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**Class Meet:** TR 12:00-1:20pm @ Blackboard      **Office Hrs:** After class TR 1:30-2:00pm or by appointment

**Scope:** A study of the major physiological pathways for harnessing the energy needs of living systems; study of the synthesis and breakdown of fundamentally important biomolecules and metabolites.

**Objective:** Students who complete this course will be able to: describe all major metabolic pathways including catabolic and anabolic ones that degrade and synthesize major types of biomolecules; identify major metabolites; describe how energy are produced, stored and used in the cells; understand the principle of regulation of the metabolism at cell and body level; and use the principles and concepts of biochemistry learned in the class to understand new and unfamiliar biological systems that involve dynamics and energy.

**Prerequisites:** This is a continuation of CHEM 3330 (Biochemistry I) and it is required that CHEM 3330 be taken prior to this course.

**Class Meetings:** Tuesday & Thursday 12:00-1:20pm at Blackboard Collaborative via a synchronized online lecture. You should MUTE your computer sound unless you were called and during discussions or raise questions. Depending on the university regulation, we might have Face-to-face (F2F) sections for exams.

- Required Materials:**
1. Computer and fast network connection. Due the format of the class will be mostly online, it is required to have a computer with working audio and video system including speaker, microphone, and webcam. Fast internet connections are also essential to attend the class. You should check whether you can check out a T-mobile hotspot from library.
  2. Lehninger *Principles of Biochemistry* 7<sup>th</sup> Ed.; Nelson and Cox; W. H. Freeman Company, New York, ISBN-13 options:
    - A. 9781319108236 (E-book with 6-month Sapling Learning Plus, online or bookstore);
    - B. 9781319168988 (the loose-leaf textbook with 6-month Sapling Learning Plus, online or bookstore);
    - C. 9781464187964 (the loose-leaf textbook without Sapling Learning Plus, online or bookstore);
    - D. 9781464126116 (the hard-cover textbook without Sapling Learning Plus, online or bookstore);Option A is for students only need to take CHEM3332 (Spring 2021). Option B, C, or D is for students who want to have a hard copy of the whole textbook.
  3. Students will need to do **BOTH** the on-lecture quizzes (Qz) and the **pre-lecture assignment (PLA)** to obtain their Q&P average scores that can be counted into their final scores. Students are highly encouraged to do the quizzes and PLAs. However, they have the option not to do it. Those students who decided not to do the quizzes and PLAs must take all four exams. See **Course Grading** section below.
    - A. i>Clicker Cloud will be required for all on-lecture quizzes. UTEP and the *i>Clicker* vendor have agreed that the students can use the on-line voting system *i>Clicker Cloud* without additional charge. It is student's responsibility to create and maintain a working i>Clicker cloud account during the semester. Students have two weeks of time at the beginning of the semester to test and solve all the issues of their i>Clicker Cloud account.
    - B. Account on Sapling Learning Plus for all PLA. It is students' responsibility to purchase the service from [www.saplinglearning.com](http://www.saplinglearning.com) so that students can login and finish the on-line PLAs (ISBN Option A and B above). It is students' responsibility to have required computer/network hardware and software to accomplish the PLAs. Students have two weeks of time at the beginning of the semester to test and try the Sapling website and two bonus PLAs to get familiar with the system without affecting their Q&P average score. AFTER THE FIRST TWO WEEKS, NO INDIVIDUAL COMPUTER/NETWORK EXCUSE WILL BE TAKEN FOR MISSING PLAs. Spring 2021 URL for the PLA is below:  
<https://www.saplinglearning.com/ibiscms/course/view.php?id=170583>
  4. Two Scantron sheets are needed for the four exams if we will assume to do F2F exams. If we will do on-line exams, a computer with webcam will be needed. You can rent laptop with webcam from the library. The instructor will roll out some mock online exams for you to test your equipment.

