



SABBATICAL LEAVE APPLICATION FOR:

Academic Year 2017-2018

Dear Applicant,

The Joint Academic Senate Sabbaticals, Fellowships, & Awards Committee wish you success as you begin your sabbatical application process. We would also like to remind you of some important details that can facilitate the processing of your application:

- Sabbaticals are granted for the purpose of professional development as outlined below.
- Faculty members must have served on a full-time basis during the preceding six years (ending June 2016). Personal leaves taken during this time may disqualify a candidate from consideration.
- All sabbaticals are awarded for one semester only and should constitute one semester’s worth of work. The Committee may award at least eight one-semester sabbaticals for the 2017-2018 academic year. Applicants are encouraged to submit proposals supporting the College’s strategic initiatives and Institutional Learning Outcomes.
- A *Sabbatical Application Pointers* PowerPoint presentation has been posted on the Committee’s website for your information. Consider reviewing these before completing this application. Our website is <http://www.smc.edu/ACG/AcademicSenate/AScommittees/Pages/Sabbaticals.aspx>.

Submitting Your Application

- The fall 2017 and spring 2018 sabbatical application deadline is **April 27, 2017 at 4 p.m.** Completed applications should be sent electronically as an email attachment to Kimberly James (james_kimberly@smc.edu). In addition, please note that the signature page must be submitted in paper form to Kimberly James (FV103) or left in Kimberly James’ mailbox in the English department which is located in Drescher 311 and must contain original signatures from you, your department chair, and area vice president. Please note that Ms. James’ office and mailbox are not in the same location. In addition you will need to secure the Dean of Human Resources’ signature prior to your proposal being reviewed in order to ensure you are qualified for sabbatical leave. Please give yourself enough lead time to secure the necessary signatures **PRIOR to the April 27, 2017, at 4:00pm** deadline. Keep in mind that individuals may be off-campus or otherwise attending to their own responsibilities and will NOT sign your proposal “on the spot.” It is likely that you will need to drop-off the signature page, including the summary of your proposed project, and will need to pick up the form at a later time. The signature page must be submitted with your application. **Note: It is the applicant’s responsibility to submit the completed “signature page” (page-3) with their application.**

If you have any questions about the application process, please feel free to contact Committee Chair **Kimberly James** (james_kimberly@smc.edu), 310-434-4239. We look forward to receiving your application!
 Sabbaticals, Fellowships, & Awards Committee Members

Kimberly James, Chair
 Patricia Burson
 Roberto Gonzalez
 Angelina Misaghi
 William Pachas-Flores
 Andrew Espinosa

Sherri Lee-Lewis, Vice Chair
 Judith Douglas
 Kay Azuma
 Claudia Szekely
 Lawrence Driscoll

Scope of Sabbatical Leaves

As a reminder, the scope of your sabbaticals application should constitute a **semester's worth of work**. Please note that in order to constitute a full semester's worth of work, it may be necessary to combine project elements targeting two or more of the following categories. Every proposal will be different.

- **Professional Development:**

Other study or experience designed to improve teaching effectiveness and/or other expertise related to the applicant's assignment not otherwise possible through normal workload assignment.

- **Formal Study:**

An academic course of study leading to increased mastery of the faculty member's own field, the development of an additional area of specialization within the applicant's field, or the development of a new field of specialization.

- **Independent Research/Creative Project /Field Study:**

Scholarly research, a creative project or a field study project of a scope or nature not permitted by a normal workload assignment.

- **Professionally Beneficial Travel:**

A plan for professionally beneficial travel that will enable the faculty member to develop knowledge, skills, expertise, or an area of specialization within a discipline.

JOINT ACADEMIC SENATE
SABBATICALS, FELLOWSHIPS, & AWARDS COMMITTEE
SABBATICAL LEAVE ACKNOWLEDGMENT NOTICE

The Sabbaticals, Fellowships & Awards Committee will consider your application blindly, that is, anonymously. Only the committee chair and vice chair will know your identity when the committee considers it.

