



JOINT ACADEMIC SENATE
SABBATICALS, FELLOWSHIPS, & AWARDS COMMITTEE

[Sabbatical and Fellowships Webpage](#)

APPLICATION FOR SABBATICAL LEAVE FOR ACADEMIC YEAR 2021-2022

DEADLINE TO SUBMIT: November 16, 2020 at 11:59PM

Please respond to each item thoroughly, but limit your response to a reasonable amount of wording. *Please remember that you need to also submit the information for the Signature Page to davison_george@smc.edu by **November 2nd**.* You can submit your application in a separate document if you wish.

1. Write a **concise but specific** statement describing your proposed one-semester sabbatical leave.

My sabbatical will consist of a creative project and professional development, which will improve my teaching effectiveness. I would be reading about the Common Core curriculum being taught at the high school level and interviewing several high school math teachers to understand the changes that have been made in education during the last few years, including textbooks and teaching strategies used. To learn about the Common Core Standards at the high school level I plan to contact the chairs of mathematics department at certain high schools to connect me with math teachers to interview. I plan to attend the California Mathematics Council - South conference to attend workshops on teaching strategies at the high school level. As a plus, I will be able to interact with high math teachers at the conference. In addition, I will be reading a book "The Common Core Mathematics in PLC at Work, High school" to learn more about the implementation of the Common Core Standards for mathematics for high school. I plan to use the information to implement new teaching strategies in my courses to better serve our incoming students with the transition into our college math courses.

I plan to read articles in educational journals on how to engage students in mathematics and research information about how to create contextualized math problems. I will be considering reading the following books, for example, Mathematical Mindsets by Jo Boaler, A Mind for Numbers, how to excel at math and science by Barbara Oakley, Learning to Love Math by Judy Willis to provide me with a new perspective of learning mathematics and learning strategies. I will be reading the following books such as Measurement by Paul Lockhart to find interesting math problems, The First Six Books of the Elements of Euclid to find engaging math problems, The Golden Ratio: The Divine Beauty of Mathematics, The Beauty of Numbers in Nature: Mathematical Patterns and Principles from the Natural World by Ian Stewart and other books to find interesting math problems to engage students. In reading some of these books it will provide me with math problems that are used in art, architecture, nature and in additional mathematical topics that are engaging for students. I may consider different books to read due to the recommendations from math high school teachers and whether I will find enough engaging math problems in the books being considered.

Upon completion of my sabbatical research, I plan to provide a workshop for my colleagues to explain my findings and also discuss how to develop course material to improve student success in our courses.

2. State the **objectives** that you expect to complete during your sabbatical leave.

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Objective 1: Read and understand the Common Core standards of mathematics at the high school levels.

Objective 2: Interview high school math teachers to understand the high school curriculum and implementation of the Common Core standards, contextualized math concepts and course materials.

Objective 3: Read books to find engaging math problems and read articles on how to create contextualized math problems as well as how to increase student engagement through contextualized math problems. Also, I will develop contextualized problems for my developmental courses and utilize them during the Spring 2021 semester.

Objective 4: Write a summary of the information of the Common Core standards, math problems and materials. Make a PowerPoint presentation for the workshop for my department to share my findings to improve teaching strategies and to better assist incoming freshman transition in our math courses.

3. In what ways will your sabbatical **contribute to student success, to your colleagues, department, and the College at-large?** Indicate how your proposal reflects the SMC Mission, Vision, Goals and Outcomes Statement (please refer to the end of this application document for the Statement).

To better understand the needs of the incoming freshman students into our college, I will be researching and understanding the Common Core standards at the high school level to assist with the transition of math content into our math courses and to bridge the gap. I plan to focus on the math objectives and learn the math sequence changes in the past few years at the high school level. By familiarizing myself with the Common Core standards at the high school from interviewing math teachers, I will gain a better understanding of how students at the high school level are learning and how the standards are being implemented to inform myself of how the format is being delivered in lectures with contextualized math problems. I also plan to view high school math textbooks being utilized at the high school level, and this will provide me with an understanding of the approach students are used to reading and format in which the math skills are being introduced in high school math textbooks. The knowledge I will share with my department will assist us with a new understanding of the curriculum changes at the high school level in recent years and the skills that incoming freshmen are learning at the high school level. I hope it will also assist the math department with information when planning math courses in the future with new teaching strategies, and also using creative math problems to engage our students in our courses and in assisting students with skills in making the transition of high school to college level math courses.

By understanding the implementation of the Common Core standards, I will be better able to develop new teaching strategies to engage our students in our developmental courses of stem and non-stem math courses. The information I will gather during my sabbatical will increase student success since I plan to use the information of the Common Core standards to better transition the math content into our college math courses and share with my department. My sabbatical will meet the SMC supporting goals such as “Innovative and Responsive Academic Environment: Continuously develop curricular programs, learning strategies, and services to meet the evolving needs of students and the community” since I will focus on new teaching and learning strategies in our developmental math courses.

Since, I will be finding engaging math problems to utilize in my math courses by reading books on creative math problems my sabbatical will meet the Santa Monica College, Institutional Learning Outcomes, on “Authentic Engagement: Demonstrate a level of engagement in the subject matter

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that enables and motivates the integration of acquired knowledge and skills beyond the classroom". In addition, I will be presenting to my department at a workshop the summary of the Common Core standards at the high school level, as well as an explanation of the implementation of the Common Core standards and the contextualized math problems at the high school level. I will also share my findings from reading articles on how to better engage students in mathematics, especially in our developmental courses. My presentation will also include how to best develop contextualized math problems in our developmental courses.

