

GCD 3035: Culture, Identity, and Precision Medicine

Meeting Times: TTh 11:15-12:05; Amundson Hall 156

- Credits:** 2
Approximately 90 hours of student work is expected over the semester for this two credit course (per the [UMN Expected Student Academic Work per Credit policy](#)). Class meets on Tuesdays and Thursdays for 50 minutes, which represents approximately 30 hours. Out of class reading, studying, and assignments representing approximately 4 hours per week overall, for a total of 90 hours of student academic work expected.
- Instructor:** Ian MacFarlane, Ph.D.
MCB 5-136; 612-301-2789
macf0010@umn.edu (best way to contact me)
- Drop-In (Office) Hours:** In person (MCB 5-136): W 10:30-12; Th 3-4:30
(please email me dates/times that would work for you if these times don't fit your schedule; I'm also happy to meet via Zoom if that is more convenient or comfortable for you)
- Course Format:** In person sessions with a mixture of lecture and discussion. Two sessions will be held asynchronously. In rare conditions, such as instructor illness, a class may be held remotely.

Course Description:

The ability to work effectively across areas of cultural difference is an essential component of quality healthcare. As we continue to work to reduce healthcare disparities and improve access to treatment to those who have traditionally been underserved, our ability as providers to navigate intercultural communication sensitively will only become more important. This course will explore issues of culture (broadly defined to include areas of identity such as race, ethnicity, gender identity, sexual orientation, ability, religion, and others) relevant to the practice of precision medicine. Precision medicine is the practice of using genomic information to predict risk, inform diagnosis, and plan treatment for medical issues ranging from diabetes to cancer to mental health conditions. Examples of the intersections of culture and precision medicine include assessing the research on which the recommendations are based for minority representation, incorporating religious beliefs and traditions into treatment or prevention recommendations, and identifying systemic barriers to access for underrepresented communities. Students will cultivate a better understanding of their own intersectional identity, build language to effectively address cultural differences in healthcare interactions, and identify key variables involved in the provision of culturally engaged care in precision medicine. This course is open to all students interested in culturally engaged practice in healthcare professions, as the lessons we learn will translate to all allied health fields.

The first section of the course will provide a brief background in genetics, precision medicine, and culturally engaged practice needed to understand the course material. Our next focus will be understanding different areas of identity and the ways these dynamics intersect with precision medicine. The final section of the course will take a step back to explore the systems at play in precision medicine: the research that provides the foundation and the healthcare system where it is enacted.

Instructor Positionality:

As humans, we all approach life with a specific worldview shaped by our identities, personal and community histories, and values. Being aware of these “lenses” by which we interact with each other and with information is vital to the work of a culturally engaged person. We will define “culturally engaged” as part of the course, but I want to share with you a little about me and my worldview, since my position of power as the instructor privileges my worldview in the class. Professionally, I am a psychologist with relatively little training in biology beyond foundational knowledge. Because of my research interests and career journey, I have been engaged with precision medicine broadly (and genetic counseling specifically) for over 15 years. I am familiar with many of the nuances of this work, but I am still an outsider. This position gives me the ability to look at precision medicine practices without having “grown up” in the systems that govern this work, and thereby ask questions or propose ideas that may not occur to those in the systems. My outsider position also means I do not always appreciate the nuances and demands of this part of the medical system, so I may not be able to answer all your questions. In these situations, I have a strong network of contacts I can leverage to find the answer and we can learn together.

Personally, I wield significant unearned privilege in society due to my many majority identities (visible and invisible). I actively try to use this privilege to center the voices of those who have been historically, and continue to be today, marginalized. While I have considerable training on these issues, I still regularly make mistakes. When I make these mistakes, I seek to apologize and repair relationships when possible, reflect on the origins of the mistake, educate myself on the historical and current contextual factors involved, and do better in the future. I am still learning and growing in the work of diversity, equity, and inclusion (DEI), and every time I teach this course I am fortunate to learn from my students while I teach. It is my goal to grow alongside you rather than position myself as an authority or expert.

At the intersection of my personal and professional identities, I firmly believe it is the responsibility of people the current systems privilege to seek ways to deconstruct the oppressive nature of these systems. As such, I work to be actively involved in DEI efforts. Because of my majority identities I am often praised for this work more than the many people of marginalized identities who built the foundation upon which I stand. I recognize the historical and ongoing effort of these scholars, educators, activists, and revolutionaries, and seek to honor their fight by adding my work to theirs. I hope by the end of this class, you will join me in this continual process.

