

# Course Syllabus

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## MATH 321 | Mathematics BA Capstone

Fall 2021

### General Information

**Class Time:** None Required (Course is Asynchronous) **Location:** Canvas

**Optional Workshop:** F, 9:00am – 9:50am

**Location:** Zoom

<https://cwu.zoom.us/j/83991683858?pwd=bIBhM08ycnlqN0hGY3B3T09qOW8rdz09>

[.\(https://cwu.zoom.us/j/83991683858?pwd=bIBhM08ycnlqN0hGY3B3T09qOW8rdz09\)](https://cwu.zoom.us/j/83991683858?pwd=bIBhM08ycnlqN0hGY3B3T09qOW8rdz09)

Meeting ID: 839 9168 3858

Passcode: 602635

*Instructor: Dr. Emilie Hancock (Please refer to me as Emilie or Dr. Hancock)*

**Office:** Samuelson 218C

**Phone:** 509.963.2402

**Email:** [emilie.hancock@cwu.edu](mailto:emilie.hancock@cwu.edu)

**Office Hours\*:** M - F 12-2pm and by appointment

\*Refer to the [course calendar](#) for any planned changes to office hours

Office hours held on Zoom: <https://cwu.zoom.us/j/84141825205?pwd=WUIHNUxIRGItS1kwMERwdiYrNINPZz09>

[.\(https://cwu.zoom.us/j/84141825205?pwd=WUIHNUxIRGItS1kwMERwdiYrNINPZz09\)](https://cwu.zoom.us/j/84141825205?pwd=WUIHNUxIRGItS1kwMERwdiYrNINPZz09)

**Meeting ID:** 841 4182 5205 **Passcode:** 549405

#### Required Materials

- **Textbook:** None.
- **Canvas Access:** I will update the course site on Canvas frequently with announcements, assignments, handouts, and due dates. Check Canvas daily.

#### Disability Support Services

Central Washington University is committed to creating a learning environment that meets the needs of its diverse student body. [Disability Services](#) [.\(https://www.cwu.edu/disability-services/\)](https://www.cwu.edu/disability-services/) serves students with permanent and temporary disabilities attending Central on the Ellensburg campus, online or at any of our eight University Centers. Their mission is to make university life accessible to students with disabilities. They work individually with students identifying barriers, and providing accommodations to ensure equal access. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations: Hogue Hall 126, 509.963.2214, [DS@cwu.edu](mailto:DS@cwu.edu). [.\(mailto:DS@cwu.edu\)](mailto:DS@cwu.edu)

### Course Description and Learning Objectives

Mathematics BA graduates must know a broad range of mathematical concepts and be fluent with numerous skills. This course will require teacher candidates to demonstrate conceptual knowledge and procedural proficiency using a variety of methods. This course will help you review the broad range of concepts and skills important to secondary mathematics teachers which will enable you to pass the [National Evaluation Series \(NES\) mathematics test](#) [.\(http://www.west.nesinc.com/TestView.aspx?f=HTML\\_FRAG/NT304\\_TestPage.html\)](http://www.west.nesinc.com/TestView.aspx?f=HTML_FRAG/NT304_TestPage.html). This is the official test to fulfill the content knowledge requirement for candidates seeking a mathematics endorsement (grades 5-12) and a Washington teaching certificate.

Major content topics of the course include:

Unit 1: Mathematical Processes and Number Sense

Unit 2: Patterns, Algebra, and Functions

Unit 3: Measurement and Geometry

Unit 4: Trigonometry and Calculus

## Unit 5: Statistics, Probability, and Discrete Mathematics

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

- Demonstrate proficiency in applying problem-solving skills to various mathematical domains.
- Reflect on understanding of the central concepts, tools of inquiry, and structures of the discipline.
- Integrate and apply knowledge of disciplinary content and pedagogical practice to create a plan for self-directed professional development.
- Showcase a creative synthesis of program work.

## Grading Scale and Method of Evaluation

Final letter grades will be determined based on your weighted percent grade, rounded to the nearest whole percent.

Letter Grade	F	D	D+	C-	C	C+	B-	B	B+	A-	A
Percent	0-59	60-66	67-69	70-72	73-76	77-79	80-82	83-86	87-89	90-92	93-100

Overall grades will be determined as a weighted average:

- 35% Competency Checkpoints
- 20% NES Study Record
- 35% Pass NES Practice Exam
- 10% Reflection on the Major

### *Competency Checkpoints*

There are 16 competencies tested by the NES Mathematics exam and reviewed in this course. For each competency you will complete a checkpoint quiz. You have 10 minutes to answer the five questions, which is the pace required to finish the NES exam. If you score at least 4 out of 5 on the quiz, you pass that competency and may progress onto the next competency. You only get one attempt at the quiz, but you can review the quiz and your responses as many times as you want.

If you do not score at least 4 out of 5, you will need to first review a knowledge and skills page and then pass a review quiz.

### *NES Study Record*

The most important step you must consistently do during this review course is record the questions you answer incorrectly and evaluate your understanding of the knowledge and skills required to answer the questions. I will provide an NES Study Record document for you to use for completing this course. After you take the diagnostic exam and quizzes throughout the course, complete a new row of the "Study Record" for any questions you answered incorrectly. This process ensures that you are identifying and reviewing the mathematics knowledge and skills you need.

