

# BIOMEDICAL SCIENCE 136 – BIOLOGY OF HUMAN SEXUALITY - SPRING 2019

PROFESSOR: BLAKE BARRON

BLAKE'S OFFICE: EBS 322

BLAKE'S

Monday 10:00 AM - 11:00 AM, Tuesday, 2:30 PM - 3:30 PM

OFFICE HOURS:

Wednesday 10:00 AM - 11:00 AM, Thursday, 2:30 PM - 3:30 PM

or other office hours at any time by previously arranged appointment

E-MAIL ADDRESS: [biosex@biosciweb.net](mailto:biosex@biosciweb.net)

TELEPHONE #: 965 - 0581 extension 2444

**TURN OFF OR SILENCE YOUR CELL PHONE NOW, IT IS THE LAST TIME IT WILL BE ON IN THIS CLASS!**

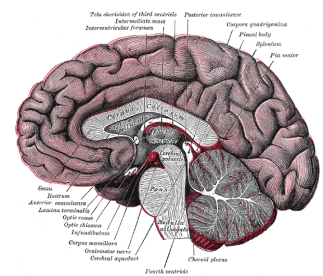
**INTRODUCTION:** Welcome to Biomedical Science 136 and the fascinating, appealing and fun study of the structure, function, lifelong changes in and diversity of human reproduction! The Biology of Human Sexuality is a course that primarily emphasizes the biological aspects of sexual reproduction in humans. This is a **3 unit lecture-only** course designed for non-majors, majors and allied health students who may not have a formal background in biology. **Please note that this is a science course and not a psychology or sociology course and thus it will primarily focus on topics of discussion related to biological science.** This course satisfies the SBCC General Education Requirement in Natural Sciences and this course is also transferable to the UC and CSU as a life science course **without** a laboratory. Registered Nurses will receive 30 CEUs by taking this course. **For this course, you must attend two 80 minute lectures each week. Most students find this to be a challenging course.** There will be **many hours of study outside of class** each week required on your part to successfully complete this course (a **minimum of 9 hours per week** is suggested) and achieve the best possible grade you deserve to earn. **There is no laboratory component to this course.**



For this Spring 2019 semester, our somewhat smaller class size will allow me to continue to assess the effectiveness of a modified "flipped classroom" pedagogical approach. This will include more formative assessments and collaborative learning within our lectures. I will explain this strategy in more detail at the beginning of the semester. This will **REQUIRE** that you complete some assigned online homework, watch requisite online videos and do the reading **BEFORE EVERY** lecture in preparation for our next class meeting. We will take a required quiz or participate in a more informal collaborative assessment in nearly **EVERY** lecture or you will have a take home quiz.

**TEXTS:** The required text is: *Biology of Human Sexuality* for Biomedical Sciences 136, paperback custom edition for Santa Barbara City College edited from various texts published by other authors that I have combined.

The text will be supplemented by **required** online assignments and in-class handouts and diagrams which you will find useful in obtaining a greater understanding of the biology of human sexuality.



**LECTURE NOTES:** A **required** series of lecture notes, web links, videos, vocabulary lists, review sheets, and practice quizzes are at the course website (<http://www.biosciweb.net/biosex>). Please contact me if you have problems with access to a computer or the Internet. Additional **required** handouts will be distributed in lecture.

**LECTURES:** Tuesday & Thursday, 9:35 am - 10:55 am in EBS 301 (#57268)

## BIOMEDICAL SCIENCE 136 – BIOLOGY OF HUMAN SEXUALITY - SPRING 2019

THE FINAL COURSE GRADE IS DETERMINED BY STUDENT COMPLETION AND PERFORMANCE OF THE FOLLOWING ASSIGNMENTS:

<u>ASSIGNMENTS</u>	<u>DATE</u>	<u>POINTS</u>	<u>% of COURSE GRADE</u>
Three Lecture	Thursday, February 7 <sup>th</sup> , 9:35 am - 10:55 am	100	~8%
Assessment Exams:	Thursday, March 7 <sup>th</sup> , 9:35 am - 10:55 am	100	~8%
	Thursday, April 11 <sup>th</sup> , 9:35 am - 10:55 am	100	~8%
One Final Exam:	Tuesday, May 7 <sup>th</sup> , 8:00 am - 10:00 am	150	~13%
Literature Search Paper:	1 paper @ 100 points due February 28	100	~8%
Oral & Digital Presentation:	1 presentation @ 100 points due BY Apr. 18	75	~6%
Lecture Quizzes:	(at every lecture - 26 quizzes @ 10 points each)	260	~22%
Homework/Group/Web-Based/Discussion Assignments:	(to be assigned)	315	~26%
<b>TOTAL:</b>		<b>1200</b>	<b>100%</b>