<b>Review Sessions:</b>	There will be <b><u>NO REVIEW SESSIONS BEFORE EXAMS</u></b> . This class is a college 3000 level course, and the materials of the class are extensive, which <b>require students to study before and after each lecture</b> . Each lecture will be a review one to highlight important concepts and resolve common mis-concepts assuming students have already learned the material before the lecture. Questions should be addressed in class or office hours routinely, not before each exam.
<b>Quizzes, PLA &amp; Exams:</b>	<p>There will be quizzes, PLAs and exams, all contribute to the final grade.</p> <p><i>Quizzes:</i> There will be a quiz given at every synchronized lecture that will also serve as a record of attendance. Quiz questions will be given at the very beginning of class. <b><u>PLEASE ARRIVE IN CLASS ON TIME AND REVIEW THE PREVIOUS LECTURE</u></b>. Furthermore, there will be several quiz questions during the lecture. <u>Bonus points</u> will be given for quizzes (see below in section of <b>Bonus Points</b>).</p> <p><i>PLAs:</i> There will be weekly PLAs that require students to read the materials <b><u>IN ADVANCE</u></b>. The PLAs are reviewed by the instructor but prepared, given, and graded by <i>Sapling Learning</i> Teaching Assistant. PLAs are not homework but are designed for you to read the textbook ahead of the lecture. Therefore, the PLAs will cover materials ahead of lectures.</p> <p><i>Exams:</i> There will be four exams. Each exam covers ¼ (three chapters) of the materials.</p>
<b>Course Grading:</b>	<p>Final grades in the course will be determined using scores on quizzes, PLAs and exams.</p> <ol style="list-style-type: none"> <li>1. The quiz average score (70%) and PLA average score (30%) will be combined to contribute for one score as Q&amp;P score. Q&amp;P scores for the first two weeks will not be counted into final Q&amp;P score, however, they can serve as bonus points (see below in section of <b>Bonus Points</b>).</li> <li>2. The lowest score in Q&amp;P and four exam scores can be dropped and the remaining 4 scores will each contribute 25% of the final score. Letter grades will not be assigned for score of Q&amp;P and individual exams. The actual score of Q&amp;P and individual exam will be converted to number of points for the final score. Students are highly encouraged to attend the class, take the quizzes, and do the PLAs to obtain their Q&amp;P average scores, which normally are their highest scores in all five scores. Students who choose not to attend the class, not to take the quizzes, and not to do the PLAs cannot drop any of the four exams and must take all of them.</li> <li>3. Depending on the overall performance of the class, letter grade will be assigned based on the final score. After the second exams, the criteria for assigning the letter grade will be set and announced in the middle of the semester before the class-withdraw deadline. The criteria will not be changed till the end of the semester. All the daily quiz scores, Q&amp;P average score, exam scores and current rank of the student in the class will be posted on Blackboard anonymously. Individual PLA scores will be available on <i>Sapling Learning</i> website (<a href="http://www.saplinglearning.com">www.saplinglearning.com</a>).</li> </ol>
<b>Class Attendance:</b>	<p><b><u>CLASS ATTENDANCE IS HIGHLY ENCOURANGED:</u></b> Attendance will be taken at each class using <b>the daily i&gt;Clicker quizzes, filling handouts, and randomly-called questions</b>. Students are responsible for attending lecture regularly and knowing what takes place during classes. This includes not only the material covered in the class, but also all announcements, such as changes of the syllabus, change of exam dates, etc.</p> <p>Attendance will be routinely taken in the form of the daily quiz, questions asked during the lecture, and handout collected after the lectures. Students will be called by name randomly to answer questions. <b><u>If the student is absence when he or she is called but his or her student ID and quiz voting appears in the collected data, the student will be considered as suspected cheating and will be reported accordingly</u></b> (see <b>Academic Integrity Policy</b> section below).</p> <p><b><u>IF student MUST miss a class, he or she need to make a special effort to learn what occurred during his or her absence. If the student chooses to do the Q&amp;P, in order to minimize the effects of the absence to his or her quiz average and semester attendance bonus points, student needs to submit verifiable documents to be approved by the instructor for the absence to get documented absences (DAs). Letters or emails from the student who will be absence cannot serve as valid document for the absence.</u></b> Without approved documents, zero score will be included in the quiz average and the student will lose his or her semester attendance bonus. Absence documents that are submitted two weeks later than the absence date will <b><u>NOT</u></b> be accepted. Student's first absence will be automatically waived (waived absence, WA) without counting its zero score in the quiz average. However, the student does lose points for semester attendant bonus (see below in section of <b>Bonus Points</b>).</p>

