

Cellular & Molecular Biology

BIOL 300

Fall 2016

Instructor: Sarah Golding, PhD

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Office: Trani Bldg. 314

Office Hours: By appointment

Section: BIOL 218-001 CRN 32714

Time: TR 9.30-10.45 am

Location: Trani 155

Course Description: A study of the molecular biology of the cell; including cell structure, cell signaling, cell metabolism, gene expression, and the growth and differentiation of cells.

Course Objective: Whether you are an aspiring researcher, doctor, nurse, environmental scientist, teacher, or ecologist, your knowledge will be founded on the basic structure and function of life; The Cell.

Knowing the components of cells and how cells function is fundamental to all biological sciences. In order to prepare you all to delve deeply into your chosen field of biology, I hope to provide you with a solid groundwork concerning cell structure, gene expression, signal transduction, and communication between cells and their environment. I will strive to provide relevant examples from recent research. I hope to help you gain a critical opinion of current topics and how they can be applied. To accomplish these goals you will use the book as your primary source of information, however, I may also share recent events from scientific journals to complement and expand on the information given in class.

Prerequisites: Prerequisites: BIOL 151 and 152; BIOZ 151 or LFSC/BNFO 251; BIOZ 152 or LFSC/BNFO 252; CHEM 101 and CHEZ 101, all with a minimum grade of C; BIOL 200, MATH 200, MATH 201, STAT 210, STAT 212, STAT 314 or satisfactory score on the VCU Mathematics Placement Test within the one-year period immediately preceding the beginning of the course. Biology majors must have completed BIOL 200. Pre- or corequisites: CHEM 102 and CHEZ 102.

Textbook: Essential Cell Biology, 4th Edition. Alberts et. al. Garland Science.

This textbook has an associated website <http://www.garlandscience.com> which contains many components to help you study, including practice quizzes, videos, and other materials.

The text book is not required but strongly advised.

Grading

The final grade in this course is out of 500 points:

4 Exams	80 % (100 points each)
4 Online Quizzes	20 % (25 points each)

Final Grade Scale

89.50-100% =A 79.50-89.49% =B 69.50-79.49% =C 59.50-69.49% =D
Below 59.50% =F

I DO NOT BEND ON THESE GRADE BARRIERS. Sorry, the line has to be somewhere. Letter grades will be assigned at the end of the course. Please be aware that I do not curve any exam or final grades. Also, I do not “round” grades or drop grades. Only changes due to mathematical error will be granted.

Grades will be posted in Blackboard and you have one week to check them and get back to me with any question or concerns about them. **No grades will be changed after the one-week period.**

A grade of Incomplete (I) will be given only if an excused absence is granted for the final exam.

The grading in this class is very simple; you can calculate your grade at any time. I will not calculate your grade for you; you need to do this math yourself!

The course is out of 500 points:

4 x 25 for quizzes
4 x 100 for exams

Your final percentage will be determined by adding up all your points, then adding your extra credit to the top and dividing by 500. Extra credit points are added to the total points BEFORE dividing by 500.

Eg:

Quiz 1 = 22, Quiz 2 = 24, Quiz 3 = 25, Quiz 4 = 25
Exam 1 = 65, Exam 2 = 75, Exam 3 = 85, exam 4 = 95
Total = 416 + extra credit 12 = 428
428/500 = 85% final score B

As a guide:

450 points is 90%

400 points is 80%

350 points is 70%

300 points is 60%

Your job is to earn these points. I do not determine your grade; you earn it!

Blackboard – <http://blackboard.vcu.edu>

Information for our course will be posted on blackboard. I will administer quizzes and post announcements, the syllabus, handouts, grades, etc. You will need your VCU e-mail address and password to log in. Blackboard will give you instructions if this is your first time using it.

VCU Email Policy

Email is considered an official method for communication at VCU because it delivers information in a convenient, timely, cost-effective, and environmentally aware manner. Students are expected to check their official VCU email on a frequent and consistent basis in order to remain informed of university-related communications. The university recommends checking email daily. Students are responsible for the consequences of not reading, in a timely fashion, university-related communications sent to their official VCU student email account. This policy ensures that all students have access to this important form of communication. It ensures students can be reached through a standardized channel by faculty and other staff of the university as needed. Mail sent to the VCU email address may include notification of university-related actions, including disciplinary action. Please read the policy in its entirety: <http://www.ts.vcu.edu/kb/3407.html>.

