

BIOMEDICAL SCIENCE 136 - BIOLOGY OF HUMAN SEXUALITY - FALL 2010

PROFESSOR: BLAKE BARRON

BLAKE'S OFFICE: EBS 322

BLAKE'S OFFICE HOURS: Monday 10:00 AM - 11:00 AM, Tuesday, 2:00 PM - 3:00 PM
Wednesday 10:00 AM - 11:00 AM, Thursday, 2:00 PM - 3:00 PM
or other office hours at any time by previously arranged appointment

E-MAIL ADDRESS: 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 however 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.** There will be **multiple hours of required study outside of class** each week required on your part to successfully complete this course (a **minimum of 8 hours per week** is suggested) to achieve the best possible grade you deserve to earn. There is no laboratory component to this course.

TEXTS: There are **two required texts:** *Human Reproductive Biology*, by Jones, 3rd or 2nd edition and *Human Reproductive Biology*, by Mader, 3rd edition or recent edition. I suggest that you **skim the reading assignments before coming to class and then read the text assignments thoroughly after you attend lecture** as you will be better prepared to grasp the material presented in the textbooks. The texts will be supplemented by **required** online 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, vocabulary lists, review sheets, and practice quizzes are available for download as PDF files and slideshow presentations from my 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 (#31000)

<u>ASSIGNMENTS</u>	<u>DATE</u>	<u>POINTS</u>	<u>% of COURSE GRADE</u>
Three Lecture	Thursday, September 16 th , 9:35 am - 10:55 am	100	~11%
Assessment Exams:	Thursday, October 14 th , 9:35 am - 10:55 am	100	~11%
	Tuesday, November 9 th , 9:35 am - 10:55 am	100	~11%
One Final Exam:	Thursday, December 9 th , 8:00 am - 10:00 am	125	~14%
Literature Search Paper:	1 paper @ 100 points due Oct 7	100	~11%
Digital Presentation:	1 presentation @ 100 points due Nov 23	100	~11%
Scheduled and Pop Lecture Quizzes:	(as indicated in lecture/syllabus)	100	~11%
Homework/Group/Web-Based/Discussion Assignments:	(to be assigned)	175	~19%
TOTAL:		900	100%

BIOMEDICAL SCIENCE 136 - BIOLOGY OF HUMAN SEXUALITY - FALL 2010

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. **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 25 POINT CUMULATIVE AND COMPREHENSIVE COMPONENT.
3. A MISSED LECTURE EXAM WILL AUTOMATICALLY LOWER YOUR COURSE GRADE BY ONE LETTER GRADE. THE FINAL EXAM IS AN ABSOLUTE REQUIREMENT; YOU CANNOT PASS THIS COURSE WITHOUT TAKING THE FINAL.
4. NONE OF THE EXAMS WILL BE DROPPED. ALL EXAMS SCORES WILL COUNT TOWARD THE FINAL GRADE.
5. THE QUIZZES WILL USUALLY BE 5 TO 10 POINTS AND ARE DESIGNED TO HELP YOU KEEP PACE WITH YOUR STUDIES AND REVIEW THE REQUIRED COURSE INFORMATION PREVIOUS TO EXAMS. ABOUT HALF THE QUIZZES ARE SCHEDULED DURING LECTURE AND ABOUT HALF THE QUIZZES WILL BE POP QUIZZES GIVEN RANDOMLY AND UNSCHEDULED DURING LECTURE THROUGHOUT THE SEMESTER. THE QUIZZES WILL USUALLY COVER MATERIAL FROM THE PREVIOUS TWO LECTURE SESSIONS.
6. THERE WILL BE ABSOLUTELY NO QUIZ MAKEUPS (SCHEDULED OR POP) OTHER THAN ONE 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 POTENTIALLY MISS A POP QUIZ.

REQUIRED READING ASSIGNMENTS IN THE TEXTS 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

WEEK	DATES	LECTURE & DISCUSSION TOPIC
1	AUG 24 & 26	COURSE INTRODUCTION, DEFINITIONS OF SEX & SEXUALITY & BRIEF HISTORY OF SEX & HUMAN SEXUALITY IN THE 20 TH CENTURY - <i>HISTORY OF SEX: THE 20TH CENTURY</i> (MOVIE) AND BASIC PHYSIOLOGICAL PRINCIPLES: HOMEOSTASIS, ORGAN SYSTEMS & HORMONES READING ASSIGNMENT IN JONES: CHAPTER 1 pgs. 3 - 10 & CHAPTER 5 pgs. 125 - 133 & CHAPTER 8 pgs. 193 - 194 & CHAPTER 17 pgs. 463 - 467 READING ASSIGNMENT IN MADER: CHAPTER 6: pgs. 71 - 73
2	AUG 31 & SEPT 2	MORE PHYSIOLOGICAL PRINCIPLES, FUNDAMENTAL ASPECTS OF CELL STRUCTURE & FUNCTION, THE HUMAN LIFE CYCLE AND CELL DIVISION READING ASSIGNMENT IN MADER: CHAPTERS 1, 2, 3 & 4 READING ASSIGNMENT IN MADER: CHAPTERS 1, 2, 3 & 4
3	SEPT 7 & 9	DNA, BASIC MOLECULAR BIOLOGY, GENETICS, HEREDITY, SEX CHROMOSOMES, SEX & BIOTECHNOLOGY, CLONING, "DESIGNER BABIES" AND GENETIC DISORDERS OF SEX READING ASSIGNMENT IN MADER: CHAPTERS 1, 2, 3 & 4 READING ASSIGNMENT IN JONES: CHAPTERS 5: pgs. 125 - 145 &

