**Graduate School of Education – Graduate Teacher Education Program**

***ITP 524 – Secondary Mathematics Methods - Fall 2022***

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| **Instructor:** | Torrey Kulow, PhD |
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| **Phone:** | 339-222-2261 (cell) |
| **Office/Hours:** | By appointment |
| **Class Dates & Time:** | Wednesdays from 4:40-7:40pm + 10 hours (online module) |
| **Class Location:** | Vanport Building Room 262 |
| **Section/CRN:** | ITP 524-001/CRN 11603 |
| **Credits:** | Four (4) |
| **Class Google Site:** | https://sites.google.com/pdx.edu/itp-524-2022-23/home |
| **Class Zoom (if needed):** | https://pdx.zoom.us/j/85400463929 |

**HONORING AND ACKNOWLEDGING THE LAND AND ITS PEOPLES**

*We would like to acknowledge the people whose land we are standing on today, the Multnomah and Clackamas Peoples. It is important to acknowledge the ancestors of this place and to recognize that we are here because of the sacrifices they were forced to make. In remembering the Multnomah and Clackamas communities we honor their memory, their lives, and their descendants. We also remember that we are guests of this land and m/.ust do our best to never forget its original inhabitants.*

**UDL Statement**

This course is designed to be welcoming to, accessible to, and usable by everyone, including students who are English-language learners, have a variety of learning styles, have disabilities, or are new to online learning. Be sure to let instructors know immediately if you encounter a required element or resource in the course that is not accessible to you. Also, let me know about changes I can make to the course so that it is more welcoming to, accessible to, or usable by students who take this course in the future. (Adapted from Sheryl Burgstahler, Ph.D., DO-IT Director.)

**Disability Access Information**

*If you require accommodations (e.g., special seating, an interpreter or note-taker, etc.), please inform your instructor immediately. Students with disabilities should register with the PSU Disability Resource Center (503-725-4150; TTY or Relay 503-725-4178) to document the need for accommodations and obtain support services. Your instructor will work with you to arrange the supports you need in this class.*

**Classroom Culture**

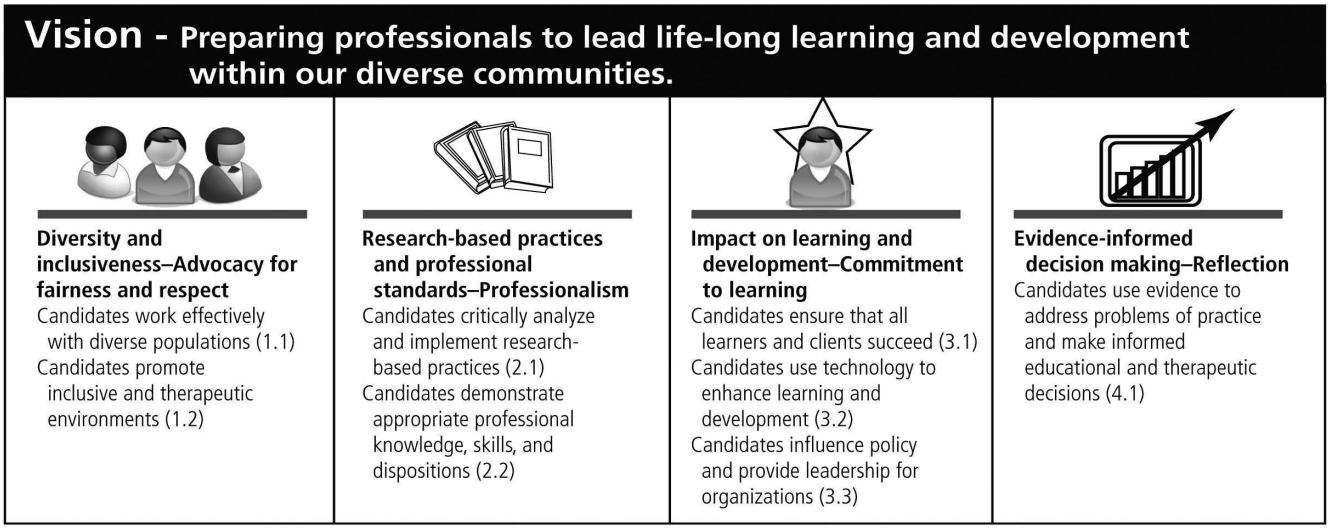
*Name and Pronouns:* Class rosters are generally provided to Instructors with students' legal names. However, I am happy to honor your request to address you by your preferred name and gender pronouns. Please advise me of this preference as soon as possible so that I may ensure your preferences are honored in this space. If you need support related to this, know that the PSU Queer Resource Center can provide advocacy in ensuring that all of your instructors abide by your requests.

