboard updated with grades and materials.
- Present the material in a way that the majority of the class can understand.
- Be available to those who need assistance outside of the classroom, by e-mail or in person, during office hours or scheduled appointment times.
- Maintain the course calendar and assignments.
- Uphold the policies of the college.
- Respect each student and provide the opportunity to discuss the material presented during the lecture period.
- Provide examinations based on the information discussed in course material.

WEB & EMAIL

Emails Should Include
- Your first and last name
- Your class name and section
- Your questions and/or comments in the body of the email (not subject line)

I Will
- Check my messages regularly during weekdays before 7:00 pm
- Do my best to respond within 24 hours

I Will Not
- Always respond immediately on weekends or holidays
- Respond to parents or counselors. You are the student in an adult class and should communicate for yourself

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Success Roadmap

Watch Videos

Each section has lecture videos embedded in Blackboard in the Course Content for each week. Please watch them before attending class.

Practice Math Skills

Each lecture has examples worked out and some examples for you to practice. Each lecture has practice problems for you to practice your math skills.

Suggested Schedule

Days	Actions
Sunday – Monday	Watch the week's lecture videos and work examples
Tuesday	Attend class, practice skills covered in week's material, and take assessments
Wednesday	Practice skills covered in week's material
Thursday	Attend class, practice skills covered in week's material, and take assessments
Friday – Saturday	Practice skills covered in week's material or prepare for the next week

COURSE OBJECTIVES

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

ATTENDANCE POLICY

Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to attend at least eighty percent (80%) of the total class meetings and submit at least eighty percent (80%) of the total class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor **may** remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student can not receive an X, the instructor will assign an F.

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We Remember

by Edgar Dale

10% of what we read

20% of what we hear

30% of what we see

50% of what we see and hear

70% of what we say and write

90% of what we do

MATHEMATICAL PRACTICES TO IMPROVE

1. Making sense of problems and persisting while solving them.

2. Engaging in productive struggle with mathematics problems.

3. Productively collaborate with others.

4. Communicate through mathematical writing.

Student Resources

Class Resources

In our Blackboard course, there are a lot of resources to help us be successful.

- Each example, even the ones not worked out in the lecture videos, has a video in the example videos folder. Please keep in mind that the videos are in a playlist, and you will need to choose the required video from the list provided by the menu icon on the upper right.

- Keys (worked-out solutions) are provided for every practice problem and every assessment (after the due date) in the Keys folder.

- All notes written in class can be found in your Class OneNote Notebook which has a link provided in Blackboard for us to access after entering our SPC credentials.

- Under Additional Resources, there are practice slides for the memory quiz information, study tips, prerequisite math rules, graph paper, and online resources.

Free SPC Tutoring

South Plains College provides free tutoring to students. The most current schedule can be found at https://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php or this QR Code.

SPC Policies

South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: https://www.southplainscollege.edu/syllabusstatements/ or this QR Code.

South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: https://www.southplainscollege.edu/emergency/covid19-faq.php.

The person who asks a question is a fool for five minutes, they who does not ask a question remains a fool forever.
    - Chinese Proverb

I find that the harder I work, the more luck I seem to have.
    - Thomas Jefferson

Learning is never done without errors and defeat.
    - Vladimir Lenin

However difficult life may seem, there is always something you can do and succeed at.
    - Stephen Hawking

Your talents and abilities will improve over time, but for that, you have to start.
    - Martin Luther King, Jr

REAL LIFE EMERGENCY HELP

Sometimes life happens and we need help. This is the reason the South Plains College Health and Wellness Center has provided a list of emergency resources. This list includes, but is not limited to community food assistance, help paying bills, and other free or reduced cost programs. To find this list, please click on the *Emergency Resources* tab, and click the linked here. The Health and Wellness Center site is found at https://www.southplainscollege.edu/health/studenthealth.php or this QR Code

Health & Wellness

The Health and Wellness Center at South Plains College oversees the provision of mental health services, student health services, and disability services to its students. Please click below for more information on these services.