I will use your vcu.edu account to send out class announcements. I will not answer emails that do not come from your vcu.edu account. In the email include your class in the subject area, please no 'text messaging' style messages email is a professional form of communication and should be treated as such, use the "reply with history" option and also be courteous and concise. I will also post announcements to the class on the Blackboard page. **Do NOT reply to announcements sent out from Blackboard, your email will get lost and I will not respond.**

Please remember that this is a large class. If the preceptors can answer your questions about class content, please contact them first.

Examinations

Due to the size of the class, all exams will be multiple choice. You will have four examinations given during scheduled class periods. The final exam will **NOT** be cumulative (however, cell biology is a cumulative subject by nature).

During exams you will be seated in allocated seats, your bags will be placed at the front of the room, no hats will be allowed to be worn, no phones will be allowed on your

person. You will be required to show your ID when you turn in your answers and you will need your V number. **If a phone or other electronic device is found on your person during an exam, you will automatically receive a zero on that exam! That is our class policy! Make sure to leave your cell phones at the front of the room!**

Please make sure that you know exactly when the tests are, I will not give any test, including the Final, early or late under any circumstance. Also, I will not give a test if you are 15 minutes late or a student has already finished and turned the exam.

Absences from an exam: Due to the size of the class I do not offer make-up exams. If you have a valid reason to miss an exam you must contact me within 24 hours of the exam (preferably before). Valid reasons include: funerals (must provide obituary), hospitalization (must provide hospital documentation), Serve illness (must provide an official doctors note stating specifically that you are too sick to take the exam – please note VCU health services notes rarely state this); other reasons will be considered but official documentation must be provided. If no proof is provided you will receive a 0.

In the event that I approve an absence I will discuss an appropriate alternative assessment based on the circumstances this could include a mix of multiple choice, short answer, and **oral** responses. All students must take the final exam during the final exam period – no make-ups will be allowed.

Quizzes

I will post 4 quizzes to Blackboard in-between each exam. These will be done at home in your own time by a defined deadline (4 days after posting). You will have 2 attempts at each quiz. The quizzes are based on a pool of questions so the second attempt will have some different questions from the first attempt. Your highest score will count. The dates for these quizzes are in the class schedule. Quizzes are intended to make you aware of what you do not know so that you can better prepare for the tests. Quiz 1 will cover material from your prerequisites and also reading from chapters 1 and 2 that you will do on your own, please be prepared. **No make-up quizzes will be given; you have several days to complete the assignment. In order for you to have a make-up quiz, you will need documentation that excuses you from class during the entire period that the quiz is open.**

Attendance

Attendance is key to success in this course and is highly encouraged! As you are an adult learner, I will not enforce attendance and all lecture slides will be posted to blackboard. However, Please be aware that any information delivered orally in lecture will be included in examinations. Lecture slides will not contain all the information delivered orally in class. Please attend class to ensure that you have maximum exposure to the materials.

Students may only attend those classes for which they have registered. Therefore, if students are attending a class for which they have not registered, they must stop attending.

Review sessions

A significant amount of review sessions will be held throughout the week by my preceptors. To encourage participation in these sessions I will monitor attendance. 0.5 extra point will be given for attendance at each review session. You may earn a maximum of 3 points (6 sessions) before exam 2 and three points (6 sessions) after exam two, to a maximum of 6 points (12 review sessions). These will be added to the final points total for class before the final grade is calculated.

Class total points = 500 (4 x 100, 4 x 25)

Student total points = 480

Student total points + extra credit = 490

Final grade: $(490/500) \times 100 = 98\%$

Supplemental Instruction

Supplemental Instruction (SI) sessions are available for free, courtesy of VCU. SI sessions are hosted by free tutors, paid by VCU, who will provide additional review and study sessions for this course. If you are struggling in this class, having attended class and review sessions, I highly encourage you to make use of this free resource. The schedule and more information can be found at <http://uc.vcu.edu/learning-support/campus-learning-center/supplemental-instruction/>

The campus learning center also has drop-in tutoring, one-on-one tutoring, and academic coaching. All of these interventions can significantly improve your performance in this and all classes. It is best to seek help after the first exam if you feel your are not reaching your potential.