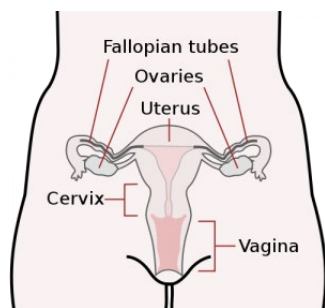
**YOU MUST BRING A 100 QUESTION BLANK SCANTRON TO EACH EXAM ONLY.**

**EXAMS AND QUIZZES:** Each of the exams and quizzes will consist of a varied combination of multiple choice, true-false, fill-in-the-blank, sentence completion, matching, short answer, essay, and diagram/graph interpretation questions. You will NOT take a quiz or participate in collaborative learning on exam days. All of the exams and quizzes will be held in EBS 301.

1. THE THREE LECTURE ASSESSMENT EXAMS WILL NOT BE CUMULATIVE.
2. THE FINAL EXAMINATION WILL HAVE A 30 TO 50 POINT CUMULATIVE AND COMPREHENSIVE COMPONENT.
3. A MISSED EXAM WILL SIGNIFICANTLY LOWER YOUR COURSE GRADE, USUALLY BY ONE LETTER GRADE. THE FINAL EXAM HAS A CUMULATIVE COMPONENT.
4. NONE OF THE EXAMS WILL BE DROPPED. ALL EXAMS SCORES WILL COUNT TOWARD THE FINAL GRADE.
5. THERE WILL BE A LECTURE QUIZ OR SOME SORT OF COLLABORATIVE LEARNING ASSESSMENTS IN EVERY LECTURE. ALL OF THESE POINTS WILL COUNT TOWARD YOUR FINAL GRADE.
6. DO NOT DISMISS THE QUIZZES/COLLABORATIVE LEARNING ASSESSMENTS AS THEY ACCOUNT FOR A TOTAL OF 260 POINTS AND ABOUT 24% OF THE FINAL GRADE, MORE THAN THE EQUIVALENT OF TWO EXAMS.
7. IF YOU MISS MORE THAN TWO LECTURE MEETINGS YOU MAY BE DROPPED FROM THE COURSE UNLESS YOU DISCUSS WITH ME ANY INTENDED OR UNFORESEEN ABSENCES.
8. THE QUIZZES WILL GENERALLY BE 10 POINTS EACH AND THE COLLABORATIVE LEARNING ASSESSMENTS WILL VARY. I WILL EXPLAIN ABOUT COLLABORATIVE LEARNING AS WE GO ALONG AND I BELIEVE YOU WILL FIND IT FUN AND HELPFUL TO IMPROVE YOUR CLASS PERFORMANCE. THESE QUIZZES AND ASSESSMENTS ARE DESIGNED TO HELP YOU KEEP PACE WITH YOUR STUDIES AND REVIEW THE REQUIRED COURSE INFORMATION WE ARE DISCUSSING PREVIOUS TO EXAMS. THE QUIZZES WILL USUALLY COVER MATERIAL FROM THE PREVIOUS TWO CLASS MEETINGS.
9. THERE WILL BE ABSOLUTELY NO QUIZ OR COLLABORATIVE LEARNING ASSESSMENT MAKEUPS OTHER THAN ONE MAKEUP QUIZ THAT WILL BE GIVEN WITH THE FINAL EXAM. THIS FINAL QUIZ WILL REPLACE ONE MISSED QUIZ OR YOUR LOWEST QUIZ SCORE IF YOU TAKE ALL THE QUIZZES.