- Mental Health Resources
- Counseling @ SPC
- Student Health
- Disability Services
- Drug & Alcohol Prevention
- Title IX Pregnancy
- Emergency Resources
- Texan Food Pantry
- COVID Response
- First Step/Non-Traditional Student Scholarship Application

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Applications Used

Gradescope
We will use Gradescope this term, which allows us to provide fast and accurate feedback on your work. Homework will be submitted through Gradescope, and homework and exam grades will be returned through Gradescope. As soon as grades are posted, you will be notified immediately so that you can log in and see your feedback. You may also submit regrade requests if you feel that there is a mistake in the grading.

You can use your phone's camera or another scanner to upload work to Gradescope. Download the Gradescope mobile app on the **App Store** or **Google Play** to use your phone's camera and follow the prompts. If you cannot scan your assignments for any reason, please get in touch with me to make alternative arrangements. All submissions to Gradescope must be clear, legible, and double-checked to ensure all answers are properly marked. You will receive an email confirmation once your assignment is successfully submitted; please retain this for your records.

Honorlock
Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from home. You **do not** need to create an account or schedule an appointment in advance. Honorlock is available 24/7, and all required is a computer, a working webcam/microphone, your ID, and a stable internet connection.

You will need Google Chrome and download the Honorlock Chrome Extension to get started.

When you are ready to complete your assessment, log into your LMS, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself and show your ID. You may be prompted to complete a room scan during the authentication steps. This is a test taker authentication step in which you will be asked to perform a 360-degree scan of your environment with the computer or webcam to confirm the integrity of the testing environment. Honorlock will be recording your exam session through your webcam and microphone and recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device.
Honorlock support is available 24/7/365. You may contact them through live chat on the support page or within the exam itself if you encounter any issues.

Blackboard
We will use Blackboard this term, which allows is our Learning Management System (LMS). It will house all of the course materials, resources, and grades. The gradebook will automatically give a zero for any assignment not graded by the due date. Do not worry if you submitted your assignment, I will change the grade once the assignment is graded.

Download the Blackboard mobile app on the **App Store** or **Google Play** to have mobile access to Blackboard.

Spring 2025 MATH-2412 Tentative Calendar

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
0	Thu	9 Jan	• Class Introduction • Algebra Review	Not due this week	Not due this week	Not due this week	Not due this week	Tue, 14 Jan by 10:35 (10:35 am) **In Class**
	Fri	10 Jan						
1	Mon	13 Jan	• Angles • Non-Acute Angles	Not due this week	Not due this week	Sat, 18 Jan by 23:30 (11:30 pm)	Tue, 21 Jan by 10:35 (10:35 am) **In Class**	Thu, 30 Jan by 10:35 (10:35 am) **In Class**
	Tue	**14 Jan**						
	Wed	15 Jan						
	Thu	**16 Jan**						
	Fri	17 Jan						
2	Mon	20 Jan	• Functions and Function Notation • Linear Functions • Quadratic Functions • Polynomial Functions • *Review for Unit 1 Exam*	**No School – Martin Luther King, Jr Day**				
	Tue	**21 Jan**		Sat, 25 Jan by 23:30 (11:30 pm)	Thu, 23 Jan by 10:35 (10:35 am) **In Class**	Sat, 25 Jan by 23:30 (11:30 pm)	Tue, 28 Jan by 10:35 (10:35 am) **In Class**	Thu, 30 Jan by 10:35 (10:35 am) **In Class**
	Wed	22 Jan						
	Thu	**23 Jan**						
	Fri	24 Jan						
3	Mon	27 Jan	• Radical Functions • Rational Functions • Trigonometric Functions • Non-Standard Position Angles	Thu, 30 Jan by 23:30 (11:30 pm)	Tue, 28 Jan by 10:35 (10:35 am) **In Class**	Sat, 1 Feb by 23:30 (11:30 pm)	Tue, 4 Feb by 10:35 (10:35 am) **In Class**	Thu, 13 Feb by 10:35 (10:35 am) **In Class**
	Tue	**28 Jan**						
	Wed	29 Jan						
	Thu	**30 Jan**						
	Fri	31 Jan						
4	Mon	3 Feb	• Trigonometric Function Graphs • Exponential Functions • Logarithmic Functions • *Review for Unit 2 Exam*	Thu, 6 Feb by 23:30 (11:30 pm)	Thu, 6 Feb by 10:35 (10:35 am) **In Class**	Sat, 8 Feb by 23:30 (11:30 pm)	Tue, 11 Feb by 10:35 (10:35 am) **In Class**	Thu, 13 Feb by 10:35 (10:35 am) **In Class**
	Tue	**4 Feb**						
	Wed	5 Feb						
	Thu	**6 Feb**						
	Fri	7 Feb						

