

MB&B233

Cellular Mechanisms of Gene Regulation and Gene Editing Tools

Contact information

Instructor: Prof. Teresita (Tere) Padilla-Benavides

E-mail: tpadillabena@wesleyan.edu

Phone: 860-685-2284

Office: 224 Hall-Atwater

Student Hours: Tuesday 10-12 PM, email to schedule please. Other times are available by making an appointment.

Classes: Monday and Wednesday 11:10AM-12:30PM, remotely.

Course website: Moodle (Cellular Mechanisms of Gene Regulation and Gene Editing Tools).

Class Zoom Meeting:

<https://wesleyan.zoom.us/j/98046916500?pwd=RVFPbnBpUEpma3BBK1ZvS21KNTJzdz09>

Meeting ID: 980 4691 6500

Passcode: MBB233

Instructor: Eduardo Castaneda-Saucedo, Universidad Autonoma de Guerrero

E-mail: ecastaneda@uagro.mx

Course overview

Term: Spring, 2021

Credits: 1

Background: MB&B181

This course will explain the mechanisms of gene expression in eukaryotes. Then we will define the main and current techniques used for gene editing (CRISPR/Cas9, TALEN, site directed mutagenesis, CRE/Lox recombination). Discussions will include how these technologies can be used to optimize organisms for health, food, and energy applications. Ethical use and current regulations of gene editing tools will also be discussed.

Recommended complementary literature

Books available at the library course reserve (ASK me if you can't find the appropriate chapters and I will send them to you):

- Hartwell et al., Genetics: from genes to genomes, 6th Ed.
- Appasani et al. Genome Editing and Engineering: From TALENs, ZFNs and CRISPRs to Molecular Surgery 1st Ed.
- Alberts, B. et al., Molecular biology of the cell, 6th Ed.

Course Objectives

By the end of this course, students will be able to:

- 1) Understand the basis of gene expression in normal conditions, and how alterations in transcriptional programs leads to pathological phenotypes.
- 2) Discuss why not every cell expresses all of its genes, and what are the underlying mechanisms mediating these processes.

- 3) Compare prokaryotic and eukaryotic gene regulation and modern tools to manipulate gene expression in diverse organisms
- 4) Integrate material from previous courses in biochemistry, cell and molecular biology to into the context of the human body and human health
- 5) Develop skills for data presentation and become a critical thinker by analyzing and leading discussions of primary research papers

How to be successful in MB&B 233

1) Preparing to present a paper:

- Perform a thorough search of potential papers of interest to present in class. Review them with your professor and ask many questions!
- Include relevant literature and methodologies to give your audience a full understanding of the science discussed.
- Use diagrams and illustrations to make it appealing to your audience. Test your own knowledge by drawing these illustrations from memory, without going back to the paper or the literature.
- You will challenge yourself to explain concepts to fellow students. Your goal is to accurately recall the course material, not simply be familiar with it when you are looking at the manuscript you will be presenting.

2) While listening to others presenting: Read the paper that will be discussed ahead of time. Prepare questions and comments for discussion

3) This is a class based on discussion and presentations in journal club style. Therefore attendance is important.

4) Be respectful of all the presentations, comments and questions

5) Attend all classes sessions on time, take notes, and ask questions and offer positive feedback of the science discussed

6) Questions are welcomed in class, in office hours, and with fellow students and by email.

7) Schedule office hours in preparation to your presentation. Let's discuss the science!

Time commitment

While the exact time commitment for the class will vary individually and over the course of the semester, I recommend that you budget approximately three out-of-class hours for every class hour to complete the reading of the manuscript that will be discussed. When preparing to present your paper I recommend at least 5 hours of work to deliver a comprehensive discussion of the science. If you feel you need more time to prepare your presentation, I would encourage you to come speak with me.

There will be optional seminars where you will be invited to attend at different hours than those proposed for our class. Attendance to these and participation with questions and discussions will count as extra credit. See below.