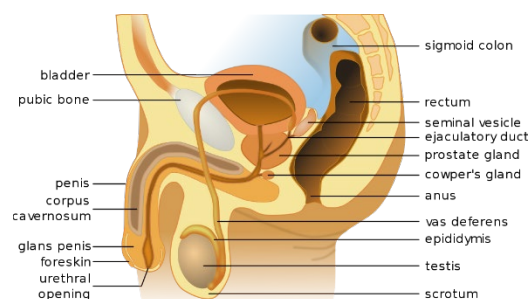
**YOU MUST ATTEND ALL LECTURES OR YOU WILL MISS A QUIZ OR COLLABORATIVE ASSESSMENT.**





**REQUIRED READING  
ASSIGNMENTS IN THE TEXT  
ARE LISTED BELOW**

**OPTIONAL REVIEW SESSIONS FOR  
EXAMS WILL BE SCHEDULED  
OUTSIDE NORMAL CLASS HOURS.**



**LECTURE SCHEDULE**

*THIS SCHEDULE MAY BE MODIFIED DURING THE COURSE AT MY DISCRETION*

<b>WEEK</b>	<b>DATES</b>	<b>LECTURE &amp; DISCUSSION TOPIC</b>
1	JAN 15 & 17	COURSE INTRODUCTION, DEFINITIONS OF SEX & SEXUALITY & BRIEF HISTORY OF SEX & HUMAN SEXUALITY IN THE 20 <sup>TH</sup> CENTURY - <i>HISTORY OF SEX: THE 20<sup>TH</sup> CENTURY</i> (MOVIE) <b>READING ASSIGNMENT:</b> CHAPTERS 1, 2 & 3
2	JAN 22 & 24	HEIRARCHY OF LIFE, BASIC PHYSIOLOGICAL PRINCIPLES: HOMEOSTASIS, ORGAN SYSTEMS, BIOMOLECULES & HORMONES, FUNDAMENTAL ASPECTS OF CELL STRUCTURE & FUNCTION, THE HUMAN LIFE CYCLE AND CELL DIVISION <b>READING ASSIGNMENT:</b> CHAPTERS 2, 3, 4, 5 & 6
3	JAN 29 & 31	MALE REPRODUCTIVE ANATOMY, STRUCTURE AND FUNCTION OF THE TESTES: SPERMATOGENESIS, (SPERM PRODUCTION), STEROIDOGENESIS, SEMINALYSIS, ENDOCRINE DISRUPTERS OF THE MALE REPRODUCTIVE SYSTEM AND THE USE AND ABUSE OF ANABOLIC STEROIDS <b>READING ASSIGNMENT:</b> CHAPTERS 5, 6, 7, 8 & 9
4	FEB 5	FEMALE REPRODUCTIVE ANATOMY AND ANIMAL ESTROUS CYCLES <b>READING ASSIGNMENT:</b> CHAPTERS 7, 8 & 9
<b>THURSDAY</b>	<b>FEB 7</b>	<b>FIRST LECTURE EXAMINATION</b>
5	FEB 12 & 14	THE MENSTRUAL CYCLE: HORMONAL CHANGES, STEROIDOGENESIS, OVULATION, MENSTRUATION, CHANGES IN THE FEMALE REPRODUCTIVE TRACT, MENSTRUAL CYCLE DISORDERS, PREGNANCY TESTING, PREMENSTRUAL SYNDROME (PMS) AND ARE LARGE NUMBERS OF MENSTRUAL CYCLES "NORMAL"? <b>READING ASSIGNMENT:</b> CHAPTERS 7, 8, 9 & 10

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6 FEB 19 & 21 STRUCTURE & FUNCTION OF THE HYPOTHALAMO-PITUITARY AXIS, HOW THE BRAIN CONTROLS THE GONADS AND HUMAN LIFE STAGES: PUBERTY TO MENOPAUSE  
**READING ASSIGNMENT:** CHAPTERS 10, 11 & 12

7 FEB 26 & 28 HUMAN LIFE STAGES: PUBERTY TO MENOPAUSE AND HUMAN SEXUAL AROUSAL: RESPONSE & SEXUAL DYSFUNCTION  
**READING ASSIGNMENT:** CHAPTERS 10, 11, 12, 13, 14 & 15