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Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
5	Mon	10 Feb	• Properties of Logarithmic Functions • Fundamental Identities • Sum and Difference Identities • Double-Angle Identities	Thu, 13 Feb by 23:30 (11:30 pm)	Tue, 11 Feb by 10:35 (10:35 am) **In Class**	Sat, 15 Feb by 23:30 (11:30 pm)	Tue, 18 Feb by 10:35 (10:35 am) **In Class**	Thu, 27 Feb by 10:35 (10:35 am) **In Class**
	Tue	**11 Feb**						
	Wed	12 Feb						
	Thu	**13 Feb**						
	Fri	14 Feb						
6	Mon	17 Feb	• Half-angle and Power-Reducing Identities • Sum-to-Product and Product-to-Sum Identities • Combining Functions • Inverse Functions • *Review for Unit 3 Exam*	Thu, 20 Feb by 23:30 (11:30 pm)	Thu, 20 Feb by 10:35 (10:35 am) **In Class**	Sat, 22 Feb by 23:30 (11:30 pm)	Tue, 25 Feb by 10:35 (10:35 am) **In Class**	Thu, 27 Feb by 10:35 (10:35 am) **In Class**
	Tue	**18 Feb**						
	Wed	19 Feb						
	Thu	**20 Feb**						
	Fri	21 Feb						
7	Mon	24 Feb	• Transformations • Binomial Expansion • Rates of Change	Thu, 27 Feb by 23:30 (11:30 pm)	Tue, 25 Feb by 10:35 (10:35 am) **In Class**	Sat, 1 Mar by 23:30 (11:30 pm)	Tue, 4 Mar by 10:35 (10:35 am) **In Class**	Thu, 13 Mar by 10:35 (10:35 am) **In Class**
	Tue	**25 Feb**						
	Wed	26 Feb						
	Thu	**27 Feb**						
	Fri	28 Feb						
8	Mon	3 Mar	• Symbolic Algebraic Manipulation • Verifying Trigonometric Identities • *Review for Unit 4 Exam*	Thu, 6 Mar by 23:30 (11:30 pm)	Thu, 6 Mar by 10:35 (10:35 am) **In Class**	Sat, 8 Mar by 23:30 (11:30 pm)	Tue, 11 Mar by 10:35 (10:35 am) **In Class**	Thu, 13 Mar by 10:35 (10:35 am) **In Class**
	Tue	**4 Mar**						
	Wed	5 Mar						
	Thu	**6 Mar**						
	Fri	7 Mar						