Course evaluation

Your grade in MB&B 233 will be determined based on the following:

- Oral presentation: 30%
- Powerpoint (visual) presentation: 20%
- Discussion and participation in classes: 20%
- Final project: 20%
- Attendance: 10%

The following table shows the relationship between letter grades and percentages:

Highest	Lowest	Letter
100.00 %	98.30 %	A+
98.29 %	95.00 %	A
94.99 %	91.70 %	A-
91.69 %	88.30 %	B+
88.29 %	85.00 %	B
84.99 %	81.70 %	B-
81.69 %	78.30 %	C+
78.29 %	75.00 %	C
74.99 %	71.70 %	C-
71.69 %	68.30 %	D+
68.29 %	65.00 %	D
64.99 %	61.70 %	D-
61.69 %	58.30 %	E+
58.29 %	55.00 %	E
54.99 %	51.70 %	E-
51.69 %	45.00 %	F

Oral presentation:

You will prepare a presentation based on the research paper of your interest and the utilization of a given gene technique and its scientific application.

Details for the duration of each presentation will be discussed the first day of class. There will be a time allocated for questions and discussion period following the conclusion of each presentation.

You will be graded based on the quality of your speech and deepness of the topic. Accuracy is essential; you need to understand the science being done. Do some research related the topics shown in the introduction of your selected paper. Be clear in stating rationales and hypothesis for the experiments performed and how these leads to certain conclusions. Dig in the methodologies that are presented and dissect them to the class. Become a thinker. Analyze the quality of the science, controls used, data presentation... Be the reviewer of the paper!

Late presentations will not be accepted. However due to the uncertainties of COVID19, we can make schedule arrangements if needed. PLEASE TALK TO ME AS SOON AS YOU FIND YOU HAVE A TIME CONFLICT. We are on this together; I am here to help you!

Powerpoint (visual) presentation:

Communication is everything! Clarity and creativity of the images supporting your speech is essential. Your grade will be based on the way your visuals convey your message. Similarly to the oral presentation accuracy is essential. Be sure all the supporting materials you use are from scientifically sound resources.

Please upload your presentation in pdf format into Moodle or send by email 24 hours before your talk

Discussion and participation in classes:

One of the goals of this course is that you improve your analytical skills. Ask questions, doubt of the science... How can you improve it? Quality and frequency of participation and thoroughness of analyses will be considered. Think critically and analytically to solve problems or improve research presented. The goal of these sessions and this type of active learning is to encourage a deeper understanding of biomedical concepts.

Final project:

The final project will consist on a paired discussion (groups of two-three students combined from Wesleyan and UAGro). The team will deliver a paper (two pages, single space, arial 11 font) regarding bioethical implications of gene editing in mammalian cells, or generation of transgenic animals or plants for food production. We will meet on Wednesday May 19 during class hours to define the expectations of this project and answer questions. The deadline for submission is by Friday 21 midnight. However, if you decide to outline your project over the course of the semester you are welcome to ask for advice to Dr. Padilla-Benavides.

Attendance:

This class is based on discussion and scientific criticism that happens in real life when attending to seminars. You need to be there to express your opinions and ask your questions. Attendance matters!

There are 25 sessions scheduled for our class for the Spring of 2021. The 10% will be calculated at the end of the semester according the number of sessions you attend. For instance, if you attend to 25 classes and remain for the entire time you will get 10%. If you attend to 6 sessions you will get 2.4%. If you attend to 23 full sessions and you come in late/leave early to 2 sessions you will get 9.6%, and so on. Ask me if you have questions. An excel file will be available to you at any time upon request to show your attendance and my records of your permanence during each meeting.

Optional seminar attendance:

Extra-credit up to 10% of the grade based on number of seminars attended and quality of participation during these talks. The weekly schedule for these meetings is posted in Moodle; check frequently as dates may change. NOTE that these seminars sometimes might not be related to gene regulation; rather these may be topics of general interest (HIV, COVID-19, cancer, etc). Your attendance to these seminars will be also available during the semester.

Class schedule

Below is the schedule of topics for the course. Relevant readings for each topic will be posted by each student in Moodle during the first week of class. We will discuss in the first session the order of presenters and topics.