Letters of Recommendation

Due to the high level of demand for letters of recommendation, this is my policy:

You must provide at least two weeks notice, preferably more, before you letter is due. I can not consider writing a letter that is due in less than two weeks due to other conflicts.

It is best for me to only write these letters for students who have served as my preceptors, completed two courses with me or that I have worked with closely in some other manner. A successful letter of recommendation must have detailed information about a student's personality, work ethic, scholastic performance, reliability, interpersonal relationships, etc.

If I agree to write a letter for you, you must let me know at least two weeks, preferably more, before the letter is due. Please email me a CV or resume with a picture on it, and

all the necessary paperwork to accompany the letter. Provide a list of all the classes you have taken with me, including the semester. Make sure to tell me when the letter is due, where to send the letter, and tell me about the program you are applying for and why you want to be in it. Also, make sure you have filled out your section of the form and signed where needed. Please make sure that the document file format is a type that I can edit.

Honor System: upholding academic integrity

Due to the size of this class seating in the exam is close. Please think about your body language. Keep your eyes down on your paper and your body within your space. I will be watching closely for wandering eyes. Looking at the exam of another student will be considered cheating and will be reported.

No electronics may be on your person during an exam. All backpacks, purses, and electronics must be stored at the front of the room during the exam. Possession of electronics during an exam will be reported to the honor council. Electronics include, but are not limited to, cell phones, beepers, graphing calculators, portable music players, etc. No earphones may be used, included noise-canceling earphones. Anyone found with electronics on their person will receive a zero on the exam.

The VCU Honor System policy describes the responsibilities of students, faculty and administration in upholding academic integrity, while at the same time respecting the rights of individuals to the due process offered by administrative hearings and appeals. According to this policy, "Members of the academic community are required to conduct themselves in accordance with the highest standards of academic honesty, ethics and integrity at all times." In addition, "To support a commitment to the Honor System, all members of the VCU community are required to:

- Adhere to the Honor System policy and its procedures;
- Report any suspicion or knowledge of possible violations of the Honor System;
- Answer truthfully when called upon to do so regarding Honor System matters;
- Maintain appropriate confidentiality regarding related to Honor System matters."

More information can be found at in the [VCU policy library](#).

Important dates

You can view important dates for the semester in the [academic calendar](#).

Managing stress

Students may experience situations or challenges that can interfere with learning and interpersonal functioning including stress, anxiety, depression, alcohol and/or other drug use, concern for a friend or family member, loss, sleep difficulties, feeling hopeless or relationship problems. There are numerous campus resources available to students including University Counseling Services (804-828-6200 MPC Campus, 804-828-3964 MCV Campus), University Student Health Services (MPC 804 828-8828, MCV Campus 804 828-

9220) and the Wellness Resource Center (804-828-9355). 24 hour emergency mental health support is available by calling 828-1234 and asking to speak to the on-call therapist or utilizing the National Suicide Prevention Lifeline (1-800-784-2433).

Mandatory responsibility of faculty members to report incidents of sexual misconduct

It is important for students to know that all faculty members are mandated reporters of any incidents of sexual misconduct/violence (e.g., sexual assault, sexual exploitation and partner or relationship violence). This means that faculty cannot keep information about sexual misconduct/violence confidential if you share that information with them and they must report this information immediately to the university's Title IX Coordinator. In addition, department chairs, deans, and other unit administrators are required to report incidents of sex or gender-based discrimination to the university's Title IX Coordinator. Once a report is made, you will receive important information on your reporting options, on campus and off campus resources and remedial measures such as no-contact directives, residence modifications, and academic modifications. If you would prefer to speak with someone confidentially for support and to discuss your options for reporting, contact:

VCU's Wellness Resource Center 804.828.9355 | myoptions@vcu.edu | thewell.vcu.edu
Greater Richmond Regional Hotline (Community program) 804.612.6126 | 24-hour hotline

VCU's Counseling Services 804-828-6200

For more information on how to help, please [click here](#). The Policy on Sexual Misconduct/Violence and Sex/Gender Discrimination, can be found in the [VCU policy library](#). For more information about the University's Title IX process, please visit equity.vcu.edu.

Military short-term training or deployment

If military students receive orders for short-term training or for deployment/mobilization, they should inform and present their orders to Military Student Services and to their professor(s). For further information on policies and procedures contact Military Student Services at 828-5993 or access the corresponding policies.

