SYLLABUS - MOLECULAR CELL BIOLOGY - BIOL3314  
CRN 13446 - Fall 2018

PLACE & TIME:  
Undergraduate Learning Center (UGLC), Room 126  
Tuesdays, Thursdays, 10:30 AM - 11:50 AM

INSTRUCTOR:  
Germán Rosas-Acosta, MSc, PhD (grosas3@utep.edu)

OFFICE:  
BioSciences Building, Rm.4.148; Office: (915) 747-5122

OFFICE HOURS:  
Tuesdays & Thursdays, 12:00 noon - 1:00 PM

TEXTBOOK:  
The CELL: A Molecular Approach, Seventh Edition  
By - Geoffrey M. Cooper and Robert E. Hausman

OTHER MATERIALS:  
All students are required to register to iClicker cloud (former REEF polling) to be able to use their laptop, smart phone, or tablet to answer our in-class activities. Registration is FREE to all UTEP students. To register, follow this link: https://www.iclicker.com/students. Detailed instructions on how to register are given on pages 7-11. Students are also required to bring a laptop pre-loaded with the Respondus LockDown Browser to EVERY EXAM. Instructions on how to download and install this browser are provided on pages 14-16.

Students are highly encouraged to buy the book. It is up to date, will be essential throughout the course, and will help you prepare for future tests (MCAT, PCAT, DAT, GRE, etc). The 6th edition of the book can be used in substitution for the 7th edition, but whenever there might be differences in content, that in the 7th edition will be considered to be correct.

I. COURSE CONTENT (What will you learn?):
This course will give you an integrated view of our current understanding of how EUKARYOTIC cells work at the molecular level. Specifically, the material to be covered is aimed at providing you with a solid understanding of:
1. The basic mechanisms by which the genetic information is organized, maintained, transcribed into RNA, and translated into proteins.
2. How gene expression is regulated at different levels so that cells synthesize the right proteins at the right time in the right amounts.
3. The different mechanisms regulating protein function and localization within the cell.
4. How regulating protein expression and protein activity allows the cell to carry out its functions in an organized manner.
5. How dysregulating the different processes and mechanisms referred above leads to various human diseases.

II. COURSE GOALS (What do I want you to be able to do by the time you get out of this course?):
By the end of this course, students are expected to:
1) Know the language of molecular cell biology.
2) Understand the most fundamental concepts of molecular cell biology.
3) Be able to apply those fundamental concepts to solve problems related to molecular cell biology.
4) Appreciate the application of molecular cell biology to modern medicine.
5) Realize the extent of our current ignorance in some of the most exciting aspects of cell biology and appreciate how solving current open questions may greatly advance medicine and our understanding of life in general.
6) Develop a logical, evidence-based approach to your daily experiences and to your decision-making processes, one that empowers you to be the driver of your present and the maker of your future.
III. COURSE APPROACH:
I will conduct this course in a combination of self-teaching, in-class activities, and traditional lectures.

1) Self-teaching: In preparation to each class, you will be expected to read the textbook and utilize the Blackboard® site associated with this course. To ensure that you do so, we will use Readiness Assessment Tests (RATs), which are short quizzes given in Blackboard® that you will be required to take up to 1 hour before the class it is due for (YES, this implies that you WILL BE QUIZZED on reading material BEFORE it is covered in class.) The RATs will assess your understanding of the reading material assigned, help you to keep up with the material, and allow you to take charge of your own learning process.

In addition to reading the textbook, for most classes you will also be expected to view one or several movies (available through the instructor’s YouTube channel) before coming to class. The likely due dates for watching each movie are indicated in pages 12-13 this syllabus. In-class iClicker cloud polling (see below) will be used by the instructor to verify that you watched the videos assigned for the class. The use of videos will allow us to decrease the amount of time spent lecturing in class.

2) In-class Activities: During our class sessions, you will be quizzed with questions posted in the PowerPoint presentations to be shown during class. The questions to be presented are aimed at assessing not just your ability to recall the basic facts related to the information being covered, but also your ability to connect those facts to interpret statements, analyze data, and draw conclusions. iClicker cloud polling will be used to collect your answers (see below).

3) Lectures: Our lectures will be aimed at clarifying and solidifying the material that you have read on the book and reviewed in the movies, skipping topics that are not fully relevant, and emphasizing the most relevant points, the ones you should know. For the lectures I will use PowerPoint presentations that will be posted in Blackboard® the night before each class.