*Classroom Demeanor and Courtesy:* Teacher candidates will be challenged to think critically about the impact of cultural differences, which may include gender, race, socioeconomic status, physical and

cognitive ability, sexuality and other forms of diversity. TCs are expected to actively participate in discussions by asking difficult questions and sharing comments. Because we may not share the same opinions on different topics in this class, it is important that we remember to respect the opinions and ideas of others, show courtesy for all members of this class at all times and use people first language when talking or writing about individuals with differences.

*Beliefs about Teaching and Learning:* As educators, we must enter into teaching with the assumption that all children are capable of learning and that all children deserve access to a high-quality education. We are an essential component to providing an equitable and humanitarian education to all learners, regardless of who they are or from where they come. To this end, our conversations about students must hold forth our values of humanity. Any disagreements about *how* to teach all students are worthwhile and need to be conducted in a manner that is respectful of our professional and personal differences in opinion and experience. What we all can agree on, though, is our commitment to valuing all learners as humans who deserve our love and care as we provide them with the emancipatory education all people deserve.

## GSE CONCEPTUAL FRAMEWORK




## COURSE DESCRIPTION & ESSENTIAL QUESTIONS

**Course Introduction**

The activities and assignments in this course are designed to motivate you to develop a point of view about mathematics teaching and learning. Your field experience will provide you with opportunities to use what you are learning with students in your classroom. The schools where you are a guest have developed a point of view about the learning and teaching of mathematics. Therefore, *you may be confronted with different points of view about teaching and learning that you will need to consider.* This is normal and will always be part of your development as a professional.

**Course Description**

Issues and methods in selecting and organizing materials for instruction in middle level and high mathematics education. Examines a variety of professional resources available to support learning. Introduces research-based instructional practices and lesson/unit planning. Situates teaching, learning, and assessment within the context of state and national standards.

**Course Essential Questions**

The overarching goal of this course is to provide teacher candidates with skills and knowledge to support them in teaching mathematics. Here are some of the questions we will grapple with:

- *Why am I teaching mathematics?*
- *What is the purpose of math education?*
- *What is my position in my classroom, school, and wider community?*
- *What do my students bring to class (e.g., knowledge – math or otherwise, social skills, experiences, interests)?*
- *How can I solicit, follow, and represent the explanations that my students give when solving problems?*
- *What is the math goal for my lesson (or unit) and how can I develop worthwhile math problems and assessments for that math goal?*
- *How can I meet the individual needs of each student and class?*

## COURSE THEMES, ACTIVITIES, AND ASSIGNMENTS

Our course is organized around three core themes:

1. *To articulate and engage our principles and practices about mathematics education*
2. *To explore how community and place relate to mathematics education*
3. *To articulate, examine, and refine our mathematics principles and practices*

These themes will be integrated throughout the activities and assignments given during the term to provide teachers multiple opportunities to synthesize and engage their developing understanding and practice of mathematics education. Additional information about the activities and assignments will be provided online.

## COURSE GOALS, STANDARDS, AND ASSESSMENTS

The general goals for the course are listed below. It is important to note that these goals are developed over a professional career. In one term, one can only lay the foundation for this development. However, the strength of that foundation is directly related to your commitment and effort to accomplish such goals. Specifically, it is expected that through this course you will begin to:

