

**Biology 408 Contemporary Genetics – 3 credits
Spring 2019**

Time and Location: Jan 8 – May 3
Tuesday & Thursday 1:25-2:40 pm
Spark 323

Prerequisites: General Genetics, Biology 301

Instructor: Joanna Kelley
Heald 431A
Office hours: by appointment
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Text: Required readings from the primary literature and news sources will be used for each week’s readings. You are expected to have read the material by class on *Tuesday*. If you have forgotten or are unfamiliar with a topic, it is essential that you review the background in your basic genetics text before the topic is covered. Every class will have required reading material.

Course Website: You can access the syllabus, readings and other resources on the course Blackboard page (learn.wsu.edu). We will have folder on Blackboard with readings for each topic.

Overview: Biology 408 is a capstone course designed for students with background and interest in genetics (prerequisite: General Genetics) to consider current topics in genetics. We will focus on topics of current interest in genetics and the course will include lectures, readings, essays by the student and discussions. You will present on a current genetics topic of interest in the last three weeks of the class. This is a course that requires extensive readings, participation in discussions, and written assignments and oral presentations.

Student learning outcomes:

	At the end of this course, students should be able to	Course assignment that advance the learning goal	This objective will be evaluated primarily by
Critical and Creative Thinking	critically evaluate information and data and from a range of sources	all discussions evaluate scientific and popular media	participation in discussions, written assignments
Depth, Breadth and Integration of Learning	integrate knowledge of genetics to current topics and apply their knowledge to contemporary issues related to genetics	participation in discussions and written assignments and exams	written assignments and exams
Communication	communicate current topics in genetics to both specialists and non-specialists	participation in discussions and in their oral presentation, written assignments and exams	written assignments and exams oral presentation
Information Literacy	find appropriate scientific articles	research for written assignments and oral presentation	written assignments oral presentation

Course schedule by week and date

Week	Date	Activity	Important notes
1	8-Jan	Introduction/ Orientation	
1	10-Jan	Review	
2	15-Jan	DNA and forensics	
2	17-Jan	DNA and forensics discussion	
3	22-Jan	Genetics & Human Phenotypes	
3	24-Jan	Genetics & Human Phenotypes discussion	
4	29-Jan	Conservation genetics	<i>Take-home essay exam I handed out</i>
4	31-Jan	Conservation genetics discussion	
5	5-Feb	Evolutionary genetics	<i>Take-home essay exam I due</i>
5	7-Feb	Evolutionary genetics discussion	
6	12-Feb	Human Evolution	
6	14-Feb	Human Evolution discussion	
7	19-Feb	Reproductive Genetics	<i>Take-home essay exam II handed out</i>
7	21-Feb	Reproductive Genetics discussion	
8	26-Feb	Genetic Engineering	<i>Take-home essay exam II due</i>
8	28-Feb	Genetic Engineering discussion	
9	5-Mar	Genetic Engineering	<i>Written assignment topic due</i>
9	7-Mar	Genetic Engineering discussion	
	12-Mar	Spring break	
	14-Mar	Spring break	
10	19-Mar	Precision Medicine	<i>Take-home essay exam III handed out</i>
10	21-Mar	Precision Medicine discussion	
11	26-Mar	Plant and Animal GMOs	<i>Take-home essay exam III due</i>
11	28-Mar	Plant and Animal GMOs discussion	<i>Written assignment draft due</i>
12	2-Apr	Oral reports	
12	4-Apr	Oral reports	
13	9-Apr	Oral reports	
13	11-Apr	Oral reports	
14	16-Apr	Oral reports	
14	18-Apr	Oral reports	
15	23-Apr	Discussion	<i>Written assignment due</i>
15	25-Apr	Concluding discussion	<i>Final essay exam handed out</i>
Final	1-May	1-3pm	<i>Final essay exam due</i>

Final Exam: May 1st, 1-3pm

Grading: Grades are based on participation in discussions, written assignment, oral report and essay exams as shown below. Students write an essay on a topic in contemporary genetics, evaluating at least two articles from the scientific literature. Assignments are important both to your grade and understanding of the material. Your written assignments may be used by university evaluators for assessment of success of this capstone course.

Participation in Discussions (1.5 pts each x 10 sessions)	15
Written assignment	25
Oral report	20
Take-home essay exams	30
Final essay exam	<u>10</u>
Grand total	100

Grading Scale:

A	93% +	C	73-76.99%
A-	90-92.99%	C-	70-73.99%
B+	87-89.99%	D+	67-69.99%
B	83-86.99%	D	63-66.99%
B-	80-82.99%	F	Below 60%
C+	77-79.99%		

Exams: There will be three take-home essay exams and a final essay exam.