**Quiz, PLA and Exam Policy:**

1. *Quiz Rules:* Students are allowed to look their textbook. Instructor may encourage discussion for certain questions before the quiz. However, during the quiz, students are not allowed to discuss to their classmates. Asking classmates to take the quiz will be treated as cheating.
2. *PLA Rules:* Students will have several days (normally one week in advance) to finish the PLAs. The PLA will be due in Monday evening except special announcements. NO EXTENSION OF DEADLINE will be given individually after the due time because the correct answers will be available to all students after the deadline. It will be unfair to other students who finished the PLA before the deadline.
3. *F2F Exam Rules:* Students should arrive 30 to 15 minutes earlier and wait outside the exam room before instructor finish preparing the room. Students will be **assigned** to their seats by the proctors. **Remove baseball caps.** Do not look around. No talking, no joking, no sharing of pencils and erasers. Except pencil, eraser, Scantron sheet, and the photo ID, all other belongs must be put on the floor on the side or in front of the classroom, away and out of sight. **NO calculators or other electronic devices including cell phones or other electronic communication devices or methods (wrist watches, earbuds, etc.) are allowed. No wristwatch or other electronic device may be worn.** Cellular phone and all other electronic devices including watches must be turned off and put away. Only pencil, eraser, and Scantron sheet are allowed to be used during the exam. **Keep a photo ID visible on the desk at all times.** Students are highly suggested to go to the restroom before the exam. During exams, students will not be allowed to leave the examination room until they complete the exam. This includes restroom breaks. If student arrives late, he or she will only have the remaining time to finish the exam. If student arrives more than 20 minutes late to an exam, she or he will not be allowed to enter the examination room unless prior arrangements are made with the instructor. Do not disrupt students around if the student finishes the exam earlier. Once the exam is handed out, the student must leave the exam room and is not permitted to come back to continue the exam. Suspicious activity will be dealt with accordingly (see **Academic Integrity Policy** section below). Proctors have the rights to re-seat the students. Instructors and/or proctors may record and/or use their personal cell phones to document activity during the exam. Recording devices may also be located at various locations in the room and may be out of sight of the students. These recordings will be managed according to the UTEP approved regulations for such media.
4. *Online Exam rules:* Respondus LockDown browser with webcam enabled will be used for the online exams. Please following the UTEP link below to install the LockDown browser: [https://www.utep.edu/technologysupport/\\_Files/docs/MM\\_Respondus-Student.pdf](https://www.utep.edu/technologysupport/_Files/docs/MM_Respondus-Student.pdf) Don't install the LockDown browser from other sources which might not work with UTEP Blackboard. Please watch the video in the link below to get familiar with the LockDown browser: <https://web.respondus.com/lockdownbrowser-student-video/> A Mock online exam will be provided for you to test your hardware and software, all issues need to be solved before the actual online exam. No excuse will be accepted on the exam day unless it is a global issue impacting many students.

**PLACE:**

- a. Find a quiet place with good and stable internet connection. A good internet connection and working computer is student's responsibility.
- b. Ensure you're in a distraction free environment where you won't be interrupted. Televisions and other people in the room can draw your attention away from the screen. Other people that come into view of the webcam may also trigger flags by the automated system.
- c. Don't take an exam in a dark room. If the details of your face don't show clearly during the webcam check, the automated video analysis is more likely to flag you as missing.
- d. Avoid backlighting situations, such as sitting with your back to a window. The general rule is to have light in front of your face, not behind your head.
- e. Don't lie down on a couch or bed while taking an exam. There is a greater chance you'll move out of the video frame or change your relative position to the webcam.

**Webcam and computer:**

- a. If using a notebook computer, place it on a firm surface like a desk or table, not your lap.
- b. If the webcam is built into the screen, avoid making screen adjustments after the exam starts. A common mistake is to push the screen back, resulting in only the top portion of the face being recorded.

**Pre-exam procedures:**

- a. Exam will start 15 mins earlier for you to finish your pre-exam steps.

- b. Take a good facial picture. Avoid wearing baseball caps or hats with brims that will affect the facial recognition that will trigger flags.
- c. Your ID need to be shown to the webcam during the pre-exam procedures.
- d. No calculator or any electronic device is allowed include mobile devices, phones, watches, etc. Please remove them including watches since the time left will be shown on the LockDown browser.
- e. Clear your desk of all external materials — books, papers, other computers, or devices.
- f. You need to take a video of your desk and surrounding.