IV. DETAILED DESCRIPTION OF THE COURSE:
The course will be divided into 11 major topics:

1) Chromosome Structure & Genomes
2) Replication
3) Transcription
4) Translation
5) Protein Folding, Post-translational modifications, and Regulation of Protein Function
6) The nucleus & nuclear traffic
7) The Endoplasmic Reticulum, the Golgi apparatus, and protein sorting
8) Cell Surface (Plasma Membrane)
9) Cell Cycle
10) Apoptosis & Stem Cells.
11) Cancer

Our class: In each class I will cover the most important areas related to each topic, and I will emphasize the concepts and ideas that are essential for you to know. So, class attendance will matter. Pay attention to the material covered on it. We will interrupt the lectures with some frequency to give you questions and activities aimed at assessing your understanding of the topic at hand and enhancing your mastery of the material. As previously indicated, the PowerPoint presentations to be used in class will be posted in Blackboard® the night before the class.

In-class activities: In-class activities are geared to promote critical thinking, discussion, and enhanced learning. Most of the in-class activities will follow the form of a mini-quiz with multiple questions. Each question will appear on the screen in the PowerPoint presentation as well as in your iClicker cloud device and remain in view for as long as considered appropriate. You will be allowed to submit your answer using iClicker cloud polling for as long as the question is shown in the screen. For some in-class activities you will be asked to submit your own personal answer. For others, you will be expected to discuss your thoughts in teams of 2-4 students before submitting your answer. Finally, for others you will be expected to submit both, your own response, and a second response after a team discussion. Other formats may also be applied during the semester. The activities are designed to help you go over the concepts being covered and apply them. You will earn points applicable toward the final grade for every correct answer you have in the in-class activities. Those points are extra points; therefore there is no penalty if you decide not to go for them. But I highly recommend you to try to get as many as you can as THERE WILL BE NO CURVE at the end of the semester. Participation points will also be awarded every time you answer all questions given in a class (even if you answer incorrectly all of them!).
RATs! You will take a total of 15 RATs, one or more for each topic. Each RAT will be posted at least two days before the class session to cover that topic. Once you log in to take the RAT you will have only 1 hour (60 minutes) to answer it. Furthermore, you will be allowed only one log-in. The specific pages that you must read in preparation for each RAT are indicated on pages 12-13. They will also be indicated on Blackboard® within the instructions provided for each RAT.

What will RATs look like? RATs will be multiple-choice quizzes. There will be 10 questions per quiz. Some questions will be about vocabulary words, meanings of concepts, and straightforward facts covered in the reading material, while others will be aimed at assessing your understanding of the material and might require more analysis. IMPORTANT: Do not start a RAT unless you have already read the pages indicated in the instructions. Also, make sure that you take ALL RATs using a RELIABLE COMPUTER with a RELIABLE NETWORK CONNECTION. If the system kicks you out of Blackboard® while taking the RAT, you will NOT have the opportunity to log back in, your answers (if you have already provided some) may be lost, and I will NOT have the ability to grant you access to the RAT for a second try. The fact that only 10 out of the 15 RATs given throughout the semester will count toward your final grade (see “Grading Policy” below) should allow you to compensate in the event that you may be dropped out of the system while taking a RAT (hence, it is important that you take ALL RATs given throughout the semester).

Progress assessments (exams): We will have four (4) progress assessments (i.e., exams) and a cumulative final exam. These exams will test your understanding and your ability to apply all material covered in the classes and videos that preceded the test, but not including the material already tested. The only cumulative test will be the final exam, which will cover all the content covered during the semester. All exams will consist of multiple-choice questions that you will answer using a laptop. Therefore, you are required to bring a laptop computer to every exam. The laptop MUST HAVE the Respondus LockDown Browser application pre-loaded on it. Instructions on how to download and install the Respondus LockDown Browser are given on pages 14-16. If you don’t have a laptop computer, you must check-out one from the library. In this case, you MUST make sure to check it out with enough time to install the Respondus LockDown Browser and check that it works well for you. See the course schedule (pages 12-13) for the precise dates of the exams.

If you want to contest the wording of an exam question, the possible answer(s) to a question, or any issue related to the grading of a test, we can discuss it in my office within the week following the exam in question. If you can appropriately present your case and rationally explain your point of view, I may give credit to alternative answers. The same is true for the questions used in the RATs.