BIOMEDICAL SCIENCE 136 - BIOLOGY OF HUMAN SEXUALITY - FALL 2010

- 4 SEPT 14 MORE GENETICS, THE BIOLOGY OF CANCER AND CANCERS OF THE MALE AND THE FEMALE REPRODUCTIVE SYSTEMS
READING ASSIGNMENT IN JONES: CHAPTERS 5: pgs. 125 - 145 & CANCERS: CHAPTER 2 pgs. 45 - 51 & 59 - 67 & CHAPTER 4 pgs. 109 - 110
READING ASSIGNMENT IN MADER: CHAPTERS 3, 4 & 6: pgs. 71 - 73

THURSDAY SEPT 16 FIRST LECTURE EXAMINATION

- 5 SEPT 21 & 23 MALE REPRODUCTIVE ANATOMY, STRUCTURE AND FUNCTION OF THE TESTES: SPERMATOGENESIS, (SPERM PRODUCTION), STEROIDOGENESIS, SPERM COUNTS, ENDOCRINE DISRUPTERS OF THE MALE REPRODUCTIVE SYSTEM AND THE USE AND ABUSE OF ANABOLIC STEROIDS
READING ASSIGNMENT IN JONES: CHAPTER 4
READING ASSIGNMENT IN MADER: CHAPTERS 5 & 6
- 6 SEPT 28 & FEMALE REPRODUCTIVE ANATOMY, ANIMAL ESTROUS CYCLES, SEPT 30 THE MENSTRUAL CYCLE I: HORMONAL CHANGES, STEROIDOGENESIS, OVULATION, MENSTRUATION AND CHANGES IN THE FEMALE REPRODUCTIVE TRACT
READING ASSIGNMENT IN JONES: CHAPTERS 2 & 3
READING ASSIGNMENT IN MADER: CHAPTERS 5 & 6
- 7 OCT 5 & 7 THE MENSTRUAL CYCLE II: MENSTRUAL CYCLE DISORDERS, PREMENSTRUAL SYNDROME (PMS) AND ARE LARGE NUMBERS OF MENSTRUAL CYCLES "NORMAL"?
READING ASSIGNMENT IN JONES: CHAPTER 3
READING ASSIGNMENT IN MADER: CHAPTERS 5 & 6

LITERATURE SEARCH ASSIGNMENT IS DUE OCT 7
(NO LATE PAPERS ACCEPTED - NO EXCUSES/EXCEPTIONS!)

- 8 OCT 12 STRUCTURE & FUNCTION OF THE HYPOTHALAMO-PITUITARY AXIS, HOW THE BRAIN CONTROLS THE GONADS AND HUMAN LIFE STAGES: PUBERTY TO MENOPAUSE
READING ASSIGNMENT IN JONES: CHAPTERS 1, 6 & 7
READING ASSIGNMENT IN MADER: CHAPTERS 5 & 6

THURSDAY OCT 14 SECOND LECTURE EXAMINATION

- 9 OCT 19 & 21 HUMAN LIFE STAGES: PUBERTY TO MENOPAUSE AND HUMAN SEXUAL AROUSAL: RESPONSE & SEXUAL DYSFUNCTION
READING ASSIGNMENT IN JONES: CHAPTERS 5, 6, 7 & 17
READING ASSIGNMENT IN MADER: CHAPTERS 5, 6 & 7

BIOMEDICAL SCIENCE 136 - BIOLOGY OF HUMAN SEXUALITY - FALL 2010

- 10 OCT 26 & 28 HUMAN SEXUAL AROUSAL: RESPONSE & SEXUAL DYSFUNCTION,
EVOLUTION: WHY SEX? (MOVIE),
EVOLUTION OF SEXUAL BEHAVIOR: HUMAN AND ANIMAL MODELS,
BIOLOGICAL BASIS OF MATE SELECTION AND PAIR BONDING,
DIVERSITY AND PATTERNS OF SEXUAL BEHAVIOR IN HUMANS,
GENDER ROLE IDENTIFICATION & CURRENT RESEARCH ON THE
BIOLOGY OF HOMOSEXUALITY AND BI-SEXUALITY
READING ASSIGNMENT IN JONES: CHAPTERS 5 & 17
READING ASSIGNMENT IN MADER: CHAPTERS 7, 11 & 12
- 11 NOV 2 & 4 INTRODUCTION TO PREGNANCY: *AN EVERDAY MIRACLE* (MOVIE) AND
BRIEF REVIEW OF DEVELOPMENT: GAMETE TRANSPORT TO BIRTH &
LACTATION
READING ASSIGNMENT IN JONES: PARTS OF CHAPTERS 9, 10, 11 & 12
READING ASSIGNMENT IN MADER: CHAPTER 8
- 12 NOV 9 & 11