| COURSE GOALS | STANDARDS | ASSESSMENTS |
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| Deepen your understanding of how students learn mathematics and how a teacher can facilitate the mathematical growth and development of *all* students through creating an environment that supports individual and collaborative learning. | MTC: Ia-f, IIa-e, IIIa<br>InTASC: 3a, 3c, 3h, 3r, 3q, 8p<br>CF: 1.1, 1.2, 3.1<br>ELL: 3c | ● Course Readings and Activities<br>● Student Identity & Assets Project<br>● Equitable Participation Project Part 1 |
| Expand your mathematical understanding, your views regarding the nature of mathematics and mathematical activity, and develop teaching strategies which can facilitate students' mathematical thinking and understanding (e.g., identifying mathematical tasks that use multiple tools and representations to foster students' conceptual growth; observing and listening to students as they work individually and collaboratively; asking questions to assess and advance students' mathematical understandings; and orchestrating whole-class discussions of students' solutions in order to make salient key mathematical ideas, processes, and strategies). | MTC: Ia-f, IIa-e, IIIb-f<br>InTASC: 4a, 4d-f, 4j, 4k, 4n, 4o, 8d-f, 8i<br>CF: 2.2, 4.1<br>ELL: 3c | ● Course Readings and Activities<br>● Student Identity & Assets Project<br>● Equitable Participation Project Part 1<br>● Lesson Planning and Task Analysis Module |
| Develop methods of assessing student learning in mathematics that provide a multi-faceted portrait of what students understand and can do, and what they do not, and of using this assessment to guide your creation of an environment conducive to the students' learning of mathematics. | MTC: IIIf<br>InTASC: 6f, 6g, 6m, 6r<br>CF: 2.2, 4.1<br>ELL: 3c | ● Course Readings and Activities<br>● Student Identity & Assets Project |
| Plan instruction that supports each student's progress toward learning goals by drawing upon knowledge of content, curriculum, pedagogy, as well as knowledge of students and the community context. | InTASC: 7a, 7b, 7g, 7i, 7j, 8a, 8p<br>CF: 1.1, 3.1<br>ELL: 3c | ● Lesson Planning and Task Analysis Module |
| Recognize and appreciate the value of collaboration through your interactions in the course and begin to see yourself as part of a larger community of mathematics educators who are involved in creating learning environments for students that emphasize thinking, reasoning, problem solving, and the communication of mathematical ideas. | InTASC: 10b, 10c, 10f, 10q, 10r<br>CF: 2.1, 2.2, 3.3 | ● Course Readings and Activities |

## FALL TERM COURSE REQUIREMENTS

**General Description of Preparation, Participation, and Professionalism:**
This course will be conducted as a workshop; your punctual attendance and integrity to our community (e.g., in preparedness, in group work) is crucial to not only your personal success, but also the success of your classmates. Please come on time, ready to fully participate: to discuss homework, question, ponder, explore, and interact demonstrating critical, analytical and reflective processes. Given the participatory nature of learning and this course, attendance for all class sessions is required. If you find that you must miss a class, please notify Torrey before class begins and arrange with a classmate to take notes and collect copies of any handouts for you.

During every class session we will share and discuss aspects of our instruction. The homework for each class session will often require you to complete both a reading assignment as well as a field-based assignment in your field experience placement. In addition to reading the required articles you are expected to take notes about the reading (which Torrey will specify in the weekly homework email) that you will put in your personal folder, this way if Torrey needs to check at any point there will be evidence of the notes taken and the readings being done. Feedback will not be given on regular occasions for notes. Since our in-class activities are based on the weekly homework assignment it is vital that you come to class with the assignment completed and ready to share. Late work may be accepted (up to instructor discretion) but may not receive full credit. See additional information in the "Attendance, Tardiness, Participation & Professionalism" section on page 8 of the University and Course Policies.

You will submit (upload) all of your assignments directly to your personal folder. Assignments are due on or before the dates listed below, *before class*, unless otherwise indicated. (See late assignment policy on page 8.) Early submissions are very much appreciated. The list of weekly topics, class agendas and activities, and assignments due can be found on the Tentative Course Calendar.

**Specific Course Assignments:**

1. **1-1 Check-in Meetings with Torrey (for 30 mins)** **10 points**

   **DUE:** November 3 to 15 **Student Identity and Assets Project**
   December 2 to 10 **Lesson Planning and Task Analysis Module**

   This term you will meet 1-1 with Torrey two times to share and discuss your ongoing learning related to our course topics and assignments. The first meeting (which you will schedule some time from November 3 to 15) will focus on your work on the Student Identity and Assets Project (see description below). The second meeting (which you will schedule some time from December 2 to 10) will focus on your work on the Lesson Planning and Task Analysis Module (see description below).

2. **Student Identity and Assets Project** **15 points**
   **DUE (in class):** October 12 - classroom survey, October 26 - community walk, November 9 - student interview
   **MEET TO DISCUSS WITH TORREY:** November 3-15 (schedule 30-minute 1-on-1 meeting)

   For this assignment, you will learn about your students' identities as well as their personal, cultural, and community assets. First, you will give a classroom survey. Second, you will do a community

walk. Third, you will interview a student. Additional details about each part will be provided in class and online. Here are more details about each of these activities.