Date	Topic
February 10	Course introduction and topic selection
February 15	Introduction to genetics and gene regulation Recommended reading from the HARTWELL book: <ul style="list-style-type: none"> • Chapter 6. DNA Structure, Replication, and Recombination • Chapter 7. Anatomy and Function of a Gene: Dissection Through Mutation Lecture: <u>Padilla-Benavides</u>
February 17	Introduction to genetics and gene regulation <u>Student presentations:</u> <u>Paper discussion:</u> <ul style="list-style-type: none"> • Sokolik 2015. Transcription Factor Competition Allows Embryonic Stem Cells to Distinguish Authentic Signals from Noise • Erceg 2017. Dual functionality of cis-regulatory elements as developmental enhancers and Polycomb response elements
February 22	Gene regulation in Prokaryotes Recommended reading from the HARTWELL book: <ul style="list-style-type: none"> • Chapter 16. Gene Regulation in Prokaryotes Lecture: <u>Padilla-Benavides</u> <u>Student presentations:</u> <u>Paper discussion:</u> <ul style="list-style-type: none"> • Jinek 2012. A Programmable Dual-RNA–Guided DNA Endonuclease in Adaptive Bacterial Immunity
February 24	Gene regulation and basis of manipulation of the Eukaryotic genome. Transposons Recommended reading from the HARTWELL book: <ul style="list-style-type: none"> • Chapter 17. Gene Regulation in Eukaryotes • Chapter 18. Manipulating the Genomes of Eukaryotes Review paper: Ivics 2009. Transposon-mediated genome manipulation in vertebrates Lecture: <u>Padilla-Benavides</u> <u>Student presentations:</u> <u>Paper discussion:</u> <ul style="list-style-type: none"> • Urquart 2020. Eukaryotic transposable elements as “cargo carriers”: the forging of 1 metal resistance in the fungus <i>Paecilomyces variotii</i>
March 1 st	Site directed mutagenesis and TALEN Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:

	<ul style="list-style-type: none"> • Unbiased Detection of Off-target Cleavage by CRISPR/Cas9 and TALENs Using Integration-defective Lentiviral Vectors. Youjun Wu and Jiing-Kuan Yee • Gene Silencing, Disruption and Latency Reactivation with RNA-based and Gene Editing CRISPR/Cas, ZFN and TALEN Technologies for HIV-1/AIDS Therapies. Paige Charlins and Ramesh Akkina <p>Lecture: <u>Padilla-Benavides</u></p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Padilla-Benavides 2013. The Mechanism of Cu⁺-Transport ATPases. Interaction with Cu⁺ chaperones and the role of transient metal-binding sites.
March 3 rd	<p>TALEN</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Ma 2013. Visualization of repetitive DNA sequences in human chromosomes with transcription activator-like effectors • Jain 2021. TALEN outperforms Cas9 in editing heterochromatin target sites
March 8	<p>CRISPR/Cas9</p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> • CRISPR Genome Editing in Mice. Ella Paulina Thomson, Ruby Emily Dawson, James Nicholas Hughes and Paul Quinton Thomas • Review Paper: Pickar 2019. The next generation of CRISPR–Cas technologies and applications <p>Speaker: <u>Dr. Sean Ryder</u>. Associate Professor University of Massachusetts Medical School.</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Albarqi 2020. Multiple RNA regulatory pathways coordinate the activity and expression pattern of a conserved germline RNA-binding protein
March 10	<p>CRISPR/Cas9</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Billon 2017. CRISPR-Mediated Base Editing Enables Efficient Disruption of Eukaryotic Genes through Induction of STOP Codons • Wen Chiu 2019. Identification of calcium and integrin-binding protein 1 as a novel regulator of production of amyloid β peptide using CRISPR/Cas9-based screening system
March 15	<p>CRISPR/Cas9 (knock-in)</p>

	<p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> • Genome Editing with Desired Mutations (Knockin) with CRISPR in Model Organisms. Chunxin Wang and Yingjie Wu <p>Preprint:</p> <ul style="list-style-type: none"> • Pribadi 2016. CRISPR-Cas9 targeted deletion of the C9orf72 repeat expansion mutation corrects cellular phenotypes in patient-derived iPS cells <p>Speaker: <u>Dr. Rodrigo Lopez-Gonzalez</u>. Assistant staff at Cleveland Clinic Lerner Research Institute</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Partial inhibition of the overactivated Ku80-dependent DNA repair pathway rescues neurodegeneration in C9ORF72-ALS/FTD
March 17	<p>CRE/Lox recombination</p> <p>Recommended reading:</p> <p>Review paper:</p> <ul style="list-style-type: none"> • Kim 2018. Mouse Cre-LoxP system: general principles to determine tissue-specific roles of target genes. • Research paper: • Bultman 2006. Maternal BRG1 regulates zygotic genome activation in the mouse • Nasipak 2015. Opposing calcium-dependent signalling pathways control skeletal muscle differentiation by regulating a chromatin remodelling enzyme <p>Lecture: <u>Padilla-Benavides</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> • Padilla-Benavides, 2017. Casein kinase 2-mediated phosphorylation of Brahma-related gene 1 controls myoblast proliferation and contributes to SWI/SNF complex composition
March 22	<p>Gene editing in <i>Drosophila melanogaster</i></p> <p>Recommended reading:</p> <ul style="list-style-type: none"> • Review paper: Korona 2017. Engineering the Drosophila Genome for Developmental Biology <p>Speakers: <u>Dr. Fanis Missirlis</u>, CINVESTAV-Mexico City <u>Ana Karen Hernández Gallardo</u>, PhD candidate. CINVESTAV-Mexico City <u>Dr. Nicanor González Morales</u>, McGill University, Canada</p>
March 24	<p>No classes spring break</p>
March 29	<p>Gene editing in bacteria</p> <p>Recommended reading:</p> <p>Methods Papers:</p>