### *Pass NES Practice Exam*

After you have completed all 16 competency checkpoints, review your NES Study Record and take the practice NES exam. You will have 2 hours to complete 75 questions on the sample NES Exam and must answer 55 questions correct. If you do not pass the practice NES exam, then record the questions you answered incorrectly on your NES Study Record and take the second practice NES exam.

### *Reflection on the Major*

You will be asked to reflect on your favorite/best assignment in the program, explain the Math BA and how you plan to use what you have learned in this major, and complete an end-of-program survey.

## Academic Honesty and Student Conduct

Consult university policies [CWUP 5-90-040\(25\)](http://www.cwu.edu/resources-reports/cwup-5-90-040-academic-and-general-regulations#Class%20Attendance%20and%20Participation), [CWUR 2-90-040\(24\)](http://www.cwu.edu/resources-reports/cwur-2-90-040-academic-and-general-regulations#Academic%20Dishonesty), and [WAC 106-125-020](https://apps.leg.wa.gov/WAC/default.aspx?cite=106-125-020) for student conduct, cheating, plagiarism, and other academic expectations. CWU's policies and recommendations for academic misconduct will be followed, leading to disciplinary action up to and including failing the course.

Central Washington University is committed to providing all community members with a learning and work environment that is free from sexual harassment and assault. Students have options for getting help if they have experienced sexual assault, relationship violence, and sexual harassment, or stalking. Information can be found at <http://www.cwu.edu/wecare> (<http://www.cwu.edu/wecare>) and in [CWUP 2-35-050](http://www.cwu.edu/resources-reports/cwup-2-35-equal-opportunity-policies-and-programs#Harassment) (<http://www.cwu.edu/resources-reports/cwup-2-35-equal-opportunity-policies-and-programs#Harassment>): Sexual Harassment. Faculty are required to report information regarding sexual misconduct or related crimes. Students may speak to someone confidentially by contacting the CWU Wellness Center, 509-963-3213, or the CWU Student Counseling Clinic, 509-963-1391.

University Policy [CWUP 5-90-040\(38\)](http://www.cwu.edu/resources-reports/cwup-5-90-040-academic-and-general-regulations#Class%20Attendance%20and%20Participation) (<http://www.cwu.edu/resources-reports/cwup-5-90-040-academic-and-general-regulations#Class%20Attendance%20and%20Participation>) provides for reasonable accommodation of student absences for religious holidays in accordance with [RCW 28B.137.010](https://apps.leg.wa.gov/rcw/default.aspx?cite=28B.137.010) (<https://apps.leg.wa.gov/rcw/default.aspx?cite=28B.137.010>). Students seeking reasonable accommodations under this policy must provide written notice to their instructors within the first two weeks of class specifying the dates for which religious accommodations are requested. Contact the Dean of Student Success at (509) 963-1515 for further information.

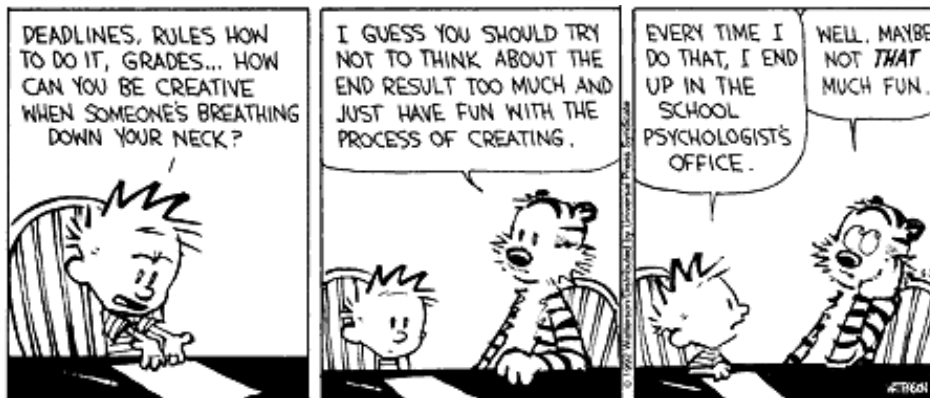
## A Positive Note

Remember that I want you to be successful. That is, I want you to develop a deep, personal understanding of the material we study so that you become a better student of mathematics who can go on to do well in all of your future endeavors. Every part of this course structure is intended to help you with this. You will often struggle, and that's intentional – struggle (and eventual success!) is essential to learning.

In all aspects of the course, please understand that I am always willing to discuss problems with you. I will never simply give you an answer, but I will offer direction and guidance that will assist you in coming up with a solution on your own. This is by far the most satisfying way to solve a problem, and the difficulty is well worth it. You are always welcome to discuss your questions or concerns with me at any time.

## Changes

I reserve the right to amend, adjust, or otherwise modify the syllabus at any time during the course.



## Footnotes

1. Stein, M. K., Boaler, J. & Silver, E. A. (2003). Teaching mathematics through problem solving: Research perspectives. In H. L. Schoen & R. I. Charles (Eds.), Teaching mathematics through problem solving: Grades 6-12 (pp. 245–256). Reston, VA: National Council of Teachers of Mathematics.
2. Ernst, D. C., Hodge, A., & Yoshinobu, S. 2017. Inquiry-based learning. Notices of the AMS, 64(6), p. 570-574.
3. Cai, J., & Lester, F. (2010). Why is teaching with problem solving important to student learning. National council of teachers of mathematics, 13(12), 1-6.