TLL 3470 Identity and Power in STEM Course Syllabus

Course Information

Course Instructor: Tinukwa Boulder, PhD

Class Modality: Blended Learning (Asynchronous online and in-person)
- September 7, 2024 (In person)
- October 5, 2024 (In person)
- November 2, 2024 (In person)
- December 7, 2024 (Virtual via Zoom – tentative, we may meet in person)

Classroom: 5602 Posvar Hall

Class Duration and Credits: 15-weeks and Three

Office Hours: by appointment

Office Phone (Teams Call): 1 412 383 4541

Course Description

In this course we will grapple with how identity and power are intertwined in the STEM field, through personal reflection, theoretical discourse and scholarly practice. We will begin our scholarly journey at the personal level and then go on to explore the current context of STEM in terms of identity and power. Our collective inquiry will be focused on understanding who we are in STEM, through exploring our own understanding of STEM and wrestling with why we chose a path along this scholarly trajectory. Additionally, we will examine how STEM, as a field, is experienced across different intersections of identity (race, class, gender, ability, etc.). Finally, we will analyze the ways power operates within the systemic framing of STEM as a discipline, to develop a deeper understanding of our own paths in STEM education.

Learning Pursuits

Students will grapple with the following critical questions:
1. What is STEM? What is STEM Education?
2. Current Research: What is the role of artificial intelligence in STEM?
3. How is our STEM identity constructed?
4. How does power operate and function in STEM Education?

Course Structure and Core Materials

I will be structuring this course using Canvas modules. Each week you will grapple with open-source core materials such as peer-reviewed journal articles, blogs, TedTalks, podcasts, and other online resources. The course includes three modules covering that critically examine STEM, STEM education, STEM identity and functions of power in the three modules below.

Module One: What is STEM? What is STEM Education?

- Course and learner introductions
- What is our Collective Understanding of STEM?
- Historical Perspective and a Survey of STEM
- Artificial Intelligence and STEM

Module Two: How is STEM Identity Constructed?

- What is our Conceptualization of Identity?
- Positionality, Identity and STEM
- Cultivating Teacher and Student STEM Identities

Module Three: Functions of Power in STEM Education and Identity?
- What is our Collective Understanding of Power in STEM?
- Dominant Narratives, Subjugated Knowledges"

Scholarly Project Activities

Throughout the course, we will complete scholarly artifacts that help us to develop and articulate our understanding of the course materials. Traditionally, we would refer to these works as "assignments." We would like to play with ideas that liberate our minds to think about creating collective scholarly artifacts in service to our shared learning. At the end of the course, you will produce different multimodal artifacts representing your scholarly journeys.

- SA #1: STEM Profile Artifact & Discussion Scholarly Activity
- SA #2: STEM Identity Literature Trace Project: Summary, Presentation and Discussion
- SA #3: Reflections on Imagination PlaYce Visit Presentation and Discussion
- SA #4: Imagination PLayCe Visit: Cultivating STEM Identity
- Weekly Journal Activities

Example Coursework and Assessments

Throughout the course, we will complete scholarly artifacts that help us to develop and articulate our understanding of how identity and power are intertwined in the STEM field. You

will produce different multimodal artifacts representing your scholarly journey. Together, we will read, view, reflect, and discuss different contemporary and emerging literature to deepen our understanding of identity and power in STEM.

Our collective work entails:
- completing assigned readings and viewings
- participating in online and in-class discussion activities
- producing, disseminating, and presenting multimodal papers and projects
- creating multimodal artifacts

Grading Scheme

Actively and authentically engaging with the course material and our learning community enables you to fulfill the course objectives. Learning happens at your own pace and from your own perspective and cannot be assessed using a decontextualized and depersonalized standard of measure. Moreover, grades can cause anxiety that obstructs meaningful learning. As such, we strive for a more humanizing approach to grades that supports learning and growth and offers grace. All coursework will be graded as an A or a 'Revise'. If you receive an A, then your work is complete. If you receive a 'Revise', then you have an opportunity to submit a revision that addresses the comments from your instructor. The revision must be submitted within 1 week of receiving feedback from your instructor.

Course Instructional Approaches and Policies

Grading with Care Policy

Actively and authentically engaging with the course material and our learning community enables you to fulfill the course goals and objectives. I understand that learning happens at your own pace and from your own perspective and cannot be assessed using a decontextualized and depersonalized standard of measure. Moreover, grading is an ineffective method to assess engaging authentic learning but instead serves to conform behavior (review Alfie Kohn's work). In this course, we incorporate an alternative strategy to traditional grading. There are movements toward radical assessment (such as the work of Jesse Stommel) that aligns with my values.

