

# ASSESSMENT OF STUDENT LEARNING FOR MATHEMATICS TEACHERS

MATH 322 | WINTER QUARTER 2014

## **INSTRUCTOR:**

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## **COURSE DESCRIPTION:**

In this course mathematics teaching candidates will learn how to plan and use assessment of student learning to guide instruction, give feedback to students, and improve their teaching. Candidates will create assessment activities aligned to the Common Core State Standards in Mathematics and student needs. Finally, candidates will learn how to develop and implement an assessment systems that can be used to both measures student's mathematical performance and plan further instruction. The rubrics for these pedagogy activities are aligned with the Washington State TPA for secondary mathematics. The course work and assessment system complete the requirements for EFC 315 and EFC 330. Teacher candidates will show that they have met all the course requirements through completing the MATH 322 portion of the Teaching Mathematics Portfolio.

## **COURSE RATIONALE:**

Assessment is an important aspect of teaching and is emphasized early in the Secondary Mathematics Teaching program. Assessment practices along with mathematical proficiency are the foundation to all other mathematical pedagogy courses. It is important that future mathematics teachers be able to assess higher order thinking such as problem solving. Gail Burrill summarizes problem-based instruction in its simplest: Good teachers foster an environment in which the students do the work! This course will give teaching candidates both theory and practical classroom expertise in assessing all types of mathematical work. It is aligned with State Endorsement, CTL, and state WAC 18A-270 standards.

## **COURSE GOALS:**

- Teacher candidates will plan and use a standards-based assessment system to analyze student work, make inference on what students know and can do, and evaluate what feedback and further instruction student need to meet the learning targets.
- Teacher candidates will plan and use multiple formative and summative strategies to systematically analyze, make inferences, and evaluate instructional practices to guide further instruction and suggest changes to improve teaching effectiveness.
- Teachers will be able to plan and teach a learning segment aligned to the CCSSM that uses knowledge of student's needs and interests.
- Teacher candidates will demonstrate a basics knowledge of assessment concepts, procedures, and systems.
- Complete the EFC 330 Handbook.

## **COURSE RESOURCES:**

**Course Textbook:** An Introduction to Student-Involved Assessment for Learning – Stiggins and Chappuis

## **Blackboard**

- Blackboard account with enrollment in MATH 322
- Blackboard is a Learning Management System, which we will use for our course. You can login to Blackboard at <http://courses.cwu.edu> Your username and your password are the same one you use for Novell/Safari. You are required to read the information provided in both the "Getting Started" page and the "Blackboard Support" page.

## **Software and Hardware**

- Livetext account and created Teaching Secondary Mathematics Portfolio.
- Documents in this course will be presented in .pdf. You will need Adobe Reader which you can obtain for free at <http://get.adobe.com/reader/>. Written assignments may be presented as a Microsoft Word document (.doc). If you do not have Microsoft Word, you can use Open Office Writer (free at <http://www.openoffice.org/>)

**COURSE OBJECTIVES:**

By the end of the course, teacher candidates will be able to:

Outcomes	Assessment	Standards
create a comprehensive assessment strategy to collect multiple assessment data aligned with standards and instruction.	(a) Case study video clip, small group, creation of learning segment assessment system. (b) Case study written lesson, individual, creation of lesson assessment system. (c) WA TPA Assessment Component - Rubric 6 of WA TPA-SM (Livetext Portfolio)	Standard V (WAC 181-78A-270) a(iii)
systematically analyze student work/data to identify error patterns in math content and language to make inferences about student achievement.	(a) Peer evaluation of Mathematics Tutoring Protocol (identify student misconception and support needs) (b) Case study written lesson, individual, analysis and inferences of student work. (c) WA TPA Assessment Component - Rubric 7 of WA TPA-SM (Livetext Portfolio)	Standard V (WAC 181-78A-270) (iii) and (vii)
evaluate student performance with respect to learning targets to provide feedback, further instruction, and intervention to support student learning.	(a) Peer evaluation of Mathematics Tutoring Protocol (implementing further instruction and intervention) (b) Case study video clip, small group, evaluation of what students can do and need to meet learning target. (c) WA TPA Assessment Component - Rubric 8 of WA TPA-SM (Livetext Portfolio)	Standard V (WAC 181-78A-270) (iii)
use student assessment data evaluate their teaching effectiveness.	(a) Case study video, individual, evaluation of what students can do and need to meet learning target. (b) Self, peer, and instructor evaluation of mini classroom teaching. (c) WA TPA Teaching Evaluation Component - Rubric 9 of WA TPA-SM (Artifact on Livetext Portfolio)	Standard V (WAC 181-78A-270) (iii)
create a learning segment aligned to the CCSSM that is developmentally appropriate and engaging.	(a) Case study video. group, planning and teaching a lesson (b) Self, peer, and instructor evaluation of practice lesson plan (c) WA TPA Planning Component - Rubric 1 of WA TPA-SM Artifact in Livetext Portfolio)	Standard V (WAC 181-78A-270) a(iii) and a(vi)
observe and participate under the guidance of a 6 - 12 grade mathematics teacher.	Candidates will follow and complete the EFC 330 handbook. (Artifact on Livetext Portfolio)	Standard V (WAC 181-78A-270) c(iii)
identify and explain the basic components of an assessment system.	(a) Quizzes and Tests (b) Blog assessment analyzing and evaluating assessment systems observed in video clips. (c) Creation of assessment system for planned and taught lesson (artifact on Livetext Portfolio)	Livetext Portfolio Rubric aligned with EFC 315
use best-practice assessment methods.	(a) Quizzes and Tests (b) Blog assessment analyzing and evaluating assessment systems observed in video clips (c) Livetext Assessment Artifact and Reflection	Livetext Portfolio Rubric aligned with EFC 315
analyze, use, and communicate assessment results.	(a) Quizzes and Tests (b) Blog assessment analyzing and evaluating assessment systems from journal and textbook examples. (c) Livetext Assessment Artifact and Reflection	Livetext Portfolio Rubric aligned with EFC 315

**ASSIGNMENTS AND EVALUATION GUIDELINES:**

The instructional and assessment strategies for this course are designed to enable your achievement of the course performance outcomes. The instructors will give you feedback to support progress in meeting performance outcomes.