**During the exam:**

- a. LockDown browser will prevent you from accessing other websites or applications.
- b. Remain at your desk or workstation for the duration of the test.
- c. You will be UNABLE to exit the test until all questions are completed and submitted.
- d. You have two chances to try the exam if you got disconnected due to technical issues that might restart the LockDown browser, but you will not have extra time. In the new trial, you will be given a new randomized set of questions. The exam will be finished on the original time. The score of your latest attempt will be your score.

**Post Exam**

- a. The instructor and TA will review all the recording clips. Any suspicious activities and flagged video will be considered as suspected cheating and will be reported accordingly (see **Academic Integrity Policy** section).
5. To drop an exam, the student must have taken the exam or prepare documents before the exam to state his or her dropping. **NO ZEROS WILL BE DROPPED!**
6. **THERE WILL BE NO MAKE-UP TESTS/EXAMS IN THIS COURSE!** The missed exam will be the one the student drops if the student has a **DOCUMENTED EXCUSED ABSENCE**. The documents must submit and approved **BEFORE** the exam. This rule has been followed for 11 years with more than 2,600 students without any exception. Please do not ask for MAKE-UP TESTS/EXAMS.
7. **ONLY ONE** score in Q&P average and four exams can be dropped.
8. Please go over F2F exams when the students come to review them and check for adding/grading errors. Except for clerical errors, re-grade requests will be a re-evaluation of the entire exam. Be aware that returned Scantrons have been photocopied prior to handing back!

**Academic Integrity Policy:**

As a part of the zero-tolerance policy, suspected cases or acts of alleged scholastic dishonesty (CHEATING) in quizzes, PLAs or exams will be dealt with University regulations. This means automatic referral to any adjudication by the Dean of Students. For example, during the exam, if student has a cellphone or other electronic device capable of communication that on the student and does not put away; or if any instructor or proctor sees or hears any electronic device during the exam or if student share his or her work with someone else, the student will be reported to the proper authorities and the student may receive a zero on the exam/quiz and an F in the class. If the student is suspected of scholastic dishonesty, the student may not be directly confronted about his or her conduct by the instructor or by the proctors. However, the student will be reported to the Office of Student Conduct and Conflict Resolution (OSCCR) and his or her exam will not be admissible. The student's grade in the class may not be available until OSCCR makes a final ruling, this may adversely impact the student's ability to enroll in other classes. Other actions including suspension may also be perused following University regulation.

**Bonus points:**

Every student can earn bonus points as shown below. **NO EXTRA CREDITS** will be given.

1. *Daily quiz bonus:* Bonus points equal to one question will be given for each lecture to who answer all the questions (*lecture attendance bonus*). Additional bonus points equal to one question will be given for each lecture to who answers all quiz questions correctly (*lecture champion bonus*).
2. *Semester attendant bonus points:* Bonus points will be given to students' Q&P average score:
  - 5 points if the student attends all the classes.
  - 4 points if the student attends all the classes except documented absence (DA); or
  - 2 points if the student attends all but one class (one waived absence but no other missing class except document absence).
3. Before calculating the quiz average score, the lowest quiz score will be dropped if the student does not have any WAs or DAs.
4. The lowest PLA score will be dropped before calculating the average. Missing PLA (zero scores) will not be treated as lowest score.

5. The scores of PLA and quizzes for the first two weeks will be added to the student's average score calculation only if they are higher than the student's semester average.
6. If time allow, we will do a Co-generated dialogue around spring break using the no class session. It is for teaching feedback to improve the teaching. It will be voluntary but participants will get 0.5 bonus point to their final score.
7. In certain year, we will have research-teaching integration (RTI) session at the end of the semester. It is to develop new teaching methods to improve student ability to apply what they learned in real problems. Participants can receive 3 bonus point to their final score if they perform well.

**Disability:**

If student has a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at <https://www.utep.edu/student-affairs/cass/>. As per UT System policy, CASS staff are the only individuals who can validate and if need be, authorize accommodations for students with disabilities. Please ensure the instructor receive the letters of accommodation at the beginning of the semester. The student also needs to arrange a meeting with the instructor no later than the first two weeks of the semester to discuss the reasonable accommodation. Accommodation must be coordinated in advance with the instructor.