	<ul style="list-style-type: none"> • Van Kessel 2017. Recombineering in Mycobacterium tuberculosis. • Chio 2006. mini-Tn7 insertion in bacteria with single attTn7 sites: example Pseudomonas aeruginosa • Arango-Pinedo 2009. Plasmids That Insert into the Rhamnose Utilization Locus, rha : A Versatile Tool for Genetic Studies in <i>Sinorhizobium meliloti</i> • Datsenko 2000. One-step inactivation of chromosomal genes in <i>Escherichia coli</i> K-12 using PCR products • Jiang 2013. RNA-guided editing of bacterial genomes using CRISPR-Cas systems • Yan 2017. CRISPR-Cas12a-Assisted Recombineering in Bacteria <p>Research papers:</p> <ul style="list-style-type: none"> • Raimunda 2014. Functional characterization of the CDF transporter SMc02724 (SmYiiP) in <i>Sinorhizobium meliloti</i>: Roles in manganese homeostasis and nodulation • Padilla-Benavides 2013. A Novel P1B-type Mn²⁺-transporting ATPase Is Required for Secreted Protein Metallation in Mycobacteria <p>Speaker: <u>Dr. Daniel Raimunda</u>. Instituto Mercedes y Martín Ferreyra. Argentina</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> • Salusso 2017. Defining the Roles of the Cation Diffusion Facilitators in Fe²⁺/Zn²⁺ Homeostasis and Establishment of Their Participation in Virulence in <i>Pseudomonas aeruginosa</i>
<p>March 31</p>	<p>Genetic variability in RNA viruses, concepts in viral evolution, and phylogenetic trees</p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> • Gene Silencing, Disruption and Latency Reactivation with RNA-based and Gene Editing CRISPR/Cas, ZFN and TALEN Technologies for HIV-1/AIDS Therapies. Paige Charlins and Ramesh Akkina <p>Speaker: <u>Dr. Maria Duenas Decamps</u>. Assistant professor, University of Massachusetts Medical School</p> <p><u>Case studies discussion</u></p>
<p>April 5</p>	<p>Gene editing in viruses</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> • Vergara-Mendoza, 2020. Regulation of Cas9 by viral proteins Tat and Rev for HIV-1 inactivation • Abbott 2020. Development of CRISPR as a prophylactic strategy to combat novel coronavirus and influenza
<p>April 7</p>	<p>Gene editing in pigs in agriculture and models for research in disease</p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p>