I have structured this course in a fashion I believe to be fairly linear, even though the world we live in is not so straightforward. To build your understanding of the nuance of this work, we will start by examining component parts then assembling them into more complex systems. For example, people experience the world through the intersection of their identities. To understand the impact of combined identities, we will first explore them individually even though no one experiences the world solely through the lens of their nationality, indigenous heritage, or first language. I use this approach to balance the incredible complexity of understanding our own and others’ experience with the desire to create an accessible pathway into that complexity. I acknowledge this approach is rooted in the values of linearity, hierarchical approaches to knowledge, and reductionism. I appreciate feedback on other ways to organize the course to achieve the learning objectives below.

Course Student Learning Outcomes:

Following successful completion of this course, you will be able to:

1. Explain the primary domains and functions of precision medicine;
2. Identify key cultural variables that influence access to and quality of service provision in precision medicine;
3. Assess how culturally engaged practice is carried out in precision medical practice;
4. Articulate your own intersectional identity;

Required Materials:

- All readings will be posted to Canvas.

Assignments:

Basic descriptions of the required assignments are provided below. Specific instructions and assessment guidelines will be posted to Canvas for each assignment.

Small Assignments (20%)

There will be short assignments throughout the course. Examples include completing worksheets about preparatory materials, comprehension quizzes about pre-class videos, or completing experiential exercises.

Exams (40%)

There will be 2 exams worth a total of 40% of your final grade. These exams will focus on understanding and applying the terminology, models, and strategies we cover in class and/or in the readings. The exam format will be a mixture of multiple choice and short answer questions.

Individual Voices Assignment (15%)

Most of this class is focused on theory and research, two critical components of forming a robust and data-driven understanding of the state of cultural engagement in personalized medicine.

While these sources can tell us a lot about how things function ideally or on average, they do not give us information about the experiences of the individuals who are engaged in healthcare either as patients or providers. There will be multiple ways to engage with individual narratives about this work and you will turn in a 2-3 page paper where you summarize what you learned, connect the material to what we've discussed in this course, and reflect on how the more personal stories have affected your understanding of these topics compared to research findings.

Cultural Autobiography (25%)

In this 6-page paper you will explore your own cultural identity and the history of how your sense of it evolved using the theories and lenses discussed in class. We will consider culture in a broad sense, and you will discuss your identities in both singular and intersectional contexts. The central goal of this assignment is to help you articulate your worldview in a structured format to facilitate understanding of dynamics between you and future patients.

Grading:

Grades will be assigned on a scale no more stringent than the following percentages:

Letter	Percent	Letter	Percent	Letter	Percent
A	93%	A-	90%	B+	87%
B	83%	B-	80%	C+	77%
C	73%	C-	70%	D+	67%
D	63%	D-	60%	F	< 60%

Technology

Canvas

This course will be web-enhanced through Canvas. Readings, lecture slides, some handouts, and links to other resources will be provided through this system. Unless otherwise specified, you will turn your assignments in via Canvas. [Click here to access Canvas](#). Questions concerning content/postings should be directed to me, while questions regarding access/technical issues should be directed to the U of MN IT Help Desk (612-301-4357; help@umn.edu). A PDF viewer is required to view the content posted to the Canvas site. [Free Adobe software is available for download](#).

Zoom

While the plan is to conduct all class sessions in person, there may be rare cases where class will take place using Zoom. Should this become necessary, I will give you as much advanced warning as possible, including instructions for joining and expectations for online interactions.

Policies (in alphabetical order):

Artificial Intelligence

The Board of Regents [Student Conduct Code](#) states the following in Section IV, Subd.1: Scholastic Dishonesty:

“Scholastic dishonesty means plagiarism; cheating on assignments or examinations, including the unauthorized use of online learning support and testing platforms; engaging in unauthorized collaboration on academic work, including the posting of student-generated coursework on online learning support and testing platforms not approved for the specific course in question; taking, acquiring, or using course materials without faculty permission, including the posting of faculty-provided course materials on online learning and testing platforms; ...”

Generative artificial intelligence (AI) models, such as ChatGPT, and online assignment help tools, such as Chegg®, are examples of online learning support platforms: they can not be used for course assignments except as explicitly authorized by the instructor. The following actions are prohibited in this course:

- Submitting all or any part of an assignment statement to an online learning support platform;
- Incorporating any part of an AI generated response in an assignment;
- Using AI to brainstorm, formulate arguments, or template ideas for assignments;
- Using AI to summarize or contextualize source materials;
- Submitting your own work for this class to an online learning support platform for iteration or improvement.