Classroom Survey (due October 12): For this activity, create a survey to gather information about all of the students in at least one class period. During our first class session of the term, we will identify a variety of things that we are interested in finding out about our students to assist you in selecting what information you will collect. You may also want to look at these questions about student assets from the TEACH Math Project and the Math Identity survey. **Your survey should include questions about how your students perceive mathematics as "sensible, useful, and worthwhile", persist in applying mathematics to solve problems, and believe in their own ability to learn mathematics.**

Community Walk (due October 26): For this activity, you will do a physical "community walk" through places/spaces near your school. As you "travel", record your observations and collect artifacts about such things as the geographic setting (e.g., building design and costs, quality of homes, natural features), types and quantities of businesses (e.g., restaurants, grocery, goods, services, local stores, chain stores), community spaces and resources (e.g., community centers, parks, churches, food banks, public transportation), and other features that you think are notable given your subject-area. Here is an example created for math teachers.

Student Interview (due November 9): For this activity (based on the TEACH Math "Case Study" Module), you will select one student from your practicum classroom who is different from you in one or more socio-cultural ways (i.e., race, socio-economic status, home language; do not select ONLY on the basis of difference in gender) AND who seems to you to struggle at least somewhat with mathematics. The interview should last approximately 20-30 minutes. The purpose of the interview is to: (1) find out more about the student including student interests, activities the student engages in outside of school, and what the student identifies as activities for which the student excels, (2) identify places, locations, and activities in the community that are familiar to children, and to find out what the student knows about potential mathematical activity in those settings, and (3) find out more about the students' ideas, attitudes and/or dispositions towards mathematics and their experiences in your math class.

Meeting with Torrey (November 3-15): During your 1-1 meeting with Torrey you will share what you learned about your students' identities and (persona, cultural, community) assets after doing these activities (considering your own personal identity and mathography) as well as what you learned about yourself in the process.

3. **Equitable Participation Project Part 1** **15 points**
**DUE DATES (in class):** November 2 (start of class) - Use the protocol 2 times, November 30 (start of class) - Use the protocol 1-2 additional times

The "Equitable Participation" Projects that we will do each term aim to have you identify and enact new ways of engaging ALL of your students in participating in your class/lessons by validating and leveraging their assets (i.e., "brilliance"). This term, you will gather information about how your students participate in your class/lessons. To do this, you will use the Co-Noticing Patterns of Student Participation Protocol 1 3-4 times this term with another teacher in your classroom. More details about this assignment will be provided in class and on our course website.

4. **Lesson Planning and Task Analysis Module** **15 points**
**DUE:** November 30 (start of class)
**MEET TO DISCUSS WITH TORREY:** December 2 - 10

For this project you will create a lesson plan and lesson materials for a lesson that you taught or plan to teach this term and describe how your lesson includes the criteria for lesson plans and "worthwhile" math problems provided in our class and reflects our additional course content. This project contains the three parts (see description below). More details about this assignment will be provided in class and on our course website.

Part 1 - Learning about Lesson Planning and Task Analysis (suggested due date November 15): For this part of the project, you will learn about lesson planning and characteristics of "worthwhile" math tasks:)

Part 2: Prepare a Lesson (due November 30): For this part of the project, you will prepare a lesson for your class. This includes writing a lesson plan and doing an analysis of the math problems/tasks in your lesson.

Part 3 - Meet with Torrey to Discuss my Lesson (schedule a time from December 2 - 10): For this part of the project, you will meet 1-1 with Torrey for 30 minutes to talk about your lesson, including how it incorporates and reflects the criteria for lesson plans and "worthwhile" tasks provided in our class as well as how it incorporates and reflects our additional course content for this term.

**5. Additional Class Preparation, Participation, and Professionalism 45 points**
**DUE: Ongoing**

This includes the additional class activities and assignments (e.g., Mathography, Math Lessons) other than things listed above.

Mathography: For this component of the project you will select four mathematical events from your life that are significant when thinking about your relationship with and understanding of mathematics and mathematics education. The events can have occurred in- or out-of-school. You will create an entry for each event on an 8.5" x 11" piece of paper illustrating and representing (with words, images, and/or whatever means you feel appropriate) the event and how this event shaped your relationship with and understanding of mathematics and/or mathematics education. You will share your four timeline entries during class on October 19. Additional details about each part will be provided in class and online. Have fun creating these entries:)

Math Lessons: During half of our class sessions this term, Torrey will lead a math lesson to engage you as a math learner:)

## COURSE ASSESSMENT & EVALUATION

Information about your course grade will be posted to your Canvas account.