**EDITED FINAL COPY OF LITERATURE SEARCH PAPER IS DUE FEB 28  
(NO LATE PAPERS ACCEPTED - NO EXCUSES/EXCEPTIONS!)**

8 MAR 5 EVOLUTION: WHY SEX? (MOVIE), MORE SEXUAL RESPONSE, EVOLUTION OF SEXUAL BEHAVIOR, DIVERSITY AND PATTERNS OF SEXUAL BEHAVIOR IN HUMANS, GENDER ROLE IDENTIFICATION & RESEARCH ON THE BIOLOGY OF HOMOSEXUALITY & BI-SEXUALITY  
**READING ASSIGNMENT:** CHAPTERS 14, 15, 16, 17, 18 & 19

**THURSDAY MAR 7 SECOND LECTURE EXAMINATION**

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9 MAR 12 & 14 CONTRACEPTION  
**READING ASSIGNMENT:** CHAPTERS 20 & 21

10 MAR 19 & 21 EMERGENCY CONTRACEPTION (PLAN B/THE MORNING AFTER PILL) & SPONTANEOUS, SURGICAL & CHEMICAL/MEDICAL ABORTION AND AN INTRODUCTION TO PREGNANCY: AN EVERYDAY MIRACLE (MOVIE)  
**READING ASSIGNMENT:** CHAPTERS 20 & 21

**MARCH 25 THROUGH MARCH 29 - NO LECTURE DUE TO SPRING BREAK**

11 APR 2 & 4 SEXUALLY TRANSMITTED INFECTIONS (STIs or STDs)  
**READING ASSIGNMENT:** CHAPTER 19 & 22

12 APR 9 SEXUALLY TRANSMITTED INFECTIONS (STIs or STDs) AND AIDS: ACQUIRED IMMUNE DEFICIENCY SYNDROME AND HIV: HUMAN IMMUNODEFICIENCY VIRUS  
**READING ASSIGNMENT:** CHAPTERS 22 & 23

**THURSDAY APR 11 THIRD LECTURE EXAMINATION**

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13 APR 16 & 18 DNA, BASIC MOLECULAR BIOLOGY OF THE GENE, GENETICS, HEREDITY, SEX CHROMOSOMES, SEX & BIOTECHNOLOGY, CLONING, "DESIGNER BABIES" AND GENETIC DISORDERS OF SEX  
**READING ASSIGNMENT:** CHAPTERS 23 & 24

**DIGITAL PRESENTATION ASSIGNMENT IS DUE APRIL 18  
(NO LATE PRESENTATIONS ACCEPTED - NO EXCUSES/EXCEPTIONS!)**

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- 14            APR 23 & 25    MORE GENETICS, THE BIOLOGY OF CANCER AND CANCERS OF THE MALE AND THE FEMALE REPRODUCTIVE SYSTEMS  
**READING ASSIGNMENT:** CHAPTERS 23 & 24
- 15            APR 30 &  
MAY 2            BRIEF REVIEW OF DEVELOPMENT: GAMETE TRANSPORT TO BIRTH & LACTATION AND INFERTILITY: CAUSES, TECHNIQUES DESIGNED TO MAXIMIZE CONCEPTION, ISSUES SURROUNDING MULTIPLE CONCEPTIONS & CURRENT AND FUTURE TREATMENTS  
**READING ASSIGNMENT:** CHAPTERS 19, 23 & 24

**FINAL EXAMINATION: TUESDAY, MAY 7<sup>TH</sup>, 8:00 AM - 10:00 AM IN EBS 301  
YOU MUST BRING A 100 QUESTION BLANK SCANTRON TO EACH EXAM ONLY.**