Student conduct in the classroom

According to the [Faculty Guide to Student Conduct in Instructional Settings](#), "The university is a community of learners. Students, as well as faculty, have a responsibility for creating and maintaining an environment that supports effective instruction. In order for faculty members (including graduate teaching assistants) to provide and students to receive effective instruction in classrooms, laboratories, studios, online courses, and other learning areas, the university expects students to conduct themselves in an orderly and cooperative manner." Among other things, cell phones should be turned off while in the classroom. The Student Code of Conduct also prohibits the possession of or carrying of any weapon. For more information see <http://register.dls.virginia.gov/details.aspx?id=3436>.

Student financial responsibility

Students assume the responsibility of full payment of tuition and fees generated from their registration and all charges for housing and dining services, and other applicable miscellaneous charges. Students are ultimately responsible for any unpaid balance on their account as a result of the University Financial Aid Office or their third party sponsor canceling or reducing their award(s).

Students representing the university – excused absences

Students who represent the university (athletes and others) do not choose their schedules. Student-athletes are required to attend games and/or meets. All student athletes should provide their schedules to their instructors at the beginning of the semester. The Intercollegiate Athletic Council strongly encourages faculty to treat missed classes or exams (because of a scheduling conflict) as excused absences and urges faculty to work with the students to make up the work or exam.

Students with disabilities

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, as amended, require that VCU provide "academic adjustments" or "reasonable accommodations" to any student who has a physical or mental impairment that substantially limits a major life activity. To receive accommodations, students must register with the Disability Support Services Office on the Monroe Park Campus (828-2253) or the Division for Academic Success on the MCV campus (828-9782). Please also visit the [Disability Support Services website](#) and/or the [Division for Academic Success website](#) for additional information.

Once students have completed the DSS registration process, they should schedule a meeting with their instructor (s) and provide their instructor (s) with an official DSS accommodation letter. Accommodation letters will outline the required classroom accommodations. Additionally, if coursework requires the student to work in a lab environment, the student should advise the instructor or a department chairperson of any concerns that the student may have regarding safety issues related to a disability. Students should follow this procedure for all courses in the academic semester.

Withdrawal from classes

Before withdrawing from classes, students should consult their instructor as well as other appropriate university offices. Withdrawing from classes may negatively impact a student's financial aid award and his or her semester charges. To discuss financial aid and the student bill, visit the [Student Services Center](#) at 1015 Floyd Avenue (Harris Hall) and/or contact your financial aid counselor regarding the impact on your financial aid.

The last date to withdraw is Friday, November 4th.

I encourage you to meet personally with me immediately after exam 2 if you are considering withdrawing. Withdrawing can appear negatively on your transcript. I have successfully worked with students to improve performance by 2 letter grades in the past.

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SCHEDULE

The Add/Drop deadline is **August 31st, 2016**

Please note that **November 4th, 2016** is the last day to withdraw from a course with a mark of **“W”**. As this is a required course for many I urge you to meet with me if you are considering withdrawal so that we can see if there is any way to improve your performance in class.

September 9th, 2016 is the last day to provide a written notification to me that you are planning to observe a religious holiday. Students athletes, please provide your schedule to me at this time if your schedule will conflict with any assignments

Please inform me as soon as possible of any scheduled absences for athletic or academic reasons.

* **Disclaimer:** The schedule, the dates, and content of tests and other aspects of this syllabus could change as a result of unplanned closings, inclement weather, and other uncontrollable factors. Therefore the dates in this syllabus are tentative. Material for quizzes and exams will be announced in class and will be posted in Blackboard.

