

**BOARD OF TRUSTEES OF COMMUNITY COLLEGES
CONGRESS BARGAINING UNIT**

APPLICATION FOR SABBATICAL LEAVE

ACADEMIC YEAR 2015-2016

Name: Pamela Frost

Date: November 1, 2014

Position: Professor of Mathematics

College: Middlesex Community College

Date of initial employment at the college: January 1993

Dates of previous leaves or other interruptions in service: None

Type of sabbatical leave requested: Half-Year/Full Salary

Dates of proposed sabbatical leave: January 2016 to May 2016 (Spring Semester 2016)

Introduction:

For more than 35 years I have been teaching math at the secondary and post-secondary levels. After 25 years of dedicated employment with the State of Connecticut, which includes over 20 years as a mathematics professor at Middlesex Community College, I am seeking approval for half-year/full-salary sabbatical leave.

During my tenure at MxCC I began as a developmental math specialist and have grown into a leader in math education at the college and at the system levels. I have a proven track record of promoting student success in mathematics and have maintained currency in instructional technology and pedagogy that supports student success. I have demonstrated leadership as the Mathematics Division Chair during two appointments totaling over five years of service. For a number of years now I have represented MxCC on the system-wide Math Issues Committee, the Mathematics Basic Skills Council of Connecticut, and for the inaugural first year and a half represented the Math Issues Committee on the PA 12-40 Advisory Group. In addition, I co-led the mathematics portion of the College Access Challenge Grant that was charged with developing common learning outcomes for our revised developmental and entry-level algebra

courses across the State. I am thoroughly familiar with the changes to these courses and the new directions we hope to implement in the next few years. At Middlesex I piloted the new curriculum in Intermediate Algebra (MAT*137) in Spring 2014 and conducted multiple professional development trainings for our math faculty. This semester I am teaching two sections of this course and coordinating it for our Math Department. Further, I have worked with many of the high schools in our service area on College Career Pathways (CCP) Articulations as well as co-hosted two English-Math Summits at Middlesex with our high school counterparts to discuss changes in our algebra curriculum in light of PA 12-40 and Common Core State Standards for Mathematics. Given this background I believe I am well prepared and professionally positioned to undertake the activities outlined in this sabbatical leave proposal.

I also believe this proposal is fully aligned with the purposes of a sabbatical leave as outlined in the Congress collective bargaining agreement, Article XVII, Section 1. It will provide me the time for both scholarly and creative endeavors that will benefit myself professionally, the college, and the system. Further, it will enable me to develop resources and materials that will enrich my teaching effectiveness as well as other mathematics faculty around the state.

I. Objective of the leave.

The objective of this leave is to review and develop materials that will support the learning outcomes of the revised entry-level algebra course adopted across the State and fully implemented in Fall 2014 in Connecticut community colleges as well as coordinate with the Common Core State Standards for Mathematics being rolled out in high schools around the country. If time permits I will also review and develop materials for the developmental algebra courses as well. Through collaboration with math faculty across the State at various levels, I propose to coordinate and facilitate the review of appropriate public domain materials as well as develop enough new material to support the many math faculty members around the State charged with implementing these agreed upon outcomes and best practices in math instruction. Also, the goal over time would be to have enough resources available so that our students may not need a commercial textbook for their initial mathematics course(s). In turn, this will save

students the cost of purchasing a textbook, which can be considerable. The materials to be developed would be aligned with the Common Core State Standards (CCSS) for Mathematics and American Mathematical Association of Two-Year Colleges (AMATYC) Standards as well as incorporate recognized best practices of mathematical pedagogy such as authentic problem based learning, active learning, flipped instruction, blended instruction, appropriate use of technology, etc. Currently no commercial publishers are providing materials that fully support this type of instruction and learning outcomes at the higher education level, which further supports the need for our own materials.

II. How will the leave contribute to your professional development?

A half-year (one semester only) sabbatical leave would allow me the time to review the latest research on best practices in mathematics instruction, attend at least one conference on one or more of these practices, meet and observe math teachers from both the secondary and higher education levels, and conduct a review of open source math materials that I would not have the time to do while also teaching. All of these activities will serve to expand my knowledge and experience base and as a result make me an even stronger teacher – one armed with the newest and most highly touted pedagogical practices upon my return. There will also be time for me to develop new materials as well as provide me the opportunity to refine my writing and production skills.

III. How will the leave benefit the college?

My sabbatical leave will benefit the college community by first providing me with sufficient time so I can share what I have learned with my math colleagues both locally and across the state (hosting group discussions, sharing at Math Issues Committee and Mathematics Basic Skills Council of Connecticut monthly meetings, organizing workshops with presentations, and through one on one discussions and training with our math instructors). Second, my students will directly benefit from what I will learn and incorporate into my teaching of all courses. Third, our math faculty members will have many more resources at their disposal to prepare and

teach their courses supporting the new learning outcomes and pedagogy. This should help them to be more effective teachers and therefore increase student success and retention in these critical math courses. Fourth, this project will contribute to building a stronger bridge from high school to college and strengthen our math articulations for Intermediate Algebra as part of the CCP dual enrollment program.

In addition, the activities and outcomes of this proposal would support several of the priorities of the Middlesex Community College Strategic Plan and also those outlined in Transform CSCU 2020. Specifically, the priorities of the MxCC Strategic Plan supported by this proposal are: Foster Student Success, Optimize Curriculum, and Enhance and Support Developmental Education. Transform CSCU 2020 purports to “Improve Student Retention Rates” and “reduce remediation, decrease degree completion time” which would also be supported by the activities outlined in this proposal.

IV. The activities to be undertaken during the sabbatical leave.

This proposed sabbatical leave would follow the contractual work schedule and begin in January 2016 and end in May 2016. The following is a summary of the activities that will take place during the sabbatical leave.

- Review latest research on best practices in mathematics instruction.
- Review the CCSS for Mathematics and the AMATYC “Crossroads in Mathematics Standards for Introductory College Mathematics Before Calculus”.
- Review the Connecticut Common Core State Curriculum for Algebra I and the developing Algebra II Curriculum and materials developed for the Connecticut State Department of Education.
- Attend at least one national conference/training on mathematics instruction relevant to this project financially supported with Professional Development Funds.
- Meet and observe a minimum of 9 math instructors at both the secondary and post-secondary levels (Community College and State University) in Intermediate Algebra or comparable courses.
- Continue to attend monthly Math Issues and Math Basic Skills Council of Connecticut meetings and collaborate with the membership on this project.
**Letters of support from each group are attached to this proposal.
- Review open source math materials and technology tools that align with CCSS and AMATYC Standards and provide a written summary of my findings and recommendations which will be posted online on the MATYCONN website.

