

*Biology/Gender Studies 255 (Bio-255/Gen-255):*

# *The Biology of Gender and Sexuality*

Professor **Diana Pettit, Ph.D.**

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Office Hours: Tuesdays/Thursday 12:10-1:30pm or by appointment

Room: NB 05.66.18

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Bio/Gen 255 Lecture: Tu/Th, 3rd Period (10:50p – 12:05p) Prof. Pettit Room 1.115

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**Course Description:** This course approaches the issues of gender and sexuality from the perspective of the biological sciences. By exploring the evolutionary origins of sexual reproduction, students will gain new insights into how and why sex and gender differences in animals, including humans, came to be. By gaining a solid grounding in basic sex-specific anatomy, physiology, and endocrinology, students will have a framework to consider several further topics, such as: gender-based medicine and the masculinized state of priorities in the biomedical industry; hermaphroditism, transexualism, and sexual reassignment; and reproductive biology and medicine. Finally, the course will examine sexual orientation and the study of its biological nature and origin, both in humans and in the animal world.

## **Learning Objectives of Gen-255:**

- **Reasoning**

Students will discuss and debate controversial topics related sexuality and gender.

- **Knowledge**

Students will consider the evolutionary emergence of sexual reproduction, sexual dimorphism, genders, sexual selection, and sex- and gender-based physiology and behavior, and students will analyze and reflect on what this natural history can tell us about our present understanding of human gender and sexuality.

Students will explore several historical scientific understandings of sex and gender and compare these with more modern biological research into sex and gender differences.

Students will master basic sex-specific physiology, anatomy, endocrinology, development/ embryology, and will apply this knowledge to the dissection of current issues in gender-based medicine. Students will then use the context of this knowledge as they consider the biology of hermaphroditism, transexualism, gender identity, and sexual reassignment

Students will learn about important women in science, past and present, and consider the issues of fairness and justice that face women scientists today.

Students will compare and contrast historical vs. modern scientific understanding and research of sexual orientation and sexual behaviors throughout the animal kingdom and in humans specifically.

- **Practical skills**

Students will gain further understanding of the scientific method and the real practice and nature of scientific research, especially, but not limited to, the study of gender and sexuality.

- **Communication**

Students will evaluate current research on sexuality and gender using orally and through a series of short reflection papers. A term paper on a topic chosen by the student, will allow for in depth exploration of a controversy. These exercises will help improve both written and oral communication skills.

## **Required Texts.**

- Judson, Olivia. Dr. Tatiana's Sex Advice to All Creation. ©2002, Metropolitan Books.

## Statement of the College Policy on Plagiarism:

- Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's own creation. Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.
- It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentations) and restatements of the ideas of others. Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited.
- Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has free guides designed to help students with problems of documentation.
- This course will use turnitin.com for all written assignments. Plagiarism will result in an automatic "zero" for the assignment, and the instructor reserves the right to report the academic dishonesty to the college disciplinary mechanisms.

**Blackboard:** Important course announcements, reading assignments, lecture notes, review questions, a discussion forum for Q and A, and other resources will be posted to the course on Blackboard. Please check regularly. Furthermore, **students are responsible** for checking their **John Jay e-mail account** regularly for important announcements. Contact DoIT, **not** your Bio instructor, for help with e-mail or Blackboard.

**Grades:** The grade for Gen255 is a composite of two in-class exams, worth 20% each; 5 in-class reading quizzes, worth a combined total of 20%; 5 summary-reflection papers, worth a combined total of 20%; and participation in class discussion, worth 20%. The chart here (→) shows the breakdown of the composition of the course grade.

Midterm Exam	20 points
Final Exam	20 points
Quizes	20 points
Papers	20 points
Discussion	20 points
Total	100 points

93.0 and above	A
90.0 - 92.9	A-
87.0 - 89.9	B+
83.0 - 86.9	B
80.0 - 82.9	B-
77.0 - 79.9	C+
73.0 - 76.9	C
70.0 - 72.9	C-
67.0 - 69.9	D+
63.0 - 66.9	D
60.0 - 62.9	D-
below 60.0	F

**Grading Scale:** The grading scale here (←) is the official grading scale for this course.

**You must check Blackboard and your John Jay E-mail account regularly.**

You are responsible for any and all course information, assignments, announcements, and communication that occurs through blackboard and/or your email account.