<b>Assignment</b>	<b>Points</b>
Basics of Assessment for Learning (quizzes)	50
Assessment Documents (lesson plans, tests, worksheets, etc)	60
Professionalism	30
Tutoring and Teaching (documentation, reflection, and evaluation blog)	50
Analysis of student learning project	50
Lesson planning and teaching – WA TPA Reflection Assignments	70
Field Experience (EFC 330) – reflections (Blog)	30
Planning commentary – WA TPA Rubric (Livetext) formative assessment	20
Assessment commentary – WA TPA Rubric (Livetext) formative assessment	20
Teaching Evaluation (self, peer, and instructor)	30
MATH 322 portion of Teaching Mathematics Portfolio (Livetext)	100
<b>Total Points</b>	<b>510</b>

Candidates will be assigned tutoring/teaching positions after the first week. Candidates can expect to observe at first, tutor student with a specific protocol, and finally teach at least one lesson. Because we will be spending at least 60 hours out of class teaching in 6–12 classrooms and tutoring the course will meet 2 days a week (for approximately 1 hour each day) and 6 hour per week (6-12 classroom or tutoring). The exact days of field-experience will be worked out in advance or during the first week of class.

**Grading Scale**

93-100% = A, 90-93% = A-, 87-90% = B+, 83-87% = B, 80-83% = B-, 77-80% = C+, 73-77% = C, 70-73% = C-, 67-70% = D+, 63-67% = D, 60-63% = D-, 0-60% = F Please see the CWU Catalog for the eligibility for an incomplete (I).

**Performance Expectations**

All of the assignments and directions can be found in the Content menu of Blackboard. The first item in this menu is a movie and written description of how to complete these courses. This course is made up of seven lessons to be completed in order and then take the final exam. You can go as fast as you want but it is expected that you complete at least one lesson every two weeks to participate in the required journaling activities. If a course deadline was missed, assessment alternatives are left up to the discretion of the instructors.

**COURSE POLICIES:****Instructor Feedback/Communication**

I will be reading the Discussion Boards and replying to messages occasionally. You will receive specific feedback on your Syllabus Draft and your Course Syllabus in the form of electronic comments appended to your electronic submission. I will use the Announcements tool in Blackboard to communicate changes to the course and other course information.

**Suggestions for Success**

Take the responsibility for your own achievement of these performance objectives. You can get individual help by e-mail or in person in my office. If at any time you have trouble-using Blackboard or do not understand an assignment make sure to contact the instructor. Use the activities, assignments, assessments and people such as the instructor to insure that you understand the mathematical teaching concepts and can demonstrated this understanding in the form of the performance objectives.

**Student Feedback/Communication**

I welcome all feedback on the course. My preferred method of communication with individual students is via email. I am also available for office hours. If you experience a legitimate emergency (according to my standards) that will prevent you from completing required coursework on time, I expect you to communicate with me at the earliest reasonable opportunity. Please state the nature of the emergency, and when you expect to turn in the coursework.

**Submitting Electronic Files**

All electronic files must be submitted in .doc or .pdf format. If you do not have Microsoft Word, you can download Open Office Writer for free at <http://www.openoffice.org/>. This will allow you to open the instruction files, make changes and save in .doc or .pdf.

**Late and Uncompleted Work**

- If extenuating circumstances exist, contact instructor.
- All course assignments must be completed to pass the course.

**UNIVERSITY POLICIES:****Academic Integrity**

Academic Integrity is a standard set for this course. Students are expected to complete all of their coursework and assignments using their original words and ideas and will properly cite the words and ideas of others. Students are also expected to be honest in their interactions with the instructor. A student found to have not upheld these expectations is subject to failing this course and shall be subject to disciplinary action or sanction. The University catalog defines the term "academic dishonesty" in all its forms including, but not limited to:

- cheating on tests;
- copying from another student's test paper;
- using materials during a test not authorized by the person giving the test;
- collaboration with any other person during a test without authority;
- knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an unadministered test or information about an unadministered test;
- bribing any other person to obtain an unadministered test or information about an unadministered test; substitution for another student or permitting any other person to substitute for oneself to take a test;
- "plagiarism" which shall mean the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit;
- "collusion" which shall mean the unauthorized collaboration with any other person in preparing work offered for credit.

Documented incidences of Academic Dishonesty will be referred to Office of the Vice President of Student Affairs.

**Special Needs**

If you have a disability that may prevent you from meeting course requirements, contact the instructor immediately to file a Student Disability Statement and to develop an Accommodation Plan. Course requirements will not be waived but reasonable accommodations will be developed to help you meet the requirements. You are expected to work with the instructor and the CWU Disability Support Specialist to develop and implement a reasonable Accommodation Plan. For contact information at Center for Disability Services (CDS) please visit <http://www.cwu.edu/~dss/cms/>.