**Academic Dispute**

When dispute between a student and the instructor happens, the student is referred to university policies: <http://catalog.utep.edu/undergrad/academic-regulations/student-life-policies-and-procedures/>. For complaints solely involving a grade dispute that doesn't require referral to University's Equal Opportunity office, the recommended process in the Department of Chemistry and Biochemistry is as follow:

1. The student must first discuss the issue with the instructor to seek a satisfactory resolution.
2. Having failed to resolve the matter after consultation with the instructor in Step (1), the student can bring the dispute to the attention of the Department of Chemistry and Biochemistry Chair, who will:
  - a. Verify that the student has already sought resolution in Step (1) above. If the student has not taken Step (1), the Department Chair will refer the student to the instructor before proceeding further.
  - b. Discuss with both the instructor and student, try to resolve the dispute.
3. If a satisfactory resolution was not achieved in Step (1) and (2) above, the student can bring the matter to the attention of the College of Science, following all guidelines of the COS student academic complaint process.
4. If a satisfactory resolution was not achieved in all steps above, the student should bring the complaint to the Student Grievance Committee of the Faculty Senate no later than one (1) year after the official grade has been released to the student, or in the case of a student who has graduated, no later than three (3) months after the degree has been conferred.

**Withdrawal Policy:**

There is a deadline (Apr. 1<sup>st</sup>) after the Exam 2 for student to withdraw from any course with an automatic "W". Due the hybrid and online format. This deadline might be flexible. Please check with the latest CoS policies. Please note that it is the students' responsibility to officially withdraw from the course. The College of Science (CoS) aligns with UTEP with respect to the drop date and will not approve any course withdrawals after that date. There are always extenuating circumstances such as a death in the family or an illness; therefore, CoS will approval a complete withdrawal of all courses – not just one course in these cases. Biochemistry I (CHEM 3332) is a 3000-level course that is very demanding and challenging. Students need to spend a lot of time to study the material outside the classroom. Please consider withdraw before the deadline seriously when students cannot improve their scores because they cannot afford enough time to study. The grades of Incomplete "I" must be accompanied by an Incomplete Contract that has been signed by the instructor, student, departmental chair, and the dean. The CoS requests the contract be limited to one month based upon completion data. A grade of "I" is only used in extraordinary circumstances confined to a limited event. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