V. GRADING POLICY:
Your grade will be determined on the basis of a comprehensive assessment of your skills using the following elements.

1) Progress assessments: A total of four exams will be administered throughout the semester, each worth 100 points. Your best scoring exam will count double (i.e., 200 points) toward your final grade. Take advantage of this great opportunity and aim high, really high, in at least one of your exams. Note: Be aware that by far the main focus of the exams will be on material covered in class or in the videos, including any material not covered in the book. Your lowest scoring exam will be replaced by your score in the final exam unless you score lower in the final exam than in all other exams, in which case no replacement will occur. Important: see class policies about missing exams.

2) RATs: A total of 15 RATs will be administered on Blackboard®, of which only 10 will be counted toward your grade. The 5 lowest scores will be dropped. The schedule on pages 12-13 indicates when RATs will be administered; however, keep in mind that such schedule is subject to change. The RATs will be posted 2 days prior to the class session in which the topic will be covered and will come down 1 hour before class. You will have access to the RAT only once and you will have only 60 minutes to take the quiz. Your score will become available as soon you finish the RAT.

RAT BONUS POINTS: If at the end of the semester you have at least 10 RATs with a score of 5 or more, you’ll automatically receive 100 points toward the final grade (see GRADING SYSTEM below). Your RAT score will be the total of the 10 highest RAT scores multiplied by 2, for a maximum total of 200 points.

3) In-class activities: As indicated above, in-class activities will give you extra points toward your final grade and your answers will be collected using iClicker cloud polling (former REEF polling). The
maximum number of points to be given for the in-class activities will be set at 100 and will be given to the student (or students) who score the highest number of points. The points given to all other students will correspond to the fraction of their score as compared to the points achieved by the top scorers. For instance, if John Doesgreat is the student with the highest number of points, and he gets 400 points in the in-class activities (every correct answer can be worth anywhere between 1 and 5 points, as decided by the instructor based on the level of difficulty associated to the question), then John Doesgreat gets 100 points toward his final grade for in-class activities. If Peter D'Slacker only gets 100 points in the in-class activities, which corresponds to $\frac{1}{4}$th of the points obtained by John Doesgreat, then he would only get 25 points toward his final grade for in-class activities. A direct conclusion derived from this system is that it will be pretty much impossible for you to know how many points toward your final grade you have at any given point. It is also obvious that your best bet to maximize the number of points you get out of the in-class activities is to try your best at answering correctly every question presented. However, your main concern during the in-class activities should be directed toward fully understanding the questions and figuring out the best approach to answer them correctly, not the number of points obtained (i.e. you should focus on learning & understanding the material, not on getting a good grade; if you UNDERSTAND the material, KNOW the main concepts and the details required, and know how to approach the questions to answer them correctly, YOU WILL GET A GOOD GRADE).

4) **Final Examination**: A cumulative final exam worth 200 points will be administered during finals week at the date and time indicated on page 11. This exam will be taken by everyone **(EVEN IF YOU HAVE OBTAINED OUTSTANDING GRADES IN EVERY EXAM throughout the semester)** and can be used to replace your lowest exam grade. If your grade on the final is lower than your lowest exam grade, no replacement will occur.

The laboratory component for this class is **fully independent** and will be graded independently from the lecture.

Therefore, the **GRADING SYSTEM** is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>400 points (4 exams/100 points each)</td>
</tr>
<tr>
<td>Best Scoring Exam</td>
<td>100 points (This will be a ZERO if you violate the iClicker cloud usage policy)</td>
</tr>
<tr>
<td>RATs</td>
<td>200 points (15 quizzes/20 points each, 5 lowest scores dismissed)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 points</td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td><strong>900 Points</strong></td>
</tr>
<tr>
<td>10 RATs with score ≥5</td>
<td>100 points (50 points for 9 RATs with score of 5 or more, no points given below that)</td>
</tr>
<tr>
<td>In class activities</td>
<td>100 points maximum (These are EXTRA points. This score will be a ZERO if you violate the iClicker cloud usage policy)</td>
</tr>
<tr>
<td><strong>Actual total:</strong></td>
<td><strong>1100 Points</strong></td>
</tr>
</tbody>
</table>

The **final grade equivalency** will be as follows:

- **A** = 896 points and above (90-100%)
- **B** = 796 - 895 points (80 - 89%)
- **C** = 696 - 795 points (70 - 79%)
- **D** = 596 - 695 points (60 - 69%)
- **F** = 595 points and less (59% and below)

Please note that a student must earn a grade of **C** or better to receive credit toward graduation and **no curves will be applied**.