I acknowledge the institution's policy to adhere to a system that requires grades. However, I also recognize our power to be "in but not of" (Harney & Moten, 1962) this institutional practice and system. As such, we strive for a more humanizing approach to grades rooted in care that supports learning and growth and offers grace. Under this policy, grading will be primarily based on the following three key elements:

1. Honoring our collective relational responsibilities in our course community
2. Adhering to our PQS feedback protocol
3. Completing your self-assessment surveys

Our Collective Relational Responsibilities

To build a respectful and caring learning community, we will adopt Dr. Sabina Vaught's 'Relational Responsibilities' as a practice in this course. Our collective responsibilities are grounded in our interdependent relationships and expressed through our active engagement with one another and our dedication to learning. We will undertake relational praxes when we:

- Consider how others' experiences are similar or different from your own.
- Recognize and affirm that affective responses to readings and discussions are part of a just intellectual project.
- Engage generously and contribute meaningfully to one another's learning.
- Challenge one another's ideas in a scholarly manner but never insult or disparage one another.
- Engage in ways that enhance and strengthen your scholarship.
- Attend carefully and attentively to one another's experiences and ideas, recognizing those as gifts to the community.

Instructor Presence

Instructors will maintain an active role in this online course by logging into the course daily and responding to any queries/concerns posted in the [Ask Your Course Facilitator Discussion Forum](#) and Outlook email. The course facilitator will provide timely feedback on drafts and final assignments and respond to student queries within 24 hours of receiving your emails and course messages. Please note that the instructors will typically be more available to address questions and respond to discussion forum comments in the evenings.

Positive Question Suggestion (PQS) Protocol

Building a learning community requires trust, respect, and caring. With these values in mind, I have adapted [Richard Koch](#)'s "PQS Protocol" as a guide for providing meaningful and supportive feedback to each other on our scholarly work. Dr. Koch explained, "Research clarifies that response is more helpful to the writer [or producer of a piece of scholarly work] when we listen to understand and appreciate."

Throughout this course, we will develop several artifacts of our scholarship - e.g., reflections, free writing, discussions, annotations, content design and development, and other media. We will share our work with each other for feedback to grow our thinking and learning. Much like our learning, our work is never truly 'done,' so we will consider the pieces we share "works-in- progress" that can be further refined through community

reflection. In responding to someone's work, we will follow this PQS pattern:

1. **Positive Response:** If we "listen" fully to the work offered, we can find wisdom within. For example, consider the following questions:
   - What do you remember best from this work?
   - What resonated with you most from this work, and why?
   - What is most interesting to you about this piece?

2. **Questions:** Through our spirit of curiosity, we can offer our peers new questions to grapple with in their inquiry process. For example, consider the following:
   - What are you curious about in the topic of this work?
   - What are you confused about?
   - What would you like to know?

3. **Suggestions:** We can offer our wisdom to support the learning journey of our peers. Based on what you think is the purpose of the work, consider offering one or two suggestions, especially for what could be:
   - **Added** to the piece - Does it need a new section, or is there a part that the writer or producer should expand?
   - **Taken** out of the piece - Is a part unnecessary or repeated?
   - **Changed** in the piece – Can a part be revised with a recommended approach to improve it?

Final Grade

My primary goals for this course are that you maintain a genuine curiosity about the course materials and activities and grow your critical thinking and scholarship on topics related to online pedagogy and praxis. I hope that you focus on learning rather than the final grade.

To assuage some of this grade anxiety and also in acknowledgment of the market value of grades, I offer a minimum final grade of 'C' and Revision to all learners who complete all the course discussions and activities. Revision means that you can revise your contributions based on your peers' and course facilitator's meaningful feedback. Finally, we ask that you communicate with the course facilitator about any challenges you might experience in the course. No one will be penalized for life circumstances that lead to delayed or missed submissions in this course.

University Policies

Students in this course will be expected to comply with the [University of Pittsburgh's Policy on Academic Integrity](). Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include but is not limited to confiscating the examination of any individual suspected of

violating University Policy. Furthermore, no student may bring unauthorized materials to an exam, including dictionaries and programmable calculators.