Tentative Schedule of Lectures

Date	Topic	Chapters
Week 1		
Aug 25	Welcome to Class	
Week 2		
Aug 30	Introduction to the Cell	1
Sept 1	Chemistry and Energetics	2,3
Week 3		
Sept 6	Cells & Energy	13, 14
Sept 8	Protein Structure and Function	4

Week 4		
Sept 13	Cell Communication	4 & 16
	Online Quiz 1 Due Sept 13th at 11:59 pm	1,2,3,13,14,4 & 16
Sept 15	Exam 1 is on Sept 15th	1,2,3,13,14,4 & 16
Week 5		
Sept 20	DNA and Chromosomes	5
Sept 22	DNA replication and repair; Backing up the data	6
Week 6		
Sept 27	DNA to Protein - Translating the data	7
Sept 29	Control of Gene Expression	8
Week 7		
Oct 4	Cell Cycle	18, part I
Oct 6	Cancer; When Regulation Goes Wrong	20, part I
Week 8		
Oct 11	Review	
	Online Quiz 2 due Oct 11th at 11:59 pm	5,6,7,8,18,20
Oct 13	Exam 2 is Oct 13th	5,6,7,8,18,20
Week 9		
Oct 18	Advising	
Oct 20	READING DAY	
Week 10		
Oct 25	Membrane structure	11
Oct 27	Membrane transport	12
Week 11		
Nov 1	Intracellular functions – organizing the insides	12
Nov 3	Cytoskeleton	15
Week 12		
Nov 8	Review	17
	Online Quiz 3 due Nov 8th at 11:59 pm	11,12,15,17
Nov 10	Exam 3 is Nov 10th	11,12,15,17
Week 13		
Nov 15	Cell Communication	16
Nov 17	Cell Division	18
Week 14		
Nov 22	Whats next?	
Nov 24	Thanksgiving Break: No Class	20 (II)
Week 15		
Nov 29	Tissues, Stem Cells	

Dec 1	Cancer	
Week 16		
Dec 6	Review	
	Online Quiz 4 due Dec 6th at 11.59 pm	16,18,20
Dec 8	Exam 4	16,18,20

TIPS & TRICKS: HOW TO DO WELL IN YOUR CLASSES!

COME TO CLASS! There is NO substitute for getting out of bed, getting dressed and learning about the subject matter face-to-face with an expert. You are paying nearly \$100 a lecture for the privilege, Get your money's worth.

Going to class and review sessions saves you time, One hour of guided study time is maybe equal to two or three hours of trying to "get it" on your own! Do not trick yourself into thinking that you would save time, gas, money or what-ever by not coming to class or review sessions, this logic will cost you a letter grade!

Go to review sessions from the very beginning, even if you are a straight A student! Build extra credit 'insurance'. You might be flustered on an exam and not do your best one day. Have a cushion for that.

Shop around the preceptor sessions to find a good 'match'. All students and preceptors are different. Find a preceptor that appeals to your particular learning style.

You must participate while in review sessions. Preceptors have total control over attendance. Non-participation or partial attendance at the session will NOT result in extra credit. Extra credit at review sessions is a privilege, not a right.

You get out of review sessions what you put into it! You are an adult learner. Do not go to the review sessions with the hope that you will be 'spoon fed' the material. Step up and teach yourself by asking questions and by teaching your friends. The more you participate, the more you will learn. Remember, you are part of the equation when it comes to review sessions.

Keep your own records of the review session you attend! (Date, time, leader!)

I post the slides to Blackboard. We typically teach 500 students a semester in Cell Biology alone (along with other courses), so this makes material available when students are sick. However, **YOU CANNOT JUST READ THE SLIDES AND GET AN A IN THIS CLASS!** Coming to class helps you interpret the slides, etc. Students who rely on the slides alone do not perform well. If you are sick, make sure to go to plenty of review sessions to catch up on the materials you have missed.

Do NOT miss review sessions or class due to your work schedule. Schedule your work around review sessions. If you receive \$10 an hour, missing 10 review sessions will give you \$100. Failing this class or receiving a low grade will cost you over \$1000.

Do NOT make this course part of an 'overloaded' semester. This course requires a large time commitment. If you are taking significantly more than 15 credits, you may not have the time you need to dedicate to this course. 'Overloaded' students usually do not do well in this class.

What has worked for you in earlier courses may not work here. Be prepared to modify your study habits. If you are spending a lot of time doing it one way and it's not working, try something else. Try 'lecturing' in front of your computer. Draw the material. Color code the material. Watch videos repeatedly. Make flash cards. TALK WITH YOUR FRIENDS. Even try interpretive dance! 😊

Use your textbook! It is a required component of the class! Many students do not read the entire chapter in one sitting, but instead, reference it as they study. When you are looking at each figure on the slide and comparing it to the notes you took in class, it really helps to go read the figure legend for that figure and read the text which directly covers what we have lectured on. Also, don't forget the quizzes and videos on the textbook website! They are so useful!