SIGNATURES/ACKNOWLEDGMENTS		DATE
Applicant Name	Applicant Signature	
Ebrahim Jahangard		4/20/2017
Sabbatical Summary; Semester (check one): <input type="checkbox"/> Fall 2017 <input checked="" type="checkbox"/> Spring 2018		
<p>I would like to take a one semester sabbatical to research and learn topics in number theory and mathematical finance. Based on these topics, I want to write up at least fifteen contextualized projects, called “story puzzles” whose solutions would involve multiple areas of mathematics. I plan to use these projects in my courses to improve teaching effectiveness. Working on the “story puzzles” should convince students that they could apply their mathematical knowledge to solve real life complex problems. In the process, they could also learn how to manage their finances. Perhaps, they could be better citizens by learning how to borrow less in student loan. (Currently, the national student loan is over 1.43 trillion dollars.) I will do a presentation on my findings and advertise these “story puzzles” to colleagues and students. The projects and presentation should help raise students’ curiosity in learning mathematics and faculty’s excitement in teaching mathematics. Each “story puzzle” and its complete solution will be typed (at least 5 pages will be needed per “story puzzle”) and made available to all students and faculty who decide to utilize them for educational purposes.</p>		
Department Chair		
Vice President, Academic Affairs/Student Affairs		
Dean, Human Resources		
FOR OFFICE USE ONLY		DATE
<input type="checkbox"/> Recommended by the Sabbaticals and Fellowships Committee		
<input type="checkbox"/> Not Recommended by the Sabbaticals and Fellowships Committee		

Note regarding signatures:

Signatures from your department chair and area vice president are required as acknowledgement that you are applying for sabbatical leave. Signatures do not in any way imply their endorsement or approval for sabbatical leave. A signature from the Dean of Human Resources certifies that you are eligible for sabbatical leave. It is the applicant’s responsibility to obtain these signatures and then submit this signature page with their application. Please leave yourself sufficient time to obtain the signatures.



JOINT ACADEMIC SENATE
SABBATICALS, FELLOWSHIPS, & AWARDS COMMITTEE
<http://www.smc.edu/ACG/AcademicSenate/AScommittees/Pages/Sabbaticals.aspx>

APPLICATION FOR SABBATICAL LEAVE FOR FALL 2017/SPRING 2018

Deadline to submit: April 27, 2017, at 4:00pm.

Please respond to each item thoroughly, but limit your response to a reasonable amount of wording. *Be sure that you secure **all** necessary signatures specified on the application cover sheet and acknowledgment page when you submit your application.*

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

I would like to take a one semester sabbatical to research and learn topics in number theory and mathematical finance. Based on these topics, I want to write up at least fifteen contextualized projects, called “story puzzles” whose solutions would involve multiple areas of mathematics. I plan to use these projects as weekly supplemental assignments in my courses to improve teaching effectiveness. Working on the “story puzzles” should convince students that they could apply their mathematical knowledge to solve real life complex problems. In the process, they could also learn how to manage their finances and become better citizens by borrowing less in student loan. (Currently, the national student loan is over 1.43 trillion dollars.) I will do a presentation on my findings and advertise these “story puzzles” to colleagues and students. The projects and presentation should help raise students’ curiosity in learning mathematics and faculty’s excitement in teaching mathematics. Each “story puzzle” and its complete solution will be typed (at least 5 pages will be needed per “story puzzle”) and made available to all students and faculty who decide to utilize them for educational purposes.

In 2013, I delivered a presentation to a group of participants at the Faculty Summer Institute titled “Just-In-Time Mathematics”. As part of the talk I presented a “story problem”. I got a lot of great feedbacks and interest from the faculty, most whom were not even from the math department. I decided to write up more problems to give to my students as weekly projects. Given my regular teaching assignment and other duties, I have not gotten a chance to write up any other “story puzzle” since 2013. I am including the problem that I used for my presentation at the end of this application for your review.

I selected to concentrate on number theory and mathematical finance because they offer a rich variety of applied problems that are difficult to solve but easy to state. Based on these problems, I can write up interesting exploratory assignments for our math students. If I want to stay an effective instructor, I need to increase my knowledge and to update myself on the current research. I plan to read articles and research papers from *Annals of Mathematics*, *Journal of Number Theory* and *Journal of Mathematical Finance*. Reading and understanding such articles are not easy tasks. It takes time and concentration. I plan to read articles from *Mathematical Monthly* and *College Mathematics Magazines*. I would specifically be searching for problems and proves that are non-standard but related to topics that we cover in our math courses at Santa Monica College. Once I have collected enough material, I want to write up at least fifteen “story puzzles”. Basically, I want to compose different problems and combine them into interesting puzzles that students might find fun to think about. The solutions to these puzzles will involve different topics of mathematics that students have learned in their courses. (Please look at the example provided at the end of this form.) I plan to use these puzzles as supplementary weekly projects in my courses. I will type up all the story problems and their solutions and make them available to anyone who wants to utilize them. I also plan to give a presentation to share my findings with colleagues and to advertise the “story puzzles” to students.