I do round off. That’s why 896 points is an “A” but 895 points is a “B”. I do not push 895 points to an “A” because you have several opportunities to improve your grade (the 5 lowest RATs are dropped, your best scoring exam counts twice, the final can replace your lowest exam grade, and you can earn up to 100 extra points toward the final grade in in-class activities). This same policy is true for all other grades (i.e., 795 is C, 695 is D, and 595 is F).
Grades are not based on a curve. Everyone will receive a grade that is reflective of the effort put into the course, the knowledge learned during the course, and the skills acquired during the course. You EARN your grade; I don’t give you a grade.

VI. CLASS POLICIES:
MISSING EXAMS: If you know ahead of time that you will not be available to take an exam because of your required participation in a school-related activity, notify me and I will schedule you to take the exam one day before the scheduled date with no penalty (important: No earlier dates will be offered without exception). However, you may have a slightly different exam from that offered to the rest of the class. If you can’t take the exam the day before, then the next exam will count double toward your grade but you will lose the right to have your lowest exam grade substituted with the final exam. If you miss an exam and you can provide justification (with PROOF) for your absence, the next exam will count double toward your final grade. However, doing so will prevent you from having your lowest scoring test replaced by the final exam. If you miss an exam and cannot provide justification, then you will get a ZERO in that exam and this grade will NOT be replaced by the final exam. Each exam grade will be posted in Blackboard® right after you submit it or soon thereafter (the day of the exam). If you don’t see a grade associated to your exam by the day after, you must contact the instructor to inquire about your exam within the following five days. If you don’t, it will be understood that you missed the exam and the policies indicated above related to missing exams will be followed. IMPORTANT: The network system to be used for every exam has been amply tested. It is unlikely that you will be dropped from the network if you follow ALL the guidelines for taking exams using the Respondus LockDown Browser. If you are dropped by the network while taking an exam, you must provide PROOF that you followed all guidelines to be considered to be given a second chance to take the exam. To do so, you must indicate promptly to the instructor or to one of the TAs that you have been dropped and you should allow the instructor or the TA to verify that the network is not allowing you to continue taking the exam. If you are dropped and you simply close the computer or log out without allowing the instructor or a TA to verify what happened, your grade will be the one assigned by Blackboard® and you will not be given the chance to retake the exam.

ATTENDANCE: Class attendance will not be required. However, it will be MONITORED. You are grown-ups and you are paying tuition for this course. It is up to you to determine whether you need to attend class or not. However, I keep track of attendance simply because I like to correlate student attendance with student performance. Attendance will be monitored using the card readers (proxy sensors) located by the gates at the entrance of our classroom. Before entering the classroom, make sure to touch the card reader with your UTEP Miner Gold ID Card to check in. The reader will beep and its lights will change from red to green for less than a second when the ID card is properly positioned. The card readers will often be able to read the ID cards while still in a wallet or a purse, but they won’t be able to read them if they are either too far or if they are covered by a cell phone or a credit card with a chip. If your UTEP Miner Gold ID Card is damaged, it won’t activate the reader even if you put it directly on top of the reader. In this case, you will need to get a new card.

Keep in mind that the activities conducted in class cannot be made up at a later date. Also keep in mind that exams will be based mostly on the material covered in class and in the movies.

iCLICKER CLOUD (FORMER REEF) POLLING: iClicker cloud polling, the polling system we will use this semester, allows you to answer the in-class activities using any “smart” personal device you may have at hand (smartphone, laptop, or tablet). Do not answer the in-class activities with someone else’s polling device (UNLESS INSTRUCTED!). The instructor may choose to ask for specific students to justify their answer in front of the class. If you are called to justify your answer and you are not present, but an answer is registered as coming from your polling device, then you will lose the opportunity to accumulate points for in-class activities, and will receive an automatic grade of zero (0) in place of the grade that would correspond to your highest scoring exam (see “Grading System” above). This grade of zero will not be substituted by any other grade. The person who is found guilty of answering for another student will also receive the same penalty.