**Grading Percentages**
There is a percentage earned for each component of the class, which together will form the cumulative final grade. Earning less than 80 percent is considered below-graduate standard and is an indicator of unsatisfactory performance in the course. Courses graded 'C' or below may not be used to satisfy Masters degree requirements.

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| **100 – 93%** | **A** | **87 – 89%** | **B+** | **77 – 79%** | **C+** | **60 – 69%** | **D** |

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| **90 – 92%** | **A-** | **83 – 86%** | **B** | **74 – 76%** | **C** | **59% or below** **F** |
| | | **80 – 82%** | **B-** | **70 – 73%** | **C-** | |

**Criteria for Assessment**
This course approaches assessment holistically, and assigns grades based upon a combination of factors, including:

- In-class discussions
- Completion of assignments and activities both in and outside of class
- Engagement with and reference to course readings
- Active connections to pedagogy and practices and mathematics education
- Representation of your own voice, experience, and expertise.

Note that all written assignments will be graded on content, fluency and cohesiveness (please use proper citations, e.g., APA style); feel free to visit the Writing Center webpage (https://www.pdx.edu/writing-center/) for helpful information and services.

**Assignment Weights**
While assessment is holistic, the following assignment weights will determine course grades:

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| 1-1 Check-in Meetings with Torrey | 10% |
| Student Identity and Assets Project | 15% |
| Equitable Participation Project | 15% |
| Lesson Planning and Task Analysis Module | 15% |
| Additional Class Preparation, Participation, and Professionalism | 45% |

## INSTRUCTOR RESPONSIBILITIES

- Come prepared to each class with planned instructional activities, which model best practices and engage students in a learning process that will facilitate their effectiveness as teachers
- Facilitate class activities, being prepared to challenge assumptions, listen and raise questions, and provoke critical thinking and discourse
- Accommodate/address specific needs and legitimate concerns
- Be available throughout the term to meet with students as needed
- Provide and facilitate feedback to students on their written work
- Keep students informed in a timely manner regarding modifications to assignments and criteria for assessment
- Return email or phone calls within two days

## COURSE AND UNIVERSITY POLICIES

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| **Title IX Reporting Obligations** | As instructor, one of our responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Please be aware that as a faculty member, I have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals. For more information about Title IX please complete the required student module Creating a Safe Campus in |

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| | D2L. |
| **Safe Campus** | Portland State University desires to create a **safe campus** for our students. As part of that mission, PSU requires all students to take the learning module entitled *Creating a Safe Campus: Preventing Gender Discrimination, Sexual Harassment, Sexual Misconduct and Sexual Assault*. [See http://www.pdx.edu/sexual-assault/safe-campus-module. If you or someone you know has been harassed or assaulted, you can find the appropriate resources on PSU's Enrollment Management & Student Affairs: Sexual Prevention & Response website at http://www.pdx.edu/sexual-assault.] The **Campus Safety Escort Service** is safe, easy, and free to use for students, staff, faculty and anyone else who needs a safety escort 24/7. Two ways to get a safety escort are: (1) Call the Campus Public Safety at **503-725-4407** (non-emergency phone); or (2) Stop by Campus Public Safety located on Broadway & Montgomery to request a safety escort in person. *In an emergency, please call Campus Public Safety at* **503-725-4404.** |
| **Academic Integrity & Student Conduct Code** | **Academic integrity** is a cornerstone of any meaningful education and a reflection of each student's maturity and integrity. The Student Code of Conduct, which applies to all students, prohibits all forms of academic misconduct, fraud, and dishonesty. These acts include, but are not limited to: plagiarism, buying and selling of course assignments and research papers, performing academic assignments (including tests and examinations) for other persons, unauthorized collaboration, disclosure and receipt of academic information, and other practices commonly understood to be academic misconduct. [See http://pdx.smartcatalogiq.com/en/2016-2017/Bulletin/Student-Policies-and-Guidelines/Student-Conduct/Academic-integrity; https://www.pdx.edu/dos/psu-student-code-conduct#ProscribedPS.] |
| **Attendance, Tardiness, Participation & Professionalism** | **Attendance & Tardiness:** Participation is a critical component of this course; you are expected to attend all class sessions. You are expected to be in class on time and to honor the importance of making good use of class time. If an absence is unavoidable, it is your responsibility to contact the instructor prior to the start of class. It is also your responsibility to arrange for any missing work as a result of unexpected absences. It is recommended that you identify other members in the class that you can use as a resource for class notes and assignments in the event of an absence. **The attendance policy for this class is that candidates are permitted one absence (two counts of tardiness equals one absence). Candidates will then lose 10% of their final grade for each additional absence (for each count of tardiness, candidates will then lose 5% of their final grade). Participation & Professionalism:** Complete all course readings and come prepared for discussions. Preparation is based on your own learning needs including notes, graphic organizers, annotations—whatever process works for you. However, your process needs to be visible to the instructor and brought to class each week (verbal, electronic or hard copy). **Professionalism:** You are expected to exhibit a professional attitude —one that shows eagerness to learn as well as respect and support for others. Professionalism extends to the quality of writing and seriousness of discourse. |