	<ul style="list-style-type: none"> Genetically Engineered Pig Models for Human Diseases Using ZFNs, TALENs and CRISPR/Cas9. Martin F. Berthelsen, Martin K. Thomsen and Yonglun Luo Gene Editing to Create Agricultural and Biomedical Swine Models. Bethany K. Redel, Chad O’Gorman, Randall S. Prather and Kristin M. Whitworth Methods paper: Generation of genetically tailored porcine liver cancer cells by CRISPR/Cas9 editing <p>Speaker: <u>Dr. Kyle Schachtschneider</u>. Research Assistant Professor. University of Illinois at Chicago</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> Gaba 2020. Development and comprehensive characterization of porcine hepatocellular carcinoma for translational liver cancer investigation
<p>April 12</p>	<p>Genetics of Cancer</p> <p>Recommended reading from the HARTWELL book:</p> <ul style="list-style-type: none"> Chapter 20. The Genetics of Cancer <p>Speaker: <u>Leslie Caromile</u>. Assistant Professor UCONN Health</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> Kohaar 2020. Association of germline genetic variants with TMPRSS2-ERG fusion status in prostate cancer
<p>April 14</p>	<p>Therapeutic strategies in cancer treatment</p> <p>Speaker: <u>Eduardo Castaneda Saucedo</u> Professor Universidad Autonoma de Guerrero</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> Kumar Indra, 2007. Malignant Transformation of DMBA/TPA-Induced Papillomas and Nevi in the Skin of Mice Selectively Lacking Retinoid-X-Receptor a in Epidermal Keratinocytes
<p>April 19</p>	<p>CRISPR/Cas9 Models of Cancer <i>in vivo</i></p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> CRISPR/Cas9-based In Vivo Models of Cancer. Pranav V. Lalgudi, Monte M. Winslow and Ian P. Winters Inducible CRISPR-based Genome Editing for the Characterization of Cancer Genes. Nalani Sachan, Madison Miller, Nitin H. Shirole, Serif Senturk, Vincenzo Corbo, Justin B. Kinney and Raffaella Sordella <p><u>Student presentations:</u> <u>Paper discussion:</u></p>

	<ul style="list-style-type: none"> Rosenblum 2020. CRISPR-Cas9 genome editing using targeted lipid nanoparticles for cancer therapy Lu 2020. Safety and feasibility of CRISPR-edited T cells in patients with refractory non-small-cell lung cancer
April 21	<p>Genome Editing of Pluripotent Stem Cells</p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> Genome Editing of Pluripotent Stem Cells. Zhili Rong and Yang Xu <p>Review paper:</p> <ul style="list-style-type: none"> Hotta, 2015. From Genomics to Gene Therapy: Induced Pluripotent Stem Cells Meet Genome Editing De Massi 2019. Application of CRISPR/Cas9 to human induced pluripotent stem cells: from gene editing to drug discovery <p>Lecture: <u>Padilla-Benavides</u></p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> Jackow 2019. CRISPR/Cas9-based targeted genome editing for correction of recessive dystrophic epidermolysis bullosa using iPS cells
April 26	<p>Genome Editing of Pluripotent Stem Cells</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> Huang 2015. Production of Gene-Corrected Adult Beta Globin Protein in Human Erythrocytes Differentiated from Patient iPSCs After Genome Editing of the Sick Point Mutation Deuse 2019. Hypoimmunogenic derivatives of induced pluripotent stem cells evade immune rejection in fully immunocompetent allogeneic recipients
April 28	<p>CRISPR Genome Editing in Mice</p> <p>Speaker: <u>Jaime Rivera-Perez, PhD</u>. Associate Professor University of Massachusetts Medical School.</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> Streamlined ex vivo and in vivo gene editing in mouse embryos using adeno-associated viruses
May 3rd	<p>Genome editing in plants</p> <p>Speaker: <u>Stewart Gillmor, PhD</u>. Langebio.</p> <p><u>Student presentations:</u></p> <p>Paper discussion:</p> <ul style="list-style-type: none"> Lemmon 2018. Rapid improvement of domestication traits in an orphan crop by genome editing
May 5	<p>Genome editing in plants</p>

	<p>Recommended readings: Review: Gilbertson 2003. Cre-lox recombination: Cre-ative tools for plant biotechnology Review: Key 2008. Genetically modified plants and human health</p> <p><u>Student presentations:</u> <u>Paper discussion:</u></p> <ul style="list-style-type: none"> • Netherwood 2004. Assessing the survival of transgenic plant DNA in the human gastrointestinal tract • Sanyal 2004. Agrobacterium-mediated transformation of chickpea (<i>Cicer arietinum</i> L.) with <i>Bacillus thuringiensis</i> cry1Ac gene for resistance against pod borer insect <i>Helicoverpa armigera</i>
<p>May 10</p>	<p>Social Implications of genetically modified organisms.</p> <p>Recommended reading from the book Genome editing and engineering: from TALENs, ZFNs and CRISPRs to molecular surgery:</p> <ul style="list-style-type: none"> • The Ethics of Human Genome Editing. Tetsuya Ishii • Regulating Human Genome Editing: Negotiating Ethical Concerns through Science and Policy. Sarah Chan <p><u>Class discussion. Everybody is expected to participate in preparation to the final project.</u></p> <p><u>Papers discussion:</u></p> <ul style="list-style-type: none"> • Caplan 2020. No time to waste—the ethical challenges created by CRISPR • Rothschild 2020. Ethical implications of gene editing and gene selection • Ryder 2019. CRISPR babies