COURTESY: The use of “smart” personal devices as polling devices in the classroom provides plenty of opportunities for you to get distracted with other tasks in class. However, I expect you to remain engaged and focused and use your devices only for the intended purpose. To that end, it will be a class policy to keep cell phones and beepers on silent mode. DO NOT answer phones or pagers while in class. Do not text while in class. In addition, please show up to class on time. It’s quite disturbing to have individuals stroll into class late. And please try to be quiet during lecture time.
HONORS CREDIT: Students who want to take this course as an honors class must notify me and give me a signed Honors Contract form as soon as possible. Honors students will be required to get a final grade of A in the course, to participate in one additional activity to be scheduled during the semester, and to take an additional test with open-ended questions. There is no penalty whatsoever for honors students who fail to meet the requirements to receive honors credit.

ACADEMIC DISHONESTY: It is the policy of the University of Texas at El Paso that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. *Using someone else’s polling device* is a major form of academic dishonesty. If you notice that someone is doing so, please report the name of the student who is incurring in this fault (your name will be kept confidential). Doing so will help to keep the system fair for everyone. Students found guilty of allowing others to use their polling device, or of answering with someone else’s polling device, will be punished as indicated above under “iClicker cloud polling”. *Students found cheating during any of the five exams to be given throughout the semester*, either by possessing unauthorized sources of information, copying from another student, or permitting others to copy his/her answers, *will receive a grade of zero in that test and this grade will not be substituted by any other grade.*

DISABILITIES: If you are a student with a disability (physical, learning, etc), please notify me at the beginning of the semester so that accommodations can be made for you as soon as possible. If you choose to take the exams at the Center for Accommodations and Support Services, it is your responsibility to communicate in a timely manner with personal at the CASS to ensure that the exams will be given to you at the same time and date as they will be offered to the rest of the students.
VII. REGISTERING WITH iCLICKER CLOUD (REEF POLLING):
To receive credit for your answers to the in-class activities, you MUST CREATE an iClicker cloud (former REEF POLLING ACCOUNT) and REGISTER as a member of this course. To do so, you must follow this link: https://www.iclicker.com/students
When you click on the link, your browser will be redirected to a screen that will look like this:

While this is the same page that you should use to download the app for your device (notice you have a few options, including iPhone-, Android-, and computer-based apps), these instructions deal specifically with creating an account. Therefore, in this screen you should click on “Create an Account” (circled, signaled with an arrow, and highlighted in red). This should redirect you, after selecting the “Student” option, to a screen like the one shown below:

In the space provided, enter “UTEP”. The browser will refresh itself and show the following message:

Click on “The University of Texas at El Paso” and this will redirect your browser to a page that will look like the one shown below.
Select “Next” and this will redirect your browser to this page:
Fill out all the entries and click on “Next”. Then, create your password, confirm it, and finally select “Create account”. Your browser will refresh and show you this message:

![Account Created](image)

**Congratulations, Charles!**

By creating an account, you’ve just unlocked your 14-Day free trial. Once your trial has ended, you should continue using this account to receive credit for your responses.

[Sign In]

Click on “Sign In”. This will bring your browser to this screen:

![iClicker Reef](image)

Enter your email address (the one associated with your account) and your password and click on “Sign In”. This will refresh the browser and display this screen:
At this point, you are given the option to register an iClicker. Most of you probably don’t have one, so select “Skip This Step” (if you do have an iClicker remote and want to register it, select “Register A Remote”). At this point you should see this screen:

You don’t have any courses.
Add a course to start using iClicker Reef.
To add a course, click on the “+” sign at the top right corner of the screen. This will bring you back to the screen where you must select “The University of Texas at El Paso” once again. Click on that option again.

Now you should be prompted to find your instructor or course by a screen that looks like this:

Enter either “Rosas-Acosta” or “Molecular” or “Molecular Cell” and this will bring a screen that looks like this:

Click on “Molecular Cell Biology” and this will bring a new screen that will look like this:

Confirm the course by clicking on “Add This Course” and you will be ready to start answering our in-class activities using iClicker cloud polling.

To actually start answering in-class activities during class, you must log into your account, select our course, and then wait for the instructor to start a poll. When a poll is started by the instructor, you will see the message “A POLL IS IN PROGRESS”. Select “JOIN” and this will bring up the image currently in the instructor’s screen into your smart device. The type of answer expected will show up on your screen and you’ll have the ability to answer the question.