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

- O1. Research current topics in Number Theory and Mathematical Finance
- O2. Search for nonstandard problems and proves that could be utilized in our math classes
- O3. Write up “story puzzles” and create supplementary material to improve lesson plans
- O4. Deliver presentation to raise awareness and to create excitement

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).

Our students will benefit from my sabbatical in many ways. They see examples of interesting complex problems whose solutions will involve multiple areas of mathematics. The problems should bring about the importance and the beauty of learning mathematics. Hopefully, that would raise their curiosity and increase their participation. The solutions should demonstrate to them that math is not a set of isolated formulas and tricks. Working on the puzzles will train them on how to tackle difficult problems and how to overcome their fear of doing math. They will learn that all they need is to increase their knowledge a little at a time and to practice assembling the pieces of puzzles together. That should help their self-esteem and give them the confidence and the proper training that they need to be successful in any math classes. As a result, we will see a better retention rate and a higher success rate in our at least math classes.

I will make all of my findings available to students and faculty to utilize in any way they like for educational purposes. My colleagues could also benefit from attending the presentation. Perhaps, they could find ways of incorporating the researched material to enrich their lesson plans. Or maybe they get encouraged in coming up with their own problems or ideas to increase class participation and to reduce misconceptions about math.

The least that my sabbatical will do is to bring faculty and students together. The “story puzzles” should ignite many intellectual conversations. The presentation will be evaluated and discussed by faculty and students; my colleagues are very passionate about their subject. They will analyze and perhaps even criticize my demonstration. All of which will create a healthy environment for exchanging ideas and improving our knowledge and understanding. This complies with Santa Monica College’s Vision and Mission.

I also hope that the community and the society will benefit from this sabbatical. Once we teach our students that math is not evil and that math is important and fun maybe they can spread the word. I think the world would be a better place, if more people learned math correctly and applied it more often to their daily lives. There is nothing more satisfying than learning to overcome what seemed to be an impossible task. I hope that I could communicate this feeling to our community through “story puzzles” and the presentation.

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.

This sabbatical will make me a more self-confident, knowledgeable and effective instructor. I will be better skilled in composing interesting contextualized problems. In the last five years at SMC, I have had a few students who completed independent studies with me. I have also had the pleasure of advising many curious students on what subjects to study when they transfer to universities. The sabbatical will help me become a more informed advisor to them. I also learn how to deliver better mathematical presentations and more lively lectures. I will learn new ways of explaining some old ideas to my students.

Many colleagues stop by my office to discuss math problems and teaching ideas. I enjoy the numerous conversations that I have with them and glad to put my expertise to work. The sabbatical will help me be a better role model and a reliable resource to others. It gives me a sense of achievement and a command of my subject. This in turn helps me to be a more productive employee at Santa Monica College.

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 keep track of a list of articles and books that I read. I will create supplementary teaching material by typing up the “story puzzles” and their solutions. This would be at least seventy-five typed pages, a copy of which will be made available to the sabbatical committee. I will also present some of the problems and solutions to students and faculty before the end of the semester. I will have my findings available for any student, faculty, or community member who plans to utilize them. A copy of this presentation will also be provided to the committee for future references.

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.