TUESDAY NOV 9 THIRD LECTURE EXAMINATION

THURSDAY NOV 11 NO LECTURE DUE TO VETERAN'S DAY HOLIDAY

- 13 NOV 16 & 18 CONTRACEPTION & EMERGENCY CONTRACEPTION
(PLAN B/THE MORNING AFTER PILL) & SPONTANEOUS, SURGICAL &
CHEMICAL/MEDICAL ABORTION AND BEGIN
SEXUALLY TRANSMITTED INFECTIONS (STIs or STDs)
READING ASSIGNMENT IN JONES: CHAPTERS 14, 15 & 18
READING ASSIGNMENT IN MADER: CHAPTER 9, 10
- 14 NOV 23 SEXUALLY TRANSMITTED INFECTIONS (STIs or STDs)
READING ASSIGNMENT IN JONES: CHAPTER 18
READING ASSIGNMENT IN MADER: CHAPTER 9, 10

DIGITAL PRESENTATION ASSIGNMENT IS DUE NOV 23
(NO LATE PRESENTATIONS ACCEPTED - NO EXCUSES/EXCEPTIONS!)

THURSDAY NOV 25 NO LECTURE DUE TO THANKSGIVING DAY HOLIDAY

15	NOV 30 & DEC 2	AIDS: ACQUIRED IMMUNE DEFICIENCY SYNDROME & HIV: HUMAN IMMUNODEFICIENCY VIRUS AND INFERTILITY: CAUSES, TECHNIQUES DESIGNED TO MAXIMIZE CONCEPTION, ISSUES SURROUNDING MULTIPLE CONCEPTIONS & CURRENT AND FUTURE TREATMENTS READING ASSIGNMENT IN JONES: CHAPTERS 16 & 18 (HIV/AIDS) READING ASSIGNMENT IN MADER: CHAPTERS 9 & 10
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FINAL EXAMINATION: THURSDAY, DECEMBER 9TH, 8:00 AM - 10:00 AM IN EBS 301

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.

GRADE POLICY IS ON THE NEXT PAGE

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 will not need a blue book or green book. I will provide the exams and scantrons for each exam or quiz. You should bring two sharpened #2 pencils and perhaps a pen and colored pencils for each exam.**

Your performance during this course will be evaluated using the following basic criteria:

An **A grade** indicates that the student has performed excellent, exemplary work and completed all course assignments.

A **B grade** indicates that the student has performed well in the course and completed all course assignments.

A **C grade** indicates that the student has performed adequately well in the course and completed all course assignments.

A **D grade** indicates that the student has performed inadequate work, but has shown effort and completed all course assignments.

An **F grade** indicates that the student has performed at an unacceptably low level usually due to a poor attendance record and/or incomplete course assignments.

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

Anyone who earns above 85% in this class is guaranteed an A grade. Anyone who earns above 75% in this course is guaranteed at least a B grade. 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.

GRADE	TOTAL OVERALL PERCENTAGE	TOTAL POINTS ACCRUED
A	85% - 100%	765 - 900
B	75% - 84%	675 - 764
C	65% - 74%	585 - 674
D	55% - 64%	495 - 584
F	0% - 54%	0 - 494

BIOMEDICAL SCIENCE 136 - BIOLOGY OF HUMAN SEXUALITY - FALL 2010

ATTENDANCE:

ATTENDANCE OF ALL LECTURES IS REQUIRED. THERE WILL BE AN ATTENDANCE SHEET WHICH YOU MUST INITIAL DURING THE FIRST FEW LECTURE SESSIONS UNTIL THE DROP ROSTER IS DUE. 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 no where near 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 may miss a pop 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:

September 4th is the last day to drop the course and receive a refund. The last day to withdraw from the course (without a refund) is **October 22ND**. **September 24th** 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.**

DSPS STUDENTS:

Students with disabilities who are requesting accommodations should use the following SBCC procedure: contact the DSPS office in SS160 (x2364), present documentation of disability for review by a disabilities specialist, discuss options for support through DSPS, and present a signed DSPS authorization for accommodation to your instructor.

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 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** (at least have the decency to only "pass notes").

I WELCOME AND ENCOURAGE YOU TO ASK ME QUESTIONS DURING LECTURE