The use of Grammarly is permissible in this course, even though it uses generative AI, because it will not compose text for you. It will help sharpen your writing via prompts and suggestions, but you have to have something there for it to work, as opposed to ChatGPT which will create an entire body of text.

If you are in doubt as to whether you are using an online learning support platform appropriately in this course, I encourage you to discuss your situation with me.

Any assignment content composed by any resource other than you, regardless of whether that resource is human or digital, must be attributed to the source through proper citation. Examples of citing content composed by digital tools are presented in: libguides.umn.edu/chatgpt.

Unattributed use of online learning support platforms and unauthorized sharing of instructional property are forms of scholastic dishonesty and will be treated as such.

Attendance

Regular and engaged attendance is critically important to your success in this class. Much of our learning will be discussion-based and this cannot be adequately simulated by makeup assignments. That being said, we continue to be in extraordinary times due to the ongoing health crises and acts of violence directed toward vulnerable and/or oppressed communities. Take care of yourselves as you need to, but if you are not going to be able to attend class, please let me know ahead of time if possible. With a small class, absences can affect the ability to do certain activities and it is helpful if I can plan ahead. PowerPoint slides will be posted to the Canvas site, but you will definitely want additional information beyond what is printed on the slides. If you miss class, it is your responsibility to get notes from a classmate. I am happy to meet with you about course material you missed if you have questions remaining after getting notes from a classmate and completing the reading assignments.

Changes to the Syllabus

All aspects of this syllabus are subject to change at the discretion of the instructor. Students will be informed in writing of any changes to the syllabus via an announcement in Canvas.

Classroom Conduct

All students have the right to a civil, productive, and stimulating learning environment. In turn, as the instructor I have a responsibility to nurture and maintain such an environment. Lively, even heated, discussion is part of a stimulating learning environment. Both instructors and students, however, have a fundamental obligation to respect the rights of each other and an equally fundamental obligation to respect the instructional setting as a place for civil, courteous, and courageous behavior. We all bring different backgrounds, experiences, assumptions, and opinions into this class. The class will be a better experience for everyone if everyone feels able to share their perspectives. It is encouraged to challenge each other's perspectives, but we will debate ideas and theories using evidence to support our own positions. Repeated behaviors that undermine the learning environment described above may result in being asked to leave the class for a day or, if other interventions do not succeed, you may be dropped from the course at the instructor's discretion.

Communication

Outside of class, I will communicate with you most frequently via your **U of MN email address**. It is your responsibility to monitor this address and you are responsible for the information delivered to this address. **I highly recommend you check your email at least daily.** I will also post messages to Canvas, so you are encouraged to check Canvas regularly. The best way to contact me is through email. I will always attempt to respond to email promptly, which means within 24 hours. **I typically do not check my email after 8pm**, so if you email me at night, do not expect a response until the next morning at the earliest.

Disability Accommodations

I and the University view disability as an important aspect of diversity and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office (612-626-1333 or drc@umn.edu) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- Students with short-term disabilities, such as a broken arm, can often work with instructors to **minimize** classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.
- If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).
- For additional information, please see [the DRC website](#), or email drc@umn.edu.

Diversity Statement

I believe the tenets of Diversity, Equity, and Inclusion (DEI) should be infused into my policies, coursework, and teaching practices. I hope that these foundational experiences will not only foster an environment in which your intersecting identities, lived experiences, and cultural backgrounds are supported but will also provide you with the knowledge and skill set to carry forward into the communities you will interact with in your career and general life. I recognize that systemic oppression, discrimination, bias, and prejudice have been pervasive in science and education in overt and subtle ways. I am in the process of improving my awareness of and active process of either eliminating biased materials in my course or critiquing their use in science.

We will all bring unique perspectives to this course and I hope those who feel comfortable will share insights and alternative interpretations throughout the semester. Cultural perspectives are the heart of this course and will be explicitly included in most of our discussions. I welcome feedback on ways to increase the diversity of perspectives being provided in class and methods for creating a more inclusive atmosphere through my teaching.

The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, membership or activity in a local commission created for the purpose of dealing with discrimination, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult the [Board of Regents Equity, Diversity, Equal Opportunity, and Affirmative Action Policy](#).

