

**GRAND VALLEY STATE UNIVERSITY**  
**SABBATICAL LEAVE REQUEST APPLICATION FORM**

1. **Name:** Theodore A. Sundstrom
2. **Date employed by GVSU** 1973
3. **College** College of Liberal Arts and Sciences
4. **Unit** Mathematics
5. **Semester(s) and year of latest sabbatical leave** Winter 2000
6. **Dates of Leave of Absence as faculty since the latest sabbatical leave** None
7. **Sabbatical leave is being requested for this year and semester(s)**  
Fall X Winter \_\_\_\_\_ Academic Year \_\_\_\_\_
8. **Sabbatical Title** The History of Mathematics at Grand Valley State University
9. **Are grants, fellowships, or other financial support expected during the sabbatical leave? Specify.**  
\_\_\_\_\_
10. **Is acceptance of a sabbatical award dependent on your receiving some additional support? Specify.** No
11. **Where will the sabbatical work be done?** At home and at Grand Valley
12. **In accord with the Sabbatical Policy as stated in Chapter 4, 2.30.4D of the Administrative Manual (see also Chapter 3, Section 3.04.C.5.d, Chapter 3, Section 3.04.E.6,7 and Chapter 4, Section 4.02 item 2.30.4.D, Faculty Handbook), I agree to submit a written account of my activities and a financial statement by the end of the term following my leave. I will remain at Grand Valley State University for at least one year after completion of my leave regardless of the length of the sabbatical.**

Signature of Applicant

Date

This sabbatical request has been reviewed by:

\_\_\_\_\_(approval, disapproval, or approval as modified)  
 Unit Date

\_\_\_\_\_(approval, disapproval, or approval as modified)  
Applicant's Unit Head Date

\_\_\_\_\_(approval, disapproval, or approval as modified)  
Chairperson, College Personnel Committee      Date

\_\_\_\_\_(approval, disapproval, or approval as modified)

Dean \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_(approval, disapproval, or approval as modified)  
 Provost Date

## SABBATICAL APPLICATION FORM FOR PREPARATION OF SABBATICAL LEAVE REQUESTS

- A. This application is to be submitted to the College Dean no later than November 1 of the academic year preceding the academic year of leave. Unit review must therefore be complete before November 1.
- B. Please type using 12 point font (either single or double space) a maximum of 10 pages for the narrative. Supporting letters and documents may be placed in an appendix. Use the "Sabbatical Leave Request Application Form" as the cover page to your proposal. Your Dean's office will tell you how many copies are needed.
- C. Using this form, fill in the expandable gray boxes (Numbers 1-8) with narrative text. Please follow the instructions given under each heading, and be sure to complete each field.

1. Descriptive title of your project.

The History of Mathematics at Grand Valley State University

2. Goals and objectives.

Proposals must have a clear conceptual focus. Be certain that the conditions and criteria for sabbatical leave as stated in the Administrative Manual, chapter 4, section 2.30.4.D), have been addressed. Proposals should be specific about the academic purpose of the leave. In particular, a proposal should conform to some or all of the following:

- a) a planned effort to retrain professionally (with approval of the chair);
- b) development of new capabilities for teaching or research;
- c) a synthesis or development of prior effort or experiences;
- d) concern with a significant problem, area, or issue in the field of study;
- e) promise of a significant contribution to the subject under study or problem undertaken;
- f) practice of skills or application of research result which deepens or extends the applicant's professional capabilities.

The primary goal of this sabbatical project is to write a history of mathematics at Grand Valley State University. The plan is to make this history available on the Internet and to produce a printed version of this history. This project will satisfy several of the conditions and criteria for a sabbatical leave as stated in the Administrative Manual (Chapter 4, Section 2.30.4.D).

### DEVELOPMENT OF NEW CAPABILITIES FOR RESEARCH.

I will be working on this project under the guidance of Dr. Lynn Mapes in the Department of History. Dr. Mapes will be helping me in (at least) three ways.

1. Dr. Mapes will be assisting me in finding historical materials for this project and to help me in developing interview questions for talking to current and former members of the mathematical community at Grand Valley State University.

2. Dr. Mapes will be helping me integrate the work on this project into the project that he and Dr. Anthony Travis have started, which is to write a history of Grand Valley State University.

3. Dr. Mapes and I will be able to assist each other in writing the histories of our respective departments. While I am working on the history of mathematics at Grand Valley State University, Dr. Mapes will be working on the history of the Department of History at Grand Valley.

In addition, to complete this project, I will need to learn more about creating and maintaining web pages than I currently do. One goal is that this entire project will be made available on the Internet. (I realize I that if this project is approved, I will have to work with people on the Grand Valley Web Team in order to make this history available on the Internet.) While I currently have the ability to create and maintain simple web pages, this project will require that I learn much more so that I can create web pages similar to the one developed for the History of Grand Valley project (<http://www.gvsu.edu/gvhistory/>). In addition, to display mathematics on the web, I may have to learn MathML (Mathematical Markup Language, which is an application for representing mathematical symbols and formulae, aimed at integrating them into World Wide Web documents.)

#### A SYNTHESIS OR DEVELOPMENT OF PRIOR EXPERIENCES.

I have been at Grand Valley since 1973 and have been part of the College of Arts and Sciences in the mid 1970's, part of Kirkhof College in the 1970's and 1980's, part of the Division of Science and Mathematics, and finally, part of the College of Liberal Arts and Sciences. Because of this background and as one of the most senior member of the Department of Mathematics, I am in a unique position to undertake this project since I have been involved with mathematics at Grand Valley for a long period of time and have been actively involved in faculty governance over that time. Examples of my involvement in faculty governance include several years service on the Academic Senate, several years experience on the General Education Committee, and being a member of the Provost's Reorganization Task Force in 2003.

