WELCH CENTER FOR GRADUATE AND PROFESSIONAL STUDIES

GOUCHER COLLEGE
TEACHERS' INSTITUTE

Syllabus

AP 510.200 - Preparing Students for Advanced Placement® Calculus BC

This workshop provides teachers with the tools they need to implement effective AP Calculus BC course. During this training, teachers will explore the mathematical practices for AP Calculus (MPACs) and the components of the curriculum framework, including the big ideas, enduring understandings, learning objectives, and essential knowledge. Participants will understand how to use activities that organize the course content to develop students' proficiencies in the skills identified by the curriculum framework; participants will work on a course plan that will help them decide how they will teach the skills and content of the AP Calculus BC courses. In addition, participants will explore and incorporate the new tools from the College Board to enhance their instruction and maximize the probability of their students' successes.

Participants will be expected to collaborate and participate fully in the proceedings of the course and will be encouraged to create a network of support.

Instructor: Dr. Jim Bohan, Ed.D.
bohan.educ@gmail.com– please state "Goucher AP Calc BC" in subject line

Tentative Schedule - Summer 2020

Tentative Times	Monday	Tuesday	Wednesday	Thursday	Friday
	Introductions Expectations	Feedback Questions Technology	Feedback Questions Technology	Feedback Questions Technology	Feedback Questions Technology
Handbook	**Lessons 1-5 and 8**	**Math Practice 2 – Lesson 13**	**Math Practice 3 – Lesson 14**	**Math Practice 1 – Lesson 12**	**Math Practice 4 – Lesson 15**
AM	**Workshop Focus** **New Resources** **Key Takeaways** **Course and Exam Description (CED)** **AP Exam Overview** **IPRs and AP Course Audit** **Updated Course Framework** **Overview of Course Skills** **Exploring the Unit Guides** **Fall Registration** **Instructional Approaches**	**AP Classroom** **Modeling APSI Activities** **Unit 3 – Differentiation: Composite, Implicit and inverse functions** **Unit 4 – Contextual Applications of Differentiation**	**Unit 6 – Integration and Accumulation of Change** **Unit 7 – Differential Equations** **Unit 8 – Applications of Integration**	**Unit 9 – Parametric Equations, Polar Coordinates, Vector-Valued Functions** **Unit 10 – Infinite Series and Sequences**	**The 2019 Test**
PM	**UbD Approach** **Unit 1 – Limits and Continuity** **Unit 2 – Differentiation: Definition and Basic Rules**	**Unit 5 – Analytical Applications of Differentiation**	**Unit 9 – Parametric Equations, Polar Coordinates, Vector-Valued Functions**	**Unit 10 – Infinite Series and Sequences**	

Course Objectives

1. Understanding the Course
2. Planning the Course
3. Teaching the Course
4. Assessing Student Progress and Understanding
5. Becoming a Member of the AP Community

Graduate Programs in Education Outcomes:

GPE001: Knowledge - Theory: Apply knowledge of psychological and educational theory, research, and/or philosophy related to the area of specialization or certification.
GPE002: Knowledge - Assessments: Demonstrate understanding and use of the types of assessments appropriate to the area of specialization or certification.
GPE005: Skills - Theory: Demonstrate the ability to incorporate theory and research into practice related to the area of specialization.
GPE006: Skills - Data: Demonstrate the ability to gather appropriate data and use data in problem analysis and decision-making related to the area of specialization.
GPE007: Skills - Problem Solving: Use problem solving/critical thinking strategies appropriate to the area of specialization.
GPE008: Skills - Reflection: Use reflective practice within the area of specialization.
GPE009: Skills - Communication: Demonstrate effective communication and presentation skills related to the area of specialization.
GPE010: Skills - Technology: Use a variety of technologies appropriate for working in the area of specialization.
GPE012: Dispositions - Diversity: Demonstrate positive dispositions toward diversity and equity.
GPE013: Dispositions - Professionalism: Demonstrate professionalism in one's demeanor, behavior, conduct, decision-making, and interactions with colleagues.

Bibliographical references and complimentary textbooks will be shared in class. Please plan to share activities, websites, and strategies during the institute. All submissions will be compiled and distributed to all.

- Create an outline of how this CED will change the content of your course with reference to the Big Ideas of AP Calculus BC.
- Creation of an action plan for implementation of new instructional strategies for your course next year.
- Evaluation of the course.
    - What did you like?
    - What did you not like?
    - What should I do differently next time?

If you are taking the course for credit, no absences are permitted.
You must attend full time on all five days to receive graduate credit.

Instructions to receive a copy of Credits Earned after the completion of the course:

- ***Goucher College does not issue grade reports. You can obtain your grade approximately 3 weeks after concluding the course by going to the Goucher website (mygoucher) and follow the prompts to receive your grade.***

- ***If you need a paper copy of grades for tuition reimbursement, you will need to request a transcript in writing. You can fax your request to Student Administrative Services (SAS) at 410-337-6504 or mail to SAS at***

Goucher College, SAS
1021 Dulaney Valley Road
Baltimore, MD 21204

There is no charge for this request. Please allow 3-5 working days to process. To access the transcript request form, please go to

http://www.goucher.edu/x1891.xml