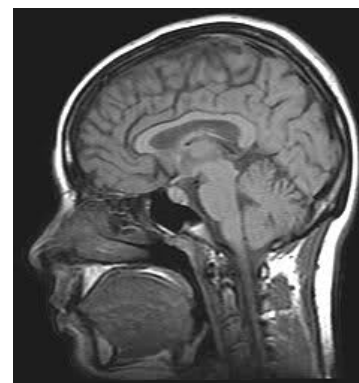


### **Student Learning Outcomes Biomedical Sciences 136 -Biology of Human Sexuality**



**After successful completion of this course, a student will be able to:**

1. Summarize the fundamental cellular and physiological principles critical to an understanding of the biology of human sexuality including the cell theory, the basic structure and functional importance of biomolecules, sex hormones and cell organelles and characterize basic aspects of homeostasis and molecular genetics.
2. Articulate basic principles and solve elementary problems of human genetics and heredity.
3. Identify and locate the anatomy of the human male and female reproductive systems and explain the essential endocrine and physiological regulation of the gonads and secondary reproductive organs including gametogenesis and the menstrual cycle.
4. Describe the basic anatomical and physiological determinants of activity changes that occur throughout a human's reproductive life history including puberty, sexual arousal, fertilization, pregnancy, embryonic development, parturition, menopause, infertility and sexual dysfunction.
5. Cite and distinguish the type of causative organism, transmission, symptoms, diagnosis and treatments of the most common sexually transmitted infections including HIV/AIDS. List the behaviors that can increase and decrease an individual's risk of contracting a sexually transmitted infection. Characterize and differentiate the physiological mechanisms of action and the basic procedures involved in the use of the most common techniques of contraception and abortion. Outline the potential benefits and consequences of each technique.
6. Research and prepare a written report in a standardized format based on a search of the literature data on a topic of personal interest related to the biology of human sexuality.



**POLICY ON GRADES - READ THESE PAGES VERY THOROUGHLY AND CAREFULLY!**

As we progress through the course and you complete each of the exams, quizzes and assignments, you will accrue points towards a final letter grade for the course. **Specific letter grades will not be given after each lecture exam or quiz, but you will receive a percentile score and I will give you a general idea of where you stand in the course after each lecture exam with reference to the rest of the class.** Generally, I have found that letter grades given for each exam can be misleading for some students. Often students will attempt to "figure out" their grade based simply on the letter grade they received for each exam or assignment (e.g. "I got an A on one test and a C on another test, so I probably have a B"). Since your course grade is based on your cumulative score for all your work, this can be an inaccurate method of determining your true course grade (although you may have a B, your cumulative percentile may be closer to an A or a C). Additionally, by giving letter grades for each exam, the focus tends to be on "getting the grade" instead of learning the subject matter. I will do everything in my power to prevent this learning from becoming an arduous and boring task for you, but it does require studious effort on your part. Thus, your percentile score on each exam is a more accurate depiction of how much of the course material you truly understand and have learned.

It is important that you realize that your grade is the result of your learned performance on the exams, quizzes, and assignments. Some students may understand the material very well, but perform poorly on any particular exam while other students may not have a complete grasp of the information and perform more adeptly on a particular exam. I can only evaluate you and assign grades based on your "performances" for each of the exams, quizzes, and other assignments. I make every attempt to grade fairly and impartially. **Each exam will include both objective (scantron) type questions and questions of the fill-in-the-blank or short answer or diagram drawing/labeling/interpretation type. YOU MUST BRING A 100 POINT SCANTRON TO EACH EXAM. You will not need a blue book or green book to each exam. I will provide the blank written portion of the exams and quiz answer sheets. You should bring two sharpened #2 pencils and perhaps a pen and colored pencils for each exam.**

A student who earns an **A grade** has performed excellent, exemplary work and completed all course assignments, while a student who earns a **C grade** has performed only adequate work in the course but still completed all course assignments. A student who earns a **B grade** has performed well in the course and completed all course assignments, while a student who earns a **D grade** has performed inadequate work, but has shown effort and completed most course assignments. An **F grade** is earned when a student performs at an unacceptably low level usually due to a poor attendance record, lack of diligent study effort and study time and/or incomplete course assignments.

**THE FOLLOWING SCALE WILL BE USED FOR DETERMINING FINAL COURSE GRADES:**

Anyone who earns above 90% in this class is guaranteed an A- or higher grade. Anyone who earns above 80% in this course is guaranteed at least a B- grade or higher. Likewise, any student who earns at least 65% in this course is guaranteed at least a C grade. **Do not allow yourself to settle for merely passing this course, each of you deserves the best grade that you can achieve.** Come talk to me if you are finding yourself lost, confused, overwhelmed, bored or scared about your grade or any of the information presented **at the earliest possible sign that you are having difficulty.**

<b>GRADE</b>	<b>TOTAL OVERALL PERCENTAGE</b>	<b>TOTAL POINTS ACCRUED</b>
A+	98% - 100%	1165 - 1200
A	93% - 97%	1105 - 1164
A-	90% - 92%	1069 - 1104
B+	88% - 89%	1045 - 1068
B	83% - 87%	985 - 1044
B-	80% - 82%	949 - 984
C+	78% - 79%	925 - 948
C	65% - 77%	769 - 924
D	55% - 64%	649 - 768
F	0% - 54%	0 - 648