To learn more about Academic Integrity, visit the [Academic Integrity Guide](#) for an overview. For hands-on practice, complete the [Understanding and Avoiding Plagiarism tutorial](#).

Attendance and Observance of Religious Holidays

Pitt guidelines on class attendance and observance of religious holidays:

- "The observance of religious holidays (activities observed by a religious group of which a student is a member) and cultural practices are an important reflection of diversity. As your instructors, we are committed to providing equivalent educational opportunities to students of all belief systems. At the beginning of the semester, you should review the course requirements to identify foreseeable conflicts with assignments, exams, or other required attendance. If at all possible, please contact us (your course coordinator/s) within the first two weeks of the first-class meeting to allow time for us to discuss and make fair and reasonable adjustments to the schedule and/or tasks." From Faculty Assembly, December 2020.

- We interpret this language to apply to cultural and spiritual observances, feasts, dances, ceremonies, etc., not covered by colonial notions of religion and/or culture. Please notify your professor in advance of any anticipated absences related to the guidelines.

Equity and Diversity

The course aligns with the School of Education's mission to ignite learning and deliver a respective, inclusive, and equitable learning experience. We behave professionally, and we communicate mindfully while feeling free to share contrasting viewpoints and ideas. We create an open learning environment for students from diverse backgrounds and perspectives. The diversity denoted by the intersections of race, gender, disability, sexuality, age, socioeconomic status, ethnicity, and culture that we all bring to this course is advantageous in serving as a strength and resource in our learning community.

"As the course instructor, I am committed to pedagogy that is anti-racist, non-sexist, non-classist, non-heterosexist, and non-gender-normative. This includes fostering an environment that is as safe and inclusive as possible. [We] intend to name and correct any actions on [our] part that fall short of these commitments as best as possible.

The University of Pittsburgh prohibits and will not engage in discrimination or harassment based on race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, disability, or status as a disabled veteran. The University is committed to creating a learning environment that is inclusive of all races, genders,

socioeconomic statuses, religions, sexual orientations, nationalities, and languages." (Roop, L., 2020).

In particular, we are committed to including the voices of minoritized groups in this class, including those of womxn and other people of color, transgender people, LGBTQIA+ people, non-Christian people, non-US citizens, and those who speak multiple languages. If you feel uncomfortable due to your social identities and background or how they are perceived, please let us know. If you do not feel comfortable talking with the instructors, you can contact
  the Office of Equity, Diversity, and Inclusion.

Preferred Names and Pronouns: You can use the NameCoach feature in Canvas to indicate your preferred pronoun. You can Use NameCoach with Canvas to add your pronouns.

Broader Use of Generative Artificial Intelligence Encouraged with Specific Guidelines

The use of Generative AI tools, including ChatGPT, is encouraged/permitted in this course for students who wish to use them. You may choose to use AI tools to help brainstorm assignments or projects or to revise existing work you have written. However, to adhere to scholarly values, students must cite any AI-generated material that informed their work (this includes in-text citations and/or use of quotations, and in your reference list). Using an AI tool to generate content without proper attribution qualifies as academic dishonesty. The University of Pittsburgh offers a plethora of information and resources on generative. You may explore them by visiting these web pages:

- Generative AI Resources for Faculty
- AI and the Teaching of Writing - More on ChatGPT

Disability Services

Pitt required syllabus statement: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructors and the Office of Disability Resources and Services, 140 William Pitt Union, at 412-648-7890 or 412-383- 7355 (TTY) as early as possible, but no later than the fourth week of the term or visit the Office of Disability Resources and Services website as early as possible, but no later than the 4th week of the term. The DRS will work with you to provide accommodations.

Please let us know if you need resources or accommodations to complete this course. You may also seek campus-wide support, information, and/or services such as Disability Accommodations.