4. Identify the **specific activities and/or procedures** that will be performed to meet your objectives. It should be evident that these constitute one semester's worth of work.

Please refer to the table below.

5. Specify a **timeline** for the sequence of each of the activities listed in Item #4.

Please refer to the table below.

6. Delineate specific outcomes, skills, or competencies you will achieve as a result of your sabbatical.

I hope to be a more effective teacher by understanding the changes in the education system in the recent years with the Common Core standards at the high school level to develop new teaching strategies to assist students with the transition into college math courses. In understanding the contextualized math problems at the high school level, it will provide me with the knowledge that incoming freshmen are learning at the high school and to reference this knowledge to introduce math concepts at the college math level. Interviewing high school math teachers will allow me to gather information about the implementation of the Common Core standards and course material and develop examples of contextualized math problems. This will enable me to share new teaching strategies with my department colleagues so that we can collaborate to increase our students' success in our math courses. Reading books and articles on how to better engage students in math courses will enable me to create greater student interest in my math classes. Contextualizing math problems will enable me to provide connections to various areas of study that students may be pursuing. I will share the information about how to develop contextualized problems in order to help members of my department create greater variety that will engage our students in our math classes.

7. State explicitly how you plan to **document** your proposed sabbatical activities. Examples of documentation may include one or several of the following: written reports, research or scholarly papers, curriculum revisions, creative projects, multimedia lessons/presentations, videos, transcripts of courses taken.

I plan to write a written report of the Common Core standards, a summary of the information of the math articles, and examples of the contextualized problems and creative problems found that will engage students in our math courses. I will develop a PowerPoint presentation with my findings and

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have a presentation in Spring 2022 for my department. I will schedule a workshop with the department chair for Spring 2022 to share information that will assist with understanding the math skills students learn at public high schools, improve our ability to engage our students in our math courses, and improve our ability to develop contextualized math problems.

You may address questions 2 and 3 of the Application in the format below. How are your proposed activities connected to each objective? You may copy and paste the table below on a separate page for each of your objectives. (It is highly recommended that you complete this section of the application.)

Objective Number: 1			
Objective description: Read and understand the Common Core standards of mathematics levels at the high school levels.			
Activity	Description	Expected Outcome	Timeframe
1.1	Reading the common core standards for mathematics at the high school level.	To understand the common core and math objectives at a math high school level.	By September 25, 2021
1.2	Read articles on common core standards implementation.	To understand the common core and math objectives at a math high school level.	By September 30, 2021

Objective Number: 2			
Objective description: Interview high school math teachers to understand the high school curriculum and implementation of the Common Core standards, contextualize math concepts and course materials.			
Activity	Description	Expected Outcome	Timeframe
2.1	Interview several math teachers to understand high school. Attend the CMC- south conference on November 5-6, 2021	To gather information on common core standards and contextualized math materials. Understand high school curriculum.	By November 30, 2021
2.2	Course materials and contextualized materials used at the high school levels.	To gather information on contextualize materials used at the high school level.	By October 30, 2021

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2.3	Read math textbooks used at the high school level.	To gather information of the format students are reading and learning mathematics at the high school level.	By October 30, 2021
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Objective Number: 3

Objective description: Read books to find engaging math problems and read articles on how to create contextualize math problems and about engaging students with math problems in the classroom. Create a few contextualize problems for my courses and utilize in Spring 2021.

Activity	Description	Expected Outcome	Timeframe
3.1	Reading books on engaging math problems. Book list: <ol style="list-style-type: none"> 1) Mathematical Mindsets by Jo Boaler 2) Learning to Love Math by Judy Willis 3) Measurement by Paul Lockhart 4) The First Six Books of the Elements of Euclid, The Golden Ratio: The Divine Beauty of Mathematics 5) The Beauty of Numbers in Nature: Mathematical Patterns and Principles from the Natural World by Ian Stewart 6) Other Books 	To find math problems that can be utilized in our courses to engage students in our courses.	By November 30, 2021 Read on weekdays for 2-3 hours.
3.2	Read articles and research papers in Education Week, American Mathematical Society and other references.	To gather information on how to best come up with contextualized math problems.	By November 20, 2021 Read on weekdays for 1-2 hours.
3.3	Read articles and research papers in Education Week, American Mathematical Society and other references.	To gather information of how to best engage students in our math courses.	By November 20, 2021 Read on weekdays for 1 hour.
3.4	Create a few contextualize math problems.	Develop and provide examples of contextualize math problems.	By December 20, 2021

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Objective Number: 4

Objective description: Write a summary of the information of the Common Core standards, math problems and materials. Make a power point presentation for the workshop for my department to share my findings to assist with new teaching strategies and to better assist upcoming freshman transition in our math courses.

Activity	Description	Expected Outcome	Timeframe
4.1	Write the summary of common core standards	To inform colleagues of common core standards.	By December 15, 2021
4.2	Write information and PowerPoint for the presentation workshop for our department.	To provide information to colleagues to assist with course content.	By December 15, 2021
4.3	List the engaging problems found in books I read and also write a summary of the best way to contextualize math problems and also include examples of contextualize math problems.	To provide information to colleagues to assist with contextualize math problems.	By December 20, 2021