Drop-In/Office Hours

You are not required to attend office hours, but these are times I hold open for you to come ask me questions about anything related to class or broader questions, such as about career preparation. Some students use these times to ask questions about a concept in class they want to understand better. Others use these times to explore connections they are making between material in our class and something else in their lives (e.g., other classes, current events, personal

interactions). Others may want to discuss careers in precision medicine, genetic counseling, psychology, or other healthcare roles. Others want to get engaged in research opportunities or find out why participating in research as an undergraduate can be useful. You might just want to get to know me better and debate Star Trek vs. Star Wars, compare fandoms of sports teams, or trade book/movie/tv show recommendations. All these interactions and many more are welcome.

Excused Absences and Makeup Work

You will not be penalized for absence during the semester due to excused circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. In the case of excused absences, you may request make up assignments. For complete information, please see Administrative Policy: [Excused Absences and Makeup Work](#).

Incompletes

An “incomplete” only may be given as a grade for the course when a student has a passing grade the course and has an unforeseen and uncontrollable event occur that prevents him or her from earning a significant number of points in the course. Thus, incompletes are rarely given and each situation will be considered on a case-by-case basis. To have an incomplete changed to a different grade all missing work must be completed by the end of the following term.

Late Work

Assignments are due at the beginning of class on the date listed in the syllabus. I encourage you to start assignments well in advance of the due dates in order to protect yourself from something happening at the last minute. I do, however, recognize unforeseen things come up in life, so each of you gets two “free pass extensions” per semester. This free pass grants you a 48-hour extension on any assignment. You do not need to explain the situation. Simply send me an email that says you are using your free pass. Normal late penalties will accrue after the 48-hour extension period. Assignments turned in after class but on the same day will be penalized 2.5%, with 5% additional penalty for every additional calendar day the assignment is late (thus if the assignment is due on Tuesday but turned in on Thursday the maximum score you could receive is 87.5%). Extensions may be given at the discretion of the instructor and you are encouraged to approach me early with such requests.

Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the [Student Mental Health Website](#). In addition, I am happy to work with you to secure off-campus referrals if you would prefer.

Role of the Instructor

I will provide learning opportunities designed to prepare you to understand culturally engaged practice in precision medicine and foster critical thinking. I have created the course to incorporate different methods of learning and assignments draw upon multiple skillsets to be successful. Every effort will be made to accommodate different learning needs and you are

encouraged to provide feedback both formally and informally. I pledge to carefully consider constructive feedback about teaching methods and incorporate suggestions to the extent feasible. I am responsible for treating you in a respectful, professional manner and creating a classroom atmosphere where students treat each other with civility and respect. I will be accessible outside of class and encourage you to meet with me either during drop-in hours or individual appointments to discuss concerns (e.g., about the class, workload, assignments, etc.), conflicts or problems that affect course performance, concepts which need further clarification, additional resources related to course material, or career plans.

Scholastic Misconduct & Academic Integrity

Scholastic misconduct is broadly defined as any act that violates the rights of another student in academic work or that involves misrepresentation of your own work. Scholastic misconduct includes (but is not limited to): cheating on assignments or examinations; helping another student cheat on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned (including papers you have submitted in previous semesters); providing others with copies of your assignments; depriving another student of necessary course materials; or interfering with another student's work. Academic integrity is doing your own work to the best of your ability given the circumstances at the time of the assignment. It includes proper attributions to knowledge you are using from other sources and succeeding on your own merits. Academic integrity is the goal for all of us in this class, including me. Remember that you are not defined by your grades and you are worthy of being here. I'm happy to support you in improving your work if you are not satisfied with your grades.

Plagiarism is a serious offense, however, most of the time, it happens because students are rushing through assignments and do not leave themselves with sufficient time to properly attribute information taken from other sources. You need to include citations each time you use information from a source. Include your citation in the first sentence where you begin using material from other sources. If you use 5 or more consecutive words from a source, you must include quotation marks and include the page number (or paragraph number if you are using an online source) in your citation. Failure to provide the page/paragraph number for a direct quote is actually a form of plagiarism, so make sure to double check before submitting assignments.

Your major papers will be screened for plagiarism via the TurnItIn database. Penalties for scholastic misconduct in any portion of the academic work for a course shall be made at the discretion of the instructor and may range from point deductions on the assignment to failing the class. If you have any questions about whether something might be considered an academic integrity issue or not, please talk with me about it BEFORE you turn in an assignment.

The Office for Community Standards has compiled a useful list of [Frequently Asked Questions pertaining to scholastic dishonesty](#). For additional information, see the *Student Conduct Code* section below.