Additional help

Throughout this semester, we will cover a large amount of innovative primary research material. My is goal to make the information and science being released in real time interesting and easy to understand and help you increase your analytic and communication skills. This material will also require hard work and review. If there comes a time when you are overwhelmed and frustrated, do not give up. Several resources are available to you on campus, such as Peer Tutoring, Stem Zone and Study Groups. Please use them, come see me if you need assistance getting connected to these resources or to discuss the science.

MB&B 233 Course policies

Honor code

All students of Wesleyan University are responsible for knowing and adhering to the Honor Code of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council – Office of Student Affairs. Students who are found to be in violation of the academic integrity policy will be subject to both

academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). The Honor Code Office has more information.

<https://www.wesleyan.edu/studentaffairs/facguide/honor.html>

<https://www.wesleyan.edu/studentaffairs/studenthandbook/StudentHandbook.pdf>

Covid-19 Code of Conduct

To protect your health and safety, the health and safety of instructors and staff, and the health and safety of your peers, all students must understand and adhere to the University's Covid-19 Code of Conduct (<https://www.wesleyan.edu/healthservices/coronavirus/>). Students are encouraged to review the code of conduct regularly to stay up to date on the current code. The course instructor reserves the right to refuse to allow any student into the classrooms/office who does not adhere this code of conduct.

Technology policy

You are expected to be present and attentive during all class periods. You will need your laptops/tablets for use during class to take notes and complete course related activities. You may not, however, be utilizing your computer for non-course related purposes during class (including social media/unrelated web browsing).

Cell phone use is discouraged except for use in class related activities. If I notice you are abusing this, I reserve the right to ask you to leave the class and you will not be allowed to re-enter the zoom discussion.

If you have any questions or concerns regarding this, please do not hesitate to ask.

Winter weather policy

This class will be fulfilled by zoom. You do not need to be on campus to be present at the zoom room. In case you need to be on campus and in the event of inclement weather, everyone should use his or her best judgment regarding travel to and from the University. Safety should be the main concern.

If you cannot get to class because of adverse weather conditions, please contact me via email as soon as possible.

Similarly, if I am unable to establish a zoom connection for class, I will notify you as soon as possible via email.

Wesleyan university policies and procedures

Accommodations for students with disabilities

Wesleyan University is committed to ensuring that all qualified students with disabilities are afforded an equal opportunity to participate in, and benefit from, its programs and services. To receive accommodations, a student must have a disability as defined by the ADA. Since accommodations may require early planning and generally are not provided retroactively, please contact Accessibility Services as soon as possible. If you have a disability, or think that you might have a disability, please contact Accessibility Services in order to arrange an appointment to discuss your needs and the process for requesting accommodations.

Accessibility Services is located in North College, rooms 021/022, or can be reached by email (accessibility@wesleyan.edu) or phone (860-685-5581).

Religious observances

Religious observances require that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required assignments/attendance. If this applies to you, please speak with me directly as soon as possible at the beginning of the term.

Zoom room behavior

Students and faculty each have responsibility for maintaining an appropriate and respectful learning environment.

Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, ability, and nationality.

Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on the student code.

FERPA

Wesleyan University's statement of compliance with the 1974 Federal Family Educational Rights and Privacy Act states: "It is Wesleyan University's policy to keep the records of Wesleyan students confidential. Wesleyan will not disclose other than "directory information" about students to people outside the University unless the student has given written consent or in certain other cases permitted by law and University policy. The Family Educational Rights and Privacy Act of 1974 (FERPA) and University Policy protect the privacy of student education records and generally limit access to those records by third parties." To protect your privacy in regards to grades in this course, scores on graded assignments such as homework and exams will not be placed on the front of the assessment, but rather on the inside of the front page or back of the assessment.

DISCRIMINATION AND HARASSMENT

Wesleyan University is committed to maintaining a positive learning, working, and living environment. Wesleyan will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this Wesleyan policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Student Conduct (OSC) at 303-492-5550.