## Important Policies

**Course Attendance:** You are required to attend the lectures. An attendance sheet will be circulated during class. It is your responsibility to sign the sheet *during* class. You will not be permitted to sign the attendance sheet after the class has been dismissed. You will be allowed three absences with no required documentation. However, beginning with the fourth undocumented absence, your final course grade will be penalized by two percentage points (2%) for each undocumented absence. Arrivals later than fifteen minutes after the start of class will count as a one-half absence.

**Late Arrival:** Students are required to arrive on time. Failure to do so will result in the loss of one point/2 late arrivals. All students will have two free late arrivals, additional excuses must be compelling to avoid point deductions. Be aware that quizzes will be given within the first 15 min. of class. Failure to arrive on time could result in a zero for the quiz.

**Exams:** There will be two in-class exams: a midterm, and a final. The midterm will cover the first half of the course and occur as scheduled in the syllabus. The final exam will cover the second half of the course and take place during the time allotted by the College-wide final exam schedule. These exams will be a combination of multiple-choice and essay questions covering the assigned readings and the lecture material. The two exams will each form 20 points of the possible 100 points for the course grade. Exams will be graded on a curve.

**Reading Quizzes:** There will be 8 in-class multiple-choice quizzes covering specific reading assignments. These quizzes will be announced at least one class period ahead of time. The lowest 3 quiz grades (or any missed during an absence) will be dropped and the 5 highest scored quizzes will be combined to form 20 points of the possible 100 points for the course grade.

**Reflection Papers:** There will be six (6) reflection papers covering specific reading assignments. More detail will be given in class, but the expectation of these papers is two-fold: 1) The paper should spend 300-450 words summarizing in your own words the main points of the assigned reading, and another 100-250 words reflecting on the relevance of these readings to your own life or experience. These papers will be graded and checked for plagiarism through turnitin.com – thus digital copies **MUST** be provided by email or Blackboard. The lowest reflection paper grade (or one that is not completed) will be dropped and the remaining five papers will be combined to form 20 points of the possible 100 points for the course grade.

## Course Reading Materials

In addition to the required text, we will use book chapters and journal articles as part of the reading. These will be posted on Blackboard under the content directory. Reading materials will be found in each week's directory.

## Lecture Schedule *(28 class sessions + final exam)*

Week	Date	DAY	LECTURE
1	Jan 29 Jan 31	Tues Thurs	<b>Introduction</b> <b>Gender-specific behavior and gender roles in humans</b> Readings: The Science of Gender and Science a Debate: ( <a href="http://www.edge.org/3rd_culture/debate05/debate05_index.html">http://www.edge.org/3rd_culture/debate05/debate05_index.html</a> ) <b>Class Discussion</b>
2	Feb 05  Feb 07	Tues  Thurs	<b>Gender-specific behavior and gender roles in humans, Cont.</b> Readings: The Science of Gender and Science a Debate: ( <a href="http://www.edge.org/3rd_culture/debate05/debate05_index.html">http://www.edge.org/3rd_culture/debate05/debate05_index.html</a> ) <b>Class Discussion (1<sup>st</sup> writing assignment)</b> <b>Evolution of sexual reproduction</b> Readings: Chapter: <i>ch46.1-2: Animal Reproduction</i> in <u>Biology</u> (Campbell and Reece)
3	Feb 14	Thurs	<b>Tuesday, February 12: College is closed (Lincoln's Birthday)</b> <b>Gender-specific behavior and gender roles in animals</b> Readings: <u>Dr. Tatiana's Guide</u> (Judson), ch1-3: pp1-59