Objective Number: O1			
Objective description: Learn about some of the current research in Number Theory and Mathematical Finance			
Activity	Description	Expected Outcome	Timeframe
1.1	Looking up articles and research papers from Annuals of Mathematics	To get updated on the latest important research topics in mathematics.	One hour per day, until May 17, 2018
1.2	Reading articles and research papers from Journal of Number Theory	To increase my knowledge of the subject and to find interesting topics that can be utilized in the presentation.	One hour per day, until May 17, 2018
1.3	Reading articles and research papers from Journal of Mathematical Finance	To increase my knowledge of the subject and to find interesting topics that can be discussed during the presentation.	One hour per day, until May 17, 2018

Objective Number: O2			
Objective description: Search for nonstandard problems and proves			
Activity	Description	Expected Outcome	Timeframe
2.1	Reading articles, theorems, problems and solutions presented in Mathematical Monthly and College Mathematics Magazines	To find interesting applied problems and alternative ways of proving theorems	One hour per day, until June 15, 2018
2.2	Reading Martin Gardner 's Entertaining Mathematical Puzzles	To gain the skill of writing interesting mathematical puzzles	Completed by May 17, 2018
2.3	Reading Peter L. Bernstein's Against The Gods The Remarkable Story of Risk	To obtain knowledge in history of risk analysis related to mathematical finance	Completed by May 17, 2018

Objective Number: O3			
Objective description: Write up “story puzzles” and create supplementary material			
Activity	Description	Expected Outcome	Timeframe
3.1	Writing up problems and combining them to make interesting “story puzzles” using ideas from Number Theory and Mathematical Finance	To have at least 20 projects which could later be utilized as supplementary problems for teaching purposes	Completed by June 8, 2018
3.2	Working on the solutions to the “story puzzles”	To make sure that the problems are correct, useful and interesting	Completed by June 8, 2018
3.3	Type up the “story puzzles” and their solutions (each will take up at least 5 pages)	To share the projects with students and colleagues (at least 75 typed pages)	Completed by June 18, 2018

Objective Number: O4			
Objective description: Share and advertise story puzzles to create excitement in learning and teaching mathematics			
Activity	Description	Expected Outcome	Timeframe
4.1	Preparing a presentation based on the “story puzzles”	To verify and test the usefulness of the projects	Completed by June 1, 2018
4.2	Delivering a presentation based on the “story puzzles”	To share some of the findings with students and colleagues and to advertise the “story puzzles”	Completed by June 10, 2018

Here is an example of one “story puzzle”:

Faculty Summer Institute (FSI), August 7, 2013 Just-In-Time Mathematics

Assume that you recently got an internship position with a prestigious engineering firm. For your first project your supervisor asks you to build a right solid pyramid with a square base. You must satisfy a list of specifications for this project:

You can only use specially designed, light weighted, cubic blocks.

Each side of a block is one centimeter long.

You cannot change the shape or form of any single block.

The blocks are sold in bags only, with the following pricing information (each price includes the tax):

Bag's weight (kg)	# of blocks	Price (\$)
2	20000 +/- 45	100.00
1	10000 +/- 20	50.00
0.5	5000 +/- 10	25.00

The pyramid is to be displayed on a flat table that's about one meter high.

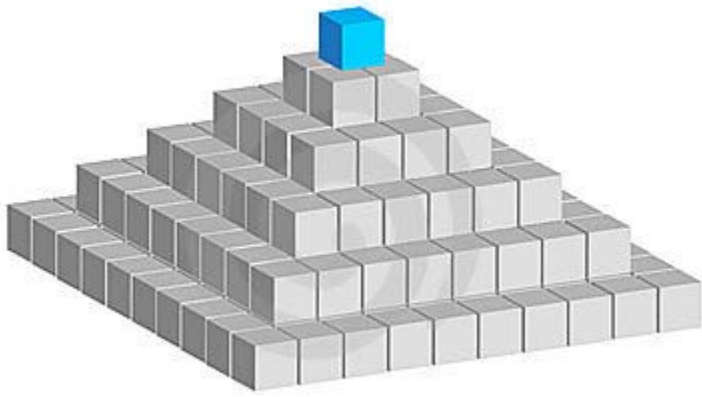
The distance from the floor to the top of the pyramid should be as high as the height of an average person.

Every level of the pyramid should have a height of one centimeter and its base area should be larger than the base area of any level above it.

The corresponding edges of the basis for any two levels should be parallel to each other.

You must use the least number of square blocks to build the pyramid.