Attendance and Participation: I will take attendance; I expect you to attend every class. Throughout the semester, we will be discussing the latest genetic technologies and their impact on society including ethical, economic, and environmental concerns. Thus, attendance and participation in discussion will be noted and considered in the “participation in discussion” portion of the grade.

Students with Disabilities: Reasonable accommodations are available for students with documented disabilities or chronic medical conditions. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center at Washington Building 217; Phone: 509-335-3417 to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center. For more information contact a Disability Specialist on your home campus.

Pullman or WSU Online: 509-335-3417 <http://accesscenter.wsu.edu>, Access.Center@wsu.edu

Campus safety and Emergency Notification. Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the “Alert, Assess, Act,” protocol for all types of emergencies and the “[Run, Hide, Fight](#)” response for an active shooter incident. Remain ALERT (through direct observation or emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able). Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI’s [Run, Hide, Fight video](#) and visit the [WSU safety portal](#).

Academic integrity. Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU’s Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will receive a failing grade on the assignment, will

not have the option to withdraw from the course pending an appeal, and will be reported to the Office of Student Conduct.

Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all of [the definitions of cheating](#). If you have any questions about what is and is not allowed in this course, you should ask course instructors before proceeding.

If you wish to appeal a faculty member's decision relating to academic integrity, please use the form available at conduct.wsu.edu.

Cheating on an exam or a writing assignment (including plagiarism) can result in a **final grade of F** for the entire course, will be reported to the Office of Student Affairs, and will result in additional disciplinary action by the University.

Additional information on plagiarism from the School of Biological Sciences website

Plagiarism: Plagiarism is the inclusion of any material, into any class assignment, that is not your own without adequate reference to its author. Other than the fraudulent manufacture of data, it is the most serious professional breach of ethics that a scientist can commit.

Consistent with the broad authority the university gives faculty in the management of the classroom, SBS views plagiarism in any student assignment as cheating and a serious breach of academic integrity. Students in all our courses (100-700 level) must clearly and unequivocally understand the meaning of this term because the penalties for plagiarism in the sciences can be career ending.

A common dictionary definition of **plagiarism** is “to steal and pass off (the ideas or words of another) as one's own : use (another's production) without crediting the source” (<http://www.merriam-webster.com/dictionary/plagiarize>) (Accessed 28 October 2013).

As with many terms, plagiarism may have alternative meanings and interpretations in other fields. However, SBS is responsible only for training students under its instruction and training to understand the meaning of plagiarism in the Life Sciences as described herein. This multi-component view is supported under WAC 504-26-010 definitions. <http://apps.leg.wa.gov/wac/default.aspx?cite=504-26-010>

“(i) Plagiarism. Presenting the information, ideas, or phrasing of another person as the student's own work without proper acknowledgment of the source. This includes submitting a commercially prepared paper or research project or submitting for academic credit any work done by someone else. The term "plagiarism" includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment.”

In accordance with universal practice in the Life Sciences, SBS interprets this definition of plagiarism to include several forms, each of which is explained below.

First, this definition includes incorporation of another author’s verbatim phrase(s) and sentence(s) into text purportedly written by the plagiarist without quotation marks and without citation of the true author.

Second, the definition also includes incorporation of another author’s verbatim phrase(s) and sentence(s) without quotation marks even if the true author is cited, e.g. at the end of a paragraph within which is the plagiarized text.

Third, the definition includes superficial paraphrasing, i.e., the substitution of a few words or modification/re-arranging/re-writing of another author’s phrases, such that the text is still largely

verbatim. Note plagiarism in this form includes copying the flow of logic or ideas in the text such that it follows the order in the original work. This practice is not permitted with or without citing the true author(s) because the original text was altered to give the impression that the plagiarist is the author of the novel idea/hypothesis/proposal (“to steal the idea as one’s own”...).

Fourth, this definition includes use of the ideas and writings of classmates and students from prior semesters as described in points one through three above.

Access to papers and other texts on the internet has opened new opportunities for those who would plagiarize, and the School of Biological Sciences (SBS) has in the past year encountered such cases in its courses. Thus, SBS now has access to software that can detect text plagiarized from the internet, and the faculty and the TAs have been instructed to employ these tools.

In the School of Biological Sciences, a confirmed case of plagiarism can result in a final course grade of F being immediately assigned and can result in the offense being immediately forwarded to the Office of Student Conduct, which will likely take further, more serious, action.

If you have any doubt at all about what constitutes plagiarism, you need to discuss immediately this matter with your instructor.

In short, **make sure all elements of your paper**, including text and figures, **are your own work**.

IMPORTANT: Per WSU policy effective August 24, 2015, I will ONLY be able to respond to emails sent from your WSU email address. I will NOT be able to respond to emails sent from your personal email address.

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