When the session ends, you will be able to review the answers given in the session under “COURSE HISTORY”. As a general rule, you should login to your iClicker account right after entering the classroom and remain logged in for the duration of the class.

Please use the UTEPSECURE WiFi network for all class-related activities.
### VIII. MCB COURSE SCHEDULE: Please be aware that this schedule is subject to change

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Topics to be covered</th>
<th>Book pages (7th Edition) to be covered in class</th>
<th>Book pages (7th Edition) you MUST READ for the RATs*</th>
<th>RATs</th>
<th>Movies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug 28</td>
<td>Introduction, syllabus and background check (quiz)</td>
<td></td>
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<tr>
<td>2</td>
<td>Aug 30</td>
<td>Chromosomes &amp; Chromatin</td>
<td>Chap. 6, 203-213</td>
<td>Chap. 6, 203-213</td>
<td>RAT#1</td>
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<tr>
<td>3</td>
<td>Sep 4</td>
<td>Cellular Genomes</td>
<td>Chap. 6, 187-203</td>
<td>Chap. 6, 187-203</td>
<td>RAT#2</td>
<td>M1</td>
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<tr>
<td></td>
<td></td>
<td>This chapter contains new information not found in previous editions</td>
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<tr>
<td>4</td>
<td>Sep 6</td>
<td>DNA Replication - Basic processes</td>
<td>Chap. 7, 217-232</td>
<td>Chap. 7, 217-232</td>
<td>RAT#3</td>
<td>M2</td>
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<tr>
<td>5</td>
<td>Sep 11</td>
<td>DNA Replication - Basic processes (continuation) &amp; replication of telomeres</td>
<td>Chp. 7, 217-232 (continuation)</td>
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<tr>
<td>6</td>
<td>Sep 13</td>
<td>DNA Repair</td>
<td>Chap. 7, 232-243</td>
<td>Chap. 7, 232-243</td>
<td>RAT#4</td>
<td>M3</td>
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<tr>
<td>7</td>
<td>Sep 18</td>
<td>DNA Recombination &amp; Rearrangements</td>
<td>Chap. 7, 243-252</td>
<td></td>
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<tr>
<td>8</td>
<td>Sep 20</td>
<td>EXAM 1 (Bring computer with Responds LockDown Browser pre-installed on it)</td>
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<tr>
<td>9</td>
<td>Sep 25</td>
<td>Transcription - Basic Mechanisms</td>
<td>Chap. 8, 259-263</td>
<td>Chap. 8, 259-263</td>
<td>RAT#5</td>
<td>M6</td>
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<tr>
<td>10</td>
<td>Sep 27</td>
<td>Transcription - Regulation in Eukaryotes</td>
<td>Chap. 8, 271-283</td>
<td>Chap. 8, 271-295</td>
<td>RAT#6</td>
<td>M7</td>
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<tr>
<td>11</td>
<td>Oct 2</td>
<td>Transcription - Chromatin Structure &amp; Methylation</td>
<td>Chap. 8, 283-295</td>
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<tr>
<td>12</td>
<td>Oct 4</td>
<td>Transcription - RNA Processing &amp; Turnover</td>
<td>Chap. 8, 295-310</td>
<td>Chap. 8, 295-310</td>
<td>RAT#7</td>
<td>M8</td>
</tr>
<tr>
<td>13</td>
<td>Oct 9</td>
<td>Translation - Players &amp; Process</td>
<td>Chap. 9, 317-332</td>
<td>Chap. 9, 317-332</td>
<td>RAT#8</td>
<td>M9</td>
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<tr>
<td>14</td>
<td>Oct 11</td>
<td>Translational Regulation &amp; Protein Folding</td>
<td>Chap. 9, 332-337</td>
<td>Chap. 9, 332-337</td>
<td>RAT#9</td>
<td></td>
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<tr>
<td>15</td>
<td>Oct 16</td>
<td>Post-translational Modifications of Proteins</td>
<td>Chap. 9, 344-358</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>Oct 18</td>
<td>EXAM 2 (Bring computer with Responds LockDown Browser pre-installed on it)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Oct 23</td>
<td>The Nucleus - Nuclear Envelope, Nuclear Pores, Nuclear Import &amp; Export Nuclear</td>
<td>Chap. 10, 367-381</td>
<td>Chap. 10, 367-381</td>
<td>RAT#10</td>
<td>M10 &amp; 11</td>
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<td>organization &amp; compartments</td>
<td>Chap. 10, 381-392</td>
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<td>This chapter has been changed substantially</td>
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<td>18</td>
<td>Oct 25</td>
<td>Protein Targeting &amp; Insertion into the ER, Folding &amp; Processing</td>
<td>Chap. 11, 397-417</td>
<td>Chap. 11, 397-429</td>
<td>RAT#11</td>
<td>M12 &amp; 13</td>
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<td>19</td>
<td>Oct 30</td>
<td>The ER &amp; Golgi - Lipid &amp; Protein Sorting Vesicular Transport</td>
<td>Chap. 11, 418-429</td>
<td>Chap. 11, 430-440</td>
<td>M14,</td>
<td>15 &amp; 16</td>
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<td>Nov 1</td>
<td>Plasma Membrane - Constituents &amp; Transport of Small Molecules</td>
<td>Chap. 14, 531-546</td>
<td>Chap. 14, 531-560</td>
<td>RAT#12</td>
<td>M17</td>
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<td>21</td>
<td>Nov 6</td>
<td>Plasma Membrane - Facilitated Diffusion &amp; Active Transport</td>
<td>Chap. 14, 546-560</td>
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<td>Nov 8</td>
<td>Plasma Membrane - Endocytosis &amp; the LDL Receptor</td>
<td>Chap. 14, 560-567</td>
<td>M20</td>
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<td>Nov 13</td>
<td>EXAM 3 (Bring computer with Responds LockDown Browser pre-installed on it)</td>
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<td>Nov 15</td>
<td>Cell Cycle - Phases, Regulation &amp; Regulators</td>
<td>Chap. 17, 651-663</td>
<td>Chap. 17, 651-678</td>
<td>RAT#13</td>
<td>M21</td>
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<td>Nov 20</td>
<td>Cell Cycle - Cyclins, Cdns, Check Points, &amp; M Phase</td>
<td>Chap. 17, 663-678</td>
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<td>M22</td>
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<td>Nov 22</td>
<td>THANKSGIVING</td>
<td>No class - Thanksgiving break! Enjoy your well-deserved break 😊</td>
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<td>Nov 27</td>
<td>Apoptosis &amp; Stem Cells</td>
<td>Chap. 18, 691-702</td>
<td>Chap. 18, 691-718</td>
<td>RAT#14</td>
<td>M23</td>
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<td>Nov 29</td>
<td>Stem Cells</td>
<td>Chap. 18, 703-718</td>
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<td>Dec 4</td>
<td>Cancer - General Properties and Definitions; Oncogenes &amp; Tumor Suppressors</td>
<td>Chap. 19, 723-735; Chap. 19, 737-741; Chap. 19, 749-753</td>
<td>Chap. 19, 723-735; Chap. 19, 737-741; Chap. 19, 749-753</td>
<td>RAT#15</td>
<td>M24</td>
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<td>Dec 6</td>
<td>EXAM 4 (Bring computer with Responds LockDown Browser pre-installed on it)</td>
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<td>Dec 13</td>
<td>Final Exam (10:00 AM-12:45 PM) - Bring computer with Responds LockDown Browser pre-installed on it. BE AWARE - THIS EXAM IS CUMULATIVE</td>
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*The specific pages covered in each RAT correspond to the pages in “The Cell: A Molecular Approach”, 7th edition. Those pages don’t correspond to the pages in previous editions of the book and substantial changes have taken place during the years. In case of disagreement related to any question found on a RAT between the 7th edition and any previous edition of the textbook, the information contained in the 7th edition will be considered to be correct.*
IX. Instructions to download and install Respondus LockDown Browser on your laptop:

1. Log in to Blackboard and go to our Molecular Cell Biology Blackboard shell.

2. From the Main Menu, select “Student Services and Internships” (see arrow below)

3. There is a module on this page called “Student Bookmarks” and within there is the link to download Respondus LockDown Browser (see arrow below). Click on “Download Lockdown Browser”. This will open a new window (shown on step 4).
4. Click on the arrowhead shown under “Before You Install:” (see arrow below). This will activate a movie that will allow you to familiarize yourself with the Respondus LockDown Browser.

5. Download the app and install it into your computer following the instructions provided.
6. To further familiarize yourself with the new browser, to check whether it was properly installed, and to make sure you know how to use it, locate the “Practice Exam” on Blackboard and take it well before the exam.