#### PROMISE OF SIGNIFICANT CONTRIBUTION TO THE SUBJECT UNDER STUDY

As far as I know, no one has ever attempted to investigate the history of mathematics at Grand Valley and to write this history. I believe this will be a valuable contribution the Department of Mathematics and to the university. It will also be a valuable contribution to the History of Grand Valley project that has been undertaken by Dr. Travis and Dr. Mapes. Dr. Mapes has indicated that one of the next steps in their project is to have people write histories of the various departments and disciplines at Grand Valley. Dr. Mapes and I will be the first to make this contribution to the overall project.

#### 3. Evidence of preparation.

Describe academic preparation that contributes to feasibility of the project, placing the planned activity in the context of your field. There shall be a thorough attempt by the proposer to search the literature and to place the planned activity in the context of that

literature. This may take the form of literature citations, consultations, and indication of previous work in the field. If a book is being written, append an outline or table of contents to demonstrate that groundwork has been laid.

I have done research in the history of mathematics during a prior sabbatical leave in the winter semester of 1993. During that time I researched the historical development of Galois theory (a field of algebra). However, this project is quite different in that I will attempt to tell the history (and stories about) mathematics at Grand Valley State University.

I will admit that this could be a difficult project for me to undertake since it is something that I have never tried before. However, I am very enthusiastic about this project and will do everything I can to produce an excellent history. I already have several ideas about what to include in this project. These ideas are explained in Part 4 - The Project Plan.

I have found some examples of this type of history by searching the Internet. After several searches, I found the following histories of mathematics departments.

1. North Carolina State University ([www4.ncsu.edu/~njrose/Special/History.html](http://www4.ncsu.edu/~njrose/Special/History.html)).
2. Rutgers University ([www.math.rutgers.edu/~weibel/history.html](http://www.math.rutgers.edu/~weibel/history.html))
3. Union College ([www.math.union.edu/about/history/welcome.html](http://www.math.union.edu/about/history/welcome.html))
4. Harvard University (<http://www.math.harvard.edu/history/index.html>)
5. Virginia Tech (<http://spec.lib.vt.edu/arc/math/math.htm>)
6. University of Northern Iowa (<http://www.math.uni.edu/mathhist.html>)
7. Western Michigan University (<http://www.wmich.edu/math/alumni/history2.htm>)
8. University of Georgia (<http://www.math.uga.edu/history/>)

The North Carolina State project also has a 90-page printed version of this history available to download as a pdf file. I plan to study these examples for ideas for this project and plan to continue to search for more examples of histories of mathematics departments.

4. Project Plan.

Describe the sabbatical project. Show how that plan relates to its goals and objectives.

Grand Valley State University has its own unique history and Dr. Travis and Dr. Mapes are writing this history. As I have explained, my project will fit into this overall project dealing with the history of Grand Valley State University.

As part of Grand Valley State University, the Department of Mathematics (and other mathematical communities within Grand Valley) share in Grand Valley's history. Mathematics is an important part of any university and mathematics has had its own unique history at Grand Valley. Part of the project is to produce a narrative history of mathematics at Grand Valley. This narrative history will include the following:

1. Mathematics during the foundation years and early years of Grand Valley State University during the 1960s.
2. Mathematics during the "cluster college years." This will deal with issues such as how the mathematics curriculum and faculty were affected by the creation of the cluster colleges - Thomas Jefferson College, William James College, College IV (later named Kirkhof College), and the Developmental Skills Institute.
3. The impact of the fiscal crises facing Grand Valley State University in the late 1970s and early 1980s on mathematics at Grand Valley State University.
4. Mathematics during the reorganization of Grand Valley State Colleges into a single college in the 1980s. This will include the role of mathematics as part of the Division of Science and Mathematics. There are many interesting stories during this time, which include the roles of computer science, statistics, and mathematics education at Grand Valley State University. As the department grew larger, separate departments of computer science and statistics were created, and the stories of how and why these departments were created will be described. On the other hand, mathematics education continues to be a vital part of the Department of Mathematics and the benefits (and struggles) of this relationship between mathematics and mathematics education are an important part of the vitality of mathematics at Grand Valley.
5. The relationship between engineering and mathematics. Another important development that had significant impact on mathematics at Grand Valley was the development of the engineering program within the Division of Science and Mathematics. The School of Engineering is now housed in the College of Engineering and Computing.
6. The impact of changes in administration and reorganization on mathematics at Grand Valley. The last ten years have seen significant changes in the central administration of Grand Valley. In addition, the university has been reorganized, and the Department of Mathematics is now part of the College of Liberal Arts and Sciences.
7. The role of tenure-track faculty, the role of adjunct faculty, and the role of affiliate faculty in the teaching of mathematics at Grand Valley over the years.

This narrative history, however, will be only one part of this project. I really want to make the faculty and the mathematics curriculum be the central foci of this project. As such, I hope to document the history of the mathematics curriculum, including course descriptions and the significant changes to the mathematics major over the years. In addition, the role of mathematics in the general education program and other units in the university will be described. I also plan to include as much historical data as I can. This could include the number of courses offered, the number of students enrolled in mathematics courses, and the number of majors.

I also plan to have the mathematics faculty at Grand Valley be a significant part of this history. I hope to be able to give a short biography of every faculty member in mathematics at Grand Valley since its inception. The attempt will be to include all tenure-track faculty members and all affiliate faculty members. (It may be difficult to include