**Tentative Schedule for material to be covered\***

<b>Events</b>	<b>Date</b>	<b>Assignment</b>
Introduction	January 19 <sup>th</sup>	First day of classes, Review syllabus, Intro to i>clicker, Study Strategy
Lecture 1	21 <sup>st</sup>	How to study; Part II Introduction (page 7e491-494), Chapter 13.1 (page 7e495-496);
<b>PLA 1</b>	<b>25<sup>th</sup></b>	<b>Lecture 1 to 3**;</b>
Lecture 2	26 <sup>th</sup>	Chapter 13.2, 13.3, 13.4 (page 7e501-527);
Lecture 3	28 <sup>th</sup>	Chapter 14.1 (page 7e533-541);
<b>PLA 2</b>	<b>February 1<sup>st</sup></b>	<b>Lecture 4 to 5**;</b>
Lecture 4	2 <sup>nd</sup>	Chapter 14.1, 14.2, 14.3, 14.4 (page 7e541-565);
Lecture 5	4 <sup>h</sup>	Chapter 14.5 (page 7e565-570); Chapter 15.1, 15.2, 15.3 (page 7e575-594);
<b>PLA 3</b>	<b>8<sup>th</sup></b>	<b>Lecture 6 to 8**;</b>
Lecture 6	9 <sup>th</sup>	Chapter 15.3, 15.4, 15.5 (page 7e594-614); Chapter 16.1 (page 7e619-621)
Lecture 7	11 <sup>th</sup>	Chapter 16.1, 16.2 (page 7e622-633);
Lecture 8	16 <sup>th</sup>	Chapter 16.1, 16.2, 16.3, 16.4 (page 7e628-29, 631, 634-643); Chapter 17.1 (page 7e649-656);
<b>Exam 1</b>	<b>18<sup>th</sup></b>	<b>Exam 1 12:00pm-1:20pm @ UGLC 116 or @ Nature Gas Conference Center</b>
<b>PLA 4</b>	<b>22<sup>nd</sup></b>	<b>Lecture 9 to 10**;</b>
Lecture 9	23 <sup>rd</sup>	Chapter 17.1, 17.2, 17.3 (page 7e656-670);
Lecture 10	24 <sup>th</sup>	Chapter 18.1, 18.3 (page 7e675-684;690-705);
<b>PLA 5</b>	<b>March 1<sup>st</sup></b>	<b>Lecture 11 to 12**;</b>
Lecture 11	2 <sup>nd</sup>	Chapter 18.2, 18.3 (page 7e685-705);
Lecture 12	4 <sup>th</sup>	Chapter 19.1 (page 7e711-722);
<b>Lecture 13</b>	<b>9<sup>th</sup></b>	<b>Co-generated dialogue or need to be used to catch up the materials***</b>
<b>Exam 2</b>	<b>11<sup>th</sup></b>	<b>Exam 2 12:00pm-1:20pm @ UGLC 116 or @ Nature Gas Conference Center</b>
Break	16 <sup>th</sup>	Spring Break, no classes
Break	18 <sup>th</sup>	Spring Break, no classes
<b>PLA 6</b>	<b>22<sup>nd</sup></b>	<b>Lecture 13 to 14**;</b>
Lecture 14	23 <sup>rd</sup>	Chapter 19.1, 19.2, 19.3, 19.4, 19.5, 19.6 (page 7e723-750); Chapter 20.1 (page 7e755-756)
Lecture 15	25 <sup>th</sup>	Chapter 20.1, 20.2, 20.3, 20.4 (page 7e757-779);
<b>PLA 7</b>	<b>29<sup>th</sup></b>	<b>Lecture 15 to 16**;</b>
Lecture 16	30 <sup>th</sup>	Chapter 20.5, 20.6 (page 7e780-798);
Lecture 17	April 1 <sup>st</sup>	Chapter 20.7, 20.8 (page 7e798-806); Chapter 21.1 (page 7e811-814);
<b>Drop Day</b>	<b>1<sup>st</sup></b>	<b>* Course Drop Deadline *</b>
<b>PLA 8</b>	<b>5<sup>th</sup></b>	<b>Lecture 17 to 19**;</b>
Lecture 18	6 <sup>th</sup>	Chapter 21.1, 21.2, 21.3 (page 7e814-837);
Lecture 19	8 <sup>th</sup>	Chapter 21.4 (page 7e837-854); Chapter 22.1 (page 7e859-863);
Lecture 20	13 <sup>th</sup>	Chapter 22.1, 22.2 (page 7e863-876);
<b>Exam 3</b>	<b>15<sup>th</sup></b>	<b>Exam 3 12:00pm-1:20pm @ @ UGLC 116 or @ Nature Gas Conference Center</b>
<b>PLA 9</b>	<b>19<sup>th</sup></b>	<b>Lecture 20 to 21**;</b>
Lecture 20	20 <sup>th</sup>	Chapter 22.2, 22.3, 22.4 (page 7e876-898);
Lecture 21	22 <sup>nd</sup>	Chapter 22.4 (page 7e898-903); Chapter 23.1, 23.2 (page 7e907-924);
<b>PLA 10</b>	<b>26<sup>th</sup></b>	<b>Lecture 22 to 24**;</b>
Lecture 22	27 <sup>th</sup>	Chapter 23.2, 23.3 (page 7e925-939);
Lecture 23	29 <sup>th</sup>	Chapter 23.4 (page 7e939-949);
Lecture 24	May 4 <sup>th</sup>	Chapter 23.5 (page 7e949-952);
<b>Lecture 25</b>	<b>6<sup>th</sup></b>	<b>No class or need to be used to catch up the materials***</b>
<b>Exam 4</b>	<b>11<sup>th</sup></b>	<b>Exam 4 1:00pm-2:30pm @ @ UGLC 116 or @ Nature Gas Conference Center</b>

\* We may end up going slower or faster depending on how the class is doing or unpredictable events. The exam dates might also be affected and changed.

\*\* PLAs are designed for you to study ahead of lectures. The lecture coverage listed in the table will be approximate which might be off because of balance between different PLAs and depending on the lecture progress.

\*\*\* Depend on the progress of the class such as we are way behind the schedule, we might have class on that day. If time allow, we might use that day for co-generated dialogue to collect teaching feedbacks.