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| **Classroom Demeanor and Courtesy** | For the learning and comfort of all, please turn off or mute cell phones during class. Laptop use should be limited to note taking and research. Also, please limit side conversations while others are speaking and be respectful listeners. Because students may not share the same opinions on different topics on this class, it is important that we remember to *honor the opinions and ideas of others.* We expect all students to show *respect and courtesy* for all members of this class at all times. [See GSE's Behavior and Performance Guidelines at http://www.pdx.edu/sites/www.pdx.edu.education/files/gse_handbook_student_conduct.pdf.] |
| **FERPA *Maintaining Student Confidentiality*** | **FERPA** guidelines apply in K-12 settings where Teacher Candidates learn about students' academic and personal history and use this information to improve their teaching practice. It is important for TCs to maintain the privacy of the educational records of their K-12 students and to limit sharing student personal identifiers to only those persons who have a *legitimate educational interest*. Please refer to the D2L Module *FERPA for Teacher Candidates* and the *edTPA for Teacher Candidates* website for more information. |
| **FERPA *Returning Student Work*** | Due to **FERPA** guidelines, instructors must return student work directly to each TC (either face to face or via electronic or US mail). If students want a hard copy of their work mailed, they must provide a stamped, self-addressed envelope large enough to hold the assignments to be returned. |
| **Incomplete Policy** | You do not have a right to receive or demand an Incomplete grade. The option of assigning an Incomplete grade is at the discretion of the instructor when the following eligibility criteria are met.<br>1. Required satisfactory course completion/participation.<br>2. Reasonable justification for the request.<br>3. Incomplete grade is not a substitute for a poor grade.<br>4. Written agreement. (See Incomplete Contract.)<br>5. Resolving the Incomplete.<br>[For the full **Incomplete Policy**, see http://pdx.smartcatalogiq.com/en/2016-2017/Bulletin/Graduate-Studies/Enrollment/Incompletes] |
| **Late Assignments** | All work is due at the start of class on the dates assigned. **Homework assignments discussed in class on the due date *will not be accepted late and will receive zero (0) credit if not completed.***<br>**Main course assignments (Student Identity and Assets Project, Equitable Participation Project Part 1, and Lesson Planning and Task Analysis Module) turned in late will have 10% of the total points deducted per week (i.e., an assignment turned in 1 day - 7 days late will receive at most 90% of the total point total, an assignment turned in 8 days - 14 days late will receive at most 80% of the total point total, an assignment turned in 15 days - 21 days late will receive at most 70% of the total point total).** Please be diligent about turning work in on time. If you are having difficulties that prevent you from turning something in on time, it is your responsibility to contact the instructor about it prior to the due date and an alternative deadline might be determined by the teacher candidate and instructor. |

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| **Student Health Insurance** | PSU provides students taking 5 or more inload, non self-support credits per term (1 credit for international students) with the mandatory PSU/Aetna **Student Health Insurance** Plan. [See http://www.pdx.edu/shac/insuranceplan.]<br>Students may waive the insurance but must provide proof of enrollment in a comparable insurance policy offered through another company. Students only need to waive out once per academic year. All eligible students will be charged for *insurance unless they waive out* by the waiver application deadline, the second Sunday of each term.<br>[See http://www.pdx.edu/shac/insurancewaiver for specific information and directions about waiving the health insurance, and a link to the online waiver application.<br>For more information, contact insurancehelp@pdx.edu.] |
| **LGBTQIA+ Resolution Statement** | As part of its commitment to social justice and human dignity, the Curriculum and Instruction Department demonstrates **LGBTQIA+ advocacy** through inclusive policies and practices that are both intentionally proactive and strategically responsive. |