## **BIOMEDICAL SCIENCE 136 – BIOLOGY OF HUMAN SEXUALITY - SPRING 2019**

**ATTENDANCE:** ATTENDANCE OF ALL LECTURES IS REQUIRED AND WILL BE RECORDED BASED ON THE QUIZ YOU WILL TAKE IN EVERY LECTURE. Attendance of lecture is not optional and attendance as well as participation will be the first criteria considered when determining "borderline grades". Arrive on time and I expect you to be fully prepared for lecture. I am aware that parking is a problem; however, "I couldn't find a spot" is NOT a sufficient enough excuse for being late for lecture or for not attending. Don't let yourself miss lecture just because parking is a hassle.

Please allow yourself enough time to account for difficulties in parking.

**You should be prepared to attend all lectures as failure to do so will mean that you will miss a required quiz. In my experience, those students who do not attend class are the students who do not fulfill their potential regardless of their level of understanding.** Medical, legal and other scheduled appointments should not be scheduled during normal class times and these will not be considered as excused absences. Medical or personal emergencies will require a written notice of the specific problem signed by an appropriately qualified individual.

**CHEATING:** Absolutely no form of academic dishonesty or plagiarism will be tolerated. It is unethical, unfair, and a violation of your own intelligence as well as being lame, slimy, vile, and pathetic. **Anyone caught cheating will be subjected to the most severe academic penalties.** **More than ever, most academic institutions and professors are acutely aware that this is a serious and unfortunately all too common issue.**

**MAKEUP EXAMS:** There will be no makeup exams except in the case of death/illness of a family member or death/illness of you. If you are sick, a written medical excuse will be required. It is your responsibility to make sure that you have no conflicts in your exam schedule. The final exam time is set by campus policy beyond my control and the lecture exams are all scheduled during regular lecture hours. In the case of some unforeseen personal crisis, a makeup will only be granted with my consent.

**EXTRA CREDIT ASSIGNMENTS:** Put simply, there are not any. **DO THE WORK!** Stay focused and put an effort into your studies early on and you won't care about extra credit. If you are having trouble in the course, you certainly don't need more to study - which is what extra credit would entail!

**WITHDRAWAL AND YOUR CONCERNS ABOUT YOUR GRADE:** **January 26<sup>th</sup>** is the last day to drop the course and receive a refund. The last day to withdraw from the course (without a refund and with a "W") is **March 15<sup>th</sup>**. **February 14<sup>th</sup>** is the last day to petition for Pass/No Pass status. **IF YOU ARE CONCERNED ABOUT YOUR GRADE, PLEASE COME TALK TO ME AT THE EARLIEST POSSIBLE TIME SO THAT WE CAN DISCUSS YOUR OPTIONS. It is to your great advantage to discuss with me (I don't bite!) any problems you are having early in the semester so that I can try and assist you as much as possible. If you do decide to withdraw, please tell me so that I will be aware of what happened to you and remember IT IS YOUR PERSONAL RESPONSIBILITY TO OFFICIALLY WITHDRAW SO THAT YOUR TRANSCRIPT RECORD WILL NOT BE ADVERSELY AFFECTED.**

**ACCOMODATIONS FOR STUDENTS WITH DISABILITIES:** Disabled Student Programs and Services (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have, or think you might have, a disability that impacts your educational experience in this class please contact DSPS to determine your eligibility for accommodations. DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is 805-730-4164. If you are already registered with DSPS please submit your accommodation requests via the '**DSPS Online Services Student Portal**' as soon as possible. Once submitted and confirmed please visit with me about your specific accommodations. Please complete this process in a timely manner to allow adequate time to provide accommodation.

**PERSONAL DISCUSSIONS IN LECTURE:** **You will not text message on your cell phone during lecture.** When you ask me questions, I will listen intently and provide you with the best possible answer that I can. I expect the same level of respect from you. **I encourage you to discuss the material with your classmates during the discussion portions of our class meetings and outside of class, but please be courteous AND DO NOT TALK AMONGST YOURSELVES WHILE I AM LECTURING AS IT IS VERY DISTURBING TO THE STUDENTS AROUND YOU.**

**I WELCOME AND ENCOURAGE YOU TO ASK ME QUESTIONS DURING LECTURE**