NOTE: We recognize that while institutional resources can be useful and important support, interacting with the university can at times be experienced as an invasion of privacy or a

source of distress. If you are uncomfortable interacting with the university, please feel free to communicate with us directly about what would be helpful to your learning and participating in the community of the course (Source: Sabina Vaught). Please review the following resources:

- [University of Pittsburgh Non-Discrimination Policy](#)
- Pitt single-occupancy restroom map and information:
  https://www.studentaffairs.pitt.edu/lgbtqia/single-occupancy-restrooms/

Accessibility

Canvas is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Learn more about the [Canvas accessibility statement.](#)

Sexual Harassment

The University of Pittsburgh is committed to maintaining a community free from all forms of sexual harassment. Sexual harassment violates University policy as well as state, federal, and local laws. It is neither permitted nor condoned. It is also a violation of the University of Pittsburgh's policy against sexual harassment for any employee or student at the University of Pittsburgh to attempt in any way to retaliate against a person who makes a claim of sexual harassment. Any individual who, after thorough investigation and an informal or formal hearing, is found to have violated the University's policy against sexual harassment will be subject to disciplinary action, including, but not limited to, reprimand, suspension, termination, or expulsion. Any disciplinary action taken will depend upon the severity of the offense. For more information, see the [Policies and Guidelines](#) website.

Copyright Notice

These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibits unauthorized duplication or retransmission of course materials. See [Library of Congress Copyright Office](#) and the [University Copyright Policy](#).

Additional University and Pittsburgh Committee Resources

- **Education Library Guide:** See this [Hillman Library customized libguide](#) a gateway to education students and faculty resources.

- **Emergencies:** Do you have Pitt Police saved on your mobile phone? 911 works, or Pitt Police, 412-624-2121.

- **Catalogs**: The University Catalogs have comprehensive information about policies, programs, and courses. There are University-level policies and policies specific to the School of Education. Bookmark these links and review these documents periodically. [Pittsburgh Campus Graduate and Professional Studies](#).

- **Student Mental Health:** Resources to support student mental health and wellness are available here at Pitt: Counseling Center, in the Wellness Center in Nordenberg Hall: https://www.studentaffairs.pitt.edu/cc/ or Call 412-648-7930, any time.

- **Sexual Assault Response**: Contact Pittsburgh Action Against Rape: 24-hour crisis intervention, counseling, and advocacy for victims of sexual assault Phone: 1-866-363- 7273 . Website: Home - [PAAR.](#)

- **Racial violence, discrimination, harassment, etc**: You can access resources and contact at the [Pitt diversity website](#).

- **Care and Resource Support Team (CARS):** Email pittcares@pitt.edu or see: http://www.studentaffairs.pitt.edu/cars/

- **Basic Needs Security**: Some students are unable to afford groceries or access sufficient food to eat every day. Some students lack a safe and stable place to live. Some students experience challenges in balancing school with paid work, childcare, and other family obligations. Those challenges can create considerable anxiety for students and may also affect students' performance in their courses. Students experiencing those challenges as urged to contact the Assistant Dean of Student Engagement, Dr. Andrea Zito (email: andreaz@pitt.edu and phone: 412-648-1780). If you are experiencing challenges with food, housing, work, and/or family obligations, are also encouraged to let your instructors know if you are comfortable in doing so. This will enable us to assist you in accessing support. In addition, the University maintains a student food pantry and a resource guide compiled by the University Library System with food, housing, health, employment, health, and other resources:
  - [Pitt Food Pantry](#)
  - [Pitt and Community Assistance Resource Guide](#)
  - [Access the Greater Pittsburgh Community Foodbank](#)
  - [Pitt Pregnant and Parenting Students](#)

  NOTE: The current Pitt language appears to reflect antiquated gender binary and heteronormative frameworks. It also focuses on harassment. Should you be adopting, fostering, or otherwise significantly shifting your dependent care demands, or should you be a student whose gender is not clearly covered by the policy and is pregnant, etc., and would like accommodations, please let us know as soon as possible so we can work together to establish a fair, respectful, and supportive plan (Source: Sabina Vaught)

A lack of a safe and stable place to live can find (Source: Chris Wright)

Affordable housing assistance:

- **Action Housing**: 611 William Penn Place, Suite 800; Pittsburgh, PA 15219 Phone: 412- 281-2102. Assists in locating affordable housing
- **Allegheny County Housing Authority**: 625 Stanwix Street, 12th floor; Pittsburgh, PA 15222 Phone: 412-355-8940. Assists in locating affordable housing

Shelter options:

- **Allegheny County Bureau of Hunger and Housing Services Phone**: 412-350-4354 This is an area homeless resource.
- **East End Cooperative Ministry**: 6140 Station Street; Pittsburgh, PA 15206 Phone: 412- 361-5549. This emergency shelter provides a refuge for the night, case management, breakfast, dinner, shower, and laundry services for men and women older than 18. Individuals can stay in the Emergency Shelter for up to 60 days.

 Note: Please help us by suggesting additional resources
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