Briefly describe how you would assemble such a pyramid. How many bags and of what weight do you need to purchase, to minimize the cost of completing this project?



dreamstime.com



JOINT ACADEMIC SENATE
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SABBATICAL LEAVE ACKNOWLEDGMENT NOTICE

If the sabbatical leave requested is granted, I hereby declare that I have read and will abide by all the rules governing such leaves, and in addition:

- Any changes in sabbatical plans must be approved by the Sabbatical, Fellowships, & Awards Committee **prior** to the commencement of the leave.
- The Sabbatical, Fellowships, & Awards Committee must be **notified in writing immediately** if substantive changes occur during the leave. If substantive changes occur, I understand that I will submit a sabbatical status report to the Committee, outlining the activities I have completed until that point. The Committee, at its discretion, will determine if the changes significantly alter the scope of my sabbatical proposal and will notify me of its decision. I understand that failure to notify the Committee may result in a referral to the Office of Human Resources.
- If I do not meet the requirements of my sabbatical plan after it has been reviewed for any reasons other than a verified illness, injury, Act of God or other reason beyond my control, I will repay the Santa Monica Community College District all monies paid to me while on my Sabbatical Leave.
- I acknowledge that ownership of work done on sabbatical will be governed by the faculty's collective bargaining agreement with Santa Monica College.
- Within sixty (60) days of my return to duty I will submit to the Chair of the Joint Academic Senate Sabbaticals, Fellowships, & Awards Committee an electronic version of a report summarizing my professional development experience and activities conducted while on sabbatical leave. I will follow the guidelines for formulating the report that are posted on the committee's website. Once the report has been reviewed and approved by the Committee, I will submit a final electronic report with any revisions requested by the Committee (if necessary). I understand this report may be published on the Committee's website for dissemination and future reference. I further understand that the Committee may request that I make changes to the report to address unanswered questions or to clarify issues, or to provide supplemental materials to document the scope of my sabbatical project.
 - Deadline to submit the report for a fall 2017 sabbatical is March 16, 2018. The deadline to submit a report for a spring 2018 sabbatical is October 26, 2018.

Santa Monica College Vision, Mission, Goals, & Outcomes

Vision

Santa Monica College will be a leader and innovator in learning and achievement. As a community committed to open dialog and the free exchange of ideas, Santa Monica College will foster its core values: knowledge, intellectual inquiry, research-based planning and evaluation, academic integrity, ethical behavior, democratic processes, communication and collegiality, global awareness, and sustainability.

Mission

Santa Monica College provides a safe and inclusive learning environment that encourages personal and intellectual exploration, and challenges and supports students in achieving their educational goals. Students learn to contribute to the global community as they develop an understanding of their relationship to diverse social, cultural, political, economic, technological, and natural environments. The College recognizes the critical importance of each individual's contribution to the achievement of this mission.

Santa Monica College provides open and affordable access to high quality associate degree and certificate of achievement programs and participates in partnerships with other colleges and universities to facilitate access to baccalaureate and higher degrees. The College's programs and services assist students in the development of skills needed to succeed in college, prepare students for careers and transfer, and nurture a lifetime commitment to learning.

Goals

To fulfill this mission, Santa Monica College has identified the following Institutional Learning Outcomes and supporting goals.

Institutional Learning Outcomes

Santa Monica College students will:

- 1. Personal Attributes:**
Acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
- 2. Analytic and Communication Skills:**
Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
- 3. Applied Social Knowledge and Values:**
Respect the inter-relatedness of the global environment, engage with diverse peoples, and acknowledge the significance of their daily actions relative to broader issues and events.
- 4. Applied Knowledge and Valuation of the Physical World:**
Take responsibility for their own impact on the earth by living a sustainable and ethical life style.
- 5. Authentic Engagement:**
Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.

Supporting Goals

Innovative and Responsive Academic Environment

- Continuously develop curricular programs, learning strategies, and services to meet the evolving needs of students and the community

Supportive Learning Environment

- Provide access to comprehensive student learning resources such as library, tutoring, and technology
- Provide access to comprehensive and innovative student support services such as Admissions and Records, Counseling, Assessment, Outreach and Financial Aid

Stable Fiscal Environment

- Response to dynamic fiscal conditions through ongoing evaluation and reallocation of existing resources and the development of new resources

Sustainable Physical Environment

- Apply sustainable practices to maintain and enhance the College's facilities and infrastructure including grounds, buildings and technology

Supportive Collegial Environment

- Employ decision-making and communication processes that respect the diverse needs of the entire College community