Sexual harassment, sexual assault, stalking and relationship violence

The University prohibits sexual misconduct and encourages anyone experiencing sexual misconduct to access resources for personal support and reporting. If you want to speak confidentially with someone about an experience of sexual misconduct, please contact your campus resources including the Aurora Center, Boynton Mental Health or Student Counseling

Services. You can also [make a sexual misconduct report online](#). If you want to report sexual misconduct, or have questions about the University's policies and procedures related to sexual misconduct, please contact your [Title IX office](#) or relevant policy contacts.

Instructors are required to share information they learn about possible sexual misconduct with the campus Title IX office that addresses these concerns. This allows a Title IX staff member to reach out to those who have experienced sexual misconduct to provide information about personal support resources and options for investigation. You may talk to instructors about concerns related to sexual misconduct, and they will provide support and keep the information you share private to the extent possible given their University role. For more information, please consult [Board of Regents Sexual Harassment, Sexual Assault, Stalking and Relationship Violence Policy](#).

Statement on School Closure

In the event of a school closure (due to inclement weather or another issue) on a day when we are scheduled to have class, please be sure to check your email for a message from me. We will likely continue to meet remotely (e.g., using Zoom), but I may contact you with instructions for an assignment or activity you could complete using Canvas or other course resources.

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected to adhere to [Board of Regents Policy: Student Conduct Code](#). Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach and/or a student's ability to learn." The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities.

Thank a Teacher

If you would like to send a [short note of thanks](#) to any of your instructors, including TAs, it can make their day or week. Your note can be signed or anonymous.

Tentative Course Schedule:

Date		Class Topic	Readings/Assignment(s) Due
Week 1			
9/2	T	Course Welcome & Introduction	Hong & Oh (2010); Resta (2020a); Resta (2020b)
9/4	Th	Culturally Engaged Practice 1	Anderson et al. (2003); Purnell (2002)
Week 2			
9/9	T	Culturally Engaged Practice 2	
9/11	Th	Genetics Fundamentals	Thompson & Thompson (Chapter 2)
Week 3			
9/16	T	Genetic Testing Overview	Trevethan (2017); Cultural Competence Model Comparison Reflection
9/18	Th	Precision Medicine & Treatment	Pharmacogenetics overview ; PM Treatment Podcast Worksheet
Week 4			
9/23	T	Understanding Race/Ethnicity 1	Pre-class video quiz
9/25	Th	Understanding Race/Ethnicity 2	Bhopal (2007); Pre-class video quiz
Week 5			
9/30	T	Race in Precision Medicine 1	Pre-class video quiz; IAT Reflection Worksheet
10/2	Th	Race in Precision Medicine 2	Racism in GC Podcast Worksheet
Week 6			
10/7	T	Exam 1	
10/9	Th	Understanding Gender	Pre-class video quiz
Week 7			
10/14	T	Gender in Precision Medicine	
10/16	Th	Understanding Sexuality	Pre-class video quiz; Individual Voices Assignment
Week 8			
10/21	T	Sexuality in Precision Medicine	Transgender Case Study Reflection; Midterm Evaluation (Optional; EC)
10/23	Th	Understanding Religion	Pre-class video quiz
Week 9			
10/28	T	Religion in Precision Medicine	
10/30	Th	Understanding Disability	Pre-class video quiz; Religious Implications Reflection
Week 10			
11/4	T	No Class	
11/6	Th	Disability in Precision Medicine	

Date		Class Topic	Readings/Assignment(s) Due
Week 11			
11/11	T	Intersectionality	Bowleg (2012); GCs & Disability Worksheet
11/13	Th	Intersectionality in Precision Medicine	
Week 12			
11/18	T	Culturally Engaged Practice in Research 1	Pre-class video quiz
11/20	Th	Culturally Engaged Practice in Research 2	Schwartz (2020)
Week 13			
11/25	T	Exam 2	
11/27	Th	No class - Thanksgiving	
Week 14			
12/2	T	Systemic Issues in Healthcare I	Alberts et al. (2014); Rawat & Meena (2014); Research Recruitment Worksheet
12/4	Th	Systemic Issues in Healthcare II	Demographic Questions Worksheet
Week 15			
12/9	T	Course Wrap-Up & Reflection	Course Evaluations (during class)
Finals			
12/13	Sa	Final Exam Period: 1:30-3:30pm	Cultural Autobiography Due