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
9	Mon	10 Mar	• Other Types of Equations • Exponential and Logarithmic Equations • Roots of Polynomial Functions	Thu, 13 Mar by 23:30 (11:30 pm)	Tue, 11 Mar by 10:35 (10:35 am) **In Class**	Sat, 15 Mar by 23:30 (11:30 pm)	Tue, 25 Mar by 10:35 (10:35 am) **In Class**	Thu, 3 Apr by 10:35 (10:35 am) **In Class**
	Tue	**11 Mar**						
	Wed	12 Mar						
	Thu	**13 Mar**						
	Fri	14 Mar						
17 Mar – 21 Mar			**No School – Spring Break**					
10	Mon	24 Mar	• Systems of Equations • Inequalities in One Variable • *Review for Unit 5 Exam*	Thu, 27 Mar by 23:30 (11:30 pm)	Thu, 27 Mar by 10:35 (10:35 am) **In Class**	Sat, 29 Mar by 23:30 (11:30 pm)	Tue, 1 Apr by 10:35 (10:35 am) **In Class**	Thu, 3 Apr by 10:35 (10:35 am) **In Class**
	Tue	**25 Mar**						
	Wed	26 Mar						
	Thu	**27 Mar**						
	Fri	28 Mar						
11	Mon	31 Mar	• Partial Fractions • Sequences and Series • Geometric Sequences and Series	Thu, 3 Apr by 23:30 (11:30 pm)	Tue, 1 Apr by 10:35 (10:35 am) **In Class**	Sat, 5 Apr by 23:30 (11:30 pm)	Tue, 8 Apr by 10:35 (10:35 am) **In Class**	Thu, 17 Apr by 10:35 (10:35 am) **In Class**
	Tue	**1 Apr**						
	Wed	2 Apr						
	Thu	**3 Apr**						
	Fri	4 Apr						
12	Mon	7 Apr	• Parabolas • Ellipses • Circles • Hyperbolas • *Review for Unit 6 Exam*	Thu, 10 Apr by 23:30 (11:30 pm)	Thu, 10 Apr by 10:35 (10:35 am) **In Class**	Sat, 12 Apr by 23:30 (11:30 pm)	Tue, 15 Apr by 10:35 (10:35 am) **In Class**	Thu, 17 Apr by 10:35 (10:35 am) **In Class**
	Tue	**8 Apr**						
	Wed	9 Apr						
	Thu	**10 Apr**						
	Fri	11 Apr						

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
13	Mon	14 Apr	• Using a Calculator • Solving Right Triangles • Law of Sines	Thu, 17 Apr by 23:30 (11:30 pm)	Tue, 15 Apr by 10:35 (10:35 am) **In Class**	Sat, 19 Apr by 23:30 (11:30 pm)	Tue, 22 Apr by 10:35 (10:35 am) **In Class**	Tue, 6 May by 10:00 (10:00 am) **In Class**
	Tue	**15 Apr**						
	Wed	16 Apr						
	Thu	**17 Apr**						
	Fri	18 Apr						
14	Mon	21 Apr	• Law of Cosines • Triangle Applications • Radian Applications	Thu, 24 Apr by 23:30 (11:30 pm)	Thu, 24 Apr by 10:35 (10:35 am) **In Class**	Sat, 26 Apr by 23:30 (11:30 pm)	Tue, 29 Apr by 10:35 (10:35 am)	Tue, 6 May by 10:00 (10:00 am) **In Class**
	Tue	**22 Apr**						
	Wed	23 Apr						
	Thu	**24 Apr**			*Last Day to Drop a Class*			
	Fri	25 Apr			**In Class**		**In Class**	
15	Mon	28 Apr	• Vectors • Vector Applications	Thu, 1 May by 23:30 (11:30 pm)	Thu, 1 May by 10:35 (10:35 am) **In Class**	Sat, 3 May by 23:30 (11:30 pm)	Thu, 1 May by 10:35 (10:35 am) **In Class**	Tue, 6 May by 10:00 (10:00 am) **In Class**
	Tue	**29 Apr**						
	Wed	30 Apr						
	Thu	**1 May**						
	Fri	2 May						
16	Mon	5 May	Review for Final Exam	Tue, 6 May by 23:30 (11:30 pm)	Not due this week	Not due this week	Not due this week	Tue, 6 May by 10:00 (10:00 am) **In Class**
	Tue	**6 May**	**Final Exam at 08:00 (8:00 am) In Class** **Final Group Project Due by 23:30 (11:30 pm)**					
	Wed	7 May	**Semester Over**					
	Thu	8 May						
	Fri	9 May	**Graduation**					