4	Feb 19	Tues	<b>Gonochorism, hermaphroditism, and gender switching in the animal world</b>
		Reading:	<u>Dr. Tatiana's Guide</u> (Judson), ch12-13: pp187-225
	Feb 21	Thurs	<b>Animal Courtship Behavior</b> Video (2 <sup>nd</sup> writing assignment)
5	Feb 25	Tues	<b>Embryonic development of gender and external reproductive anatomy</b>
		Reading:	Chapter: <i>ch5: Sexual Differentiation</i> in <u>Human Reproductive Biology</u> (Hyde)
	Feb 28	Thurs	<b>Internal human reproductive anatomy</b>
		Readings:	Reece 46.3 (pp 1000-1007) Reproductive organs produce and transport... ch20 (pp741-750): <i>The Reproductive System</i> in <u>Human Physiology...</u> (Sherwood)
6	Mar 05	Tues	<b>Meiosis and Gametogenesis</b>
		Readings:	ch46.4 (pp1007-1009): <i>Animal Reproduction</i> in <u>Biology</u> (Campbell) Reece 46.4 (pp1008-1011) Interplay of tropic and sex hormones regulates.....
	Mar 07	Thurs	<b>The female menstrual cycle: puberty, menarche, menopause and hormones</b>
		Reading:	ch20 (pp764-778): <i>The Reproductive System, Human Physiology</i> (Sherwood)
7	Mar 12	Tues	<b>Circumcision, The Controversy</b>
		Reading:	See blackboard for articles, (3 <sup>rd</sup> writing assignment)
	Mar 14	Thurs	Female fertility, contraception, pregnancy
		Reading:	Chapter: <i>ch7: Contraception and Abortion</i> in <u>Understanding Human Sexuality</u> (Hyde...) Reece 46.5 (pp1011-1018)
8	Mar 19	Tues	Review for Exam
	<b>Mar 21</b>	<b>Thurs</b>	<b>MIDTERM EXAM (COVERS THROUGH Mar 12)</b>
			<b><i>Spring Break, no classes (March 25-April 2)</i></b>
9	Apr 4	Thurs	<b>Intersex: the third gender</b>
		Reading:	Dr. Tatiana ch 12 Article by McCabe, <i>Gender as a Spectrum, Not a Dichotomy</i> (4th writing assignment)
10	Apr 9	Tues	<b>The Age of Enlightenment: scientific thought regarding human gender</b>
		Reading:	Chapter by Londa Schiebinger, <i>The Philosopher's Beard: Women and Gen</i>
	Apr 11	Thurs	<b>Evolution of scientific understanding of sexual orientation</b>
		Reading:	<u>Sexing the Body</u> (Fausto-Sterling), chapter 8: p195-232

**\*\* Friday, April 12 – Last day to resign without academic penalty\*\***

11	Apr 16	Tues	<b>Women in the military/police/etc.</b>
		Reading:	See Blackboard for papers (5 <sup>th</sup> writing assignment)
	Apr 18	Thursday	<b>Evidence of homosexuality throughout the animal world</b>
		Reading:	<i>Same Sex Sexuality</i> <u>Dr. Tatiana's Guide</u> (Judson), ch11: pp167-186
12	Apr 23	Tues	<b>Biological/medical research on sexual orientation</b>
		Reading:	See blackboard for papers
	Apr 25	Thurs	<b>Biological/medical research on sexual orientation, continued</b>
		Reading:	Article by I. Wickelgren, <i>Discovery of 'gay gene' questioned.</i> Article by lemmola and Ciani, <i>New Evidence of Genetic Factors Influencing</i>
13	Apr 30	Tues	<b>Current scientific research into gender differences: biology and health</b>
		Reading:	Article by C. Meinert, <i>The Inclusion of Women in Clinical Trials.</i> Article by Lesley Doyal, <i>Sex, Gender, and Health: The Need for a New Approach.</i> Article by Bird and Riekerb: <i>Gender matters: an integrated model for understanding...</i>

	May 02	Thurs	<b>Women in science: trailblazers in history</b>
		Reading:	Article by Gina Hamilton, <i>Innovators and Interpreters: The Historic Role...</i>
14	May 07	Tues	<b>Sex and Drug Testing at the Olympics, ethical issues</b>
		Reading:	<i>See blackboard for readings</i> (6 <sup>th</sup> writing assignment)
	May 09	Thurs	<b>Current scientific research into gender differences.... continued</b>
		Reading:	Article by Bird and Riekerb: <i>Gender matters: an integrated model for understanding...</i>
15	May 14	Tues	Catch up day/Review for Final (To cover Mar 14 – May 9)

**Final Exam Schedule will be provided later in the semester**