DO NOT MISS A QUIZ! Note when the quizzes are due, and put several reminders in place for yourself. If you miss a quiz, I will not re-open it, you will get a zero and this will have a large impact on your grade.

Do not multitask while studying:

"Each time we shift attention, there is a metabolic cost we pay in glucose. We don't actually do two, or three, or 10 things at once, we just switch from one to another. Some brain activities are more expensive than others, and switching attention is among the most expensive" -neuroscientist Daniel Levitin

EAT before the exam. Your brain needs the glucose!

SLEEP before the exam.

DO NOT reply to class announcements for Blackboard! Start your own email chain or I will not respond!

Ace Exam 2, you cannot over-prepare (or you will be playing 'catch-up). Exam 2 takes a lot of students by surprise.

Do not over-think an exam! Read the question carefully and thoroughly, and then go with your first instinct. Do not change an answer unless you have an epiphany! I always hear “I went back and changed some answers, and I changed them all to wrong”. I never hear about it the other way around, “I went back and caught a bunch of mistakes’. Trust your gut, and stick with your first choice.

Deal with test anxiety. Take practice tests. Write test questions to ‘get into the mind’ of a question writer. Take your time, read carefully and do not second guess yourself! #1 phrase heard in my office: ‘I just made a lot of stupid mistakes’

If your test anxiety is severe, Disability Support Services is an option. Disability Support Services is in Student Commons, Room 102. You may take the test there. It is your responsibility to set work with them ahead of the exam, schedule your own exam, and send me a reminder to deliver the exam. This is required for each exam. <http://www.students.vcu.edu/dss/>

COME TO CLASS AND KEEP UP WITH THE MATERIAL

Cramming will not work for this class

Do not spend all your time studying for another ‘hard’ class. This IS the hard class.

There is no curve. There are no dropped grades.

There’s a lot of extra credit. Don’t expect your tests to be easy too.

No practice tests, ‘crib sheets’, study guides, etc. will be provided. Please make them yourself; they will help you out.

All emails you send to any professor should be professional. Do not use ‘text chat’ abbreviations. “R u available” is neither profession nor polite. Also, avoid any ‘rant’ emails; these will not achieve the effect you desire.

Actively participate in the lecture by taking hand-written notes. Listening alone does not lead to high material retention rates. Taking notes by hand will activate other areas of your brain in addition to listening, and you will remember more.

Go over your notes after class to make sure that they can be understood later.

Comparing the information you learn in Cell Biology to your other classes is a great way to make sure you know what’s going on at a deep level. However, be warned that, especially at the undergraduate level, the same words or phrases can mean completely different things in different fields as different background information is implied. For instance, compare what the ‘strongest’ bond is in Chemistry vs. Cell Biology class. This seems like a simple concept but you will get very different answers depending on who

you ask. (Chemists measure bond strength in a vacuum; Cell Biologists do nothing that is not in the presence of water). Simple language cannot fully express the complexity of the biological world; there are not enough words, so some have to be used in more than one way. Be careful of the shortcut of using another class to 'study' for Cell Biology. You must fully commit a large chunk of time to studying just Cell Biology in order to succeed in this course.

Do NOT be late to class. All the most important announcements and tips are delivered in the first 5 minutes of class. You miss a lot more than first few slides when you are late to class. In addition, lateness is not tolerated in your future career; timeliness is a habit to develop now. 'I was late to class that day' will never be a valid excuse for missing class information.

The lecture is fast-paced, and taking hand-written notes during the lecture will help you learn. The easiest way to take notes in this class is to print out the slides ahead of time in the PowerPoint '3 slides' format with 'notes' on the side. That way you can directly take notes on the slides themselves during class.

Go over the slides once before class. If you having trouble keeping up in class due to the pace, this will make a world of difference.

You can either pay attention to a class lecture or you can pay attention to your cell phone. Scientific studies have shown that you cannot do both.

Lastly, **your most powerful study tool is each other.** Endeavor to make as many 'study buddies' as possible, especially during extra credit opportunities. Meet friends at review sessions or seminars. Invite classmates over to watch Cosmos. And then talk about this course. Talking about the materials with friends is the most effective way to retain material. Gossip about this class! Teach each other! 😊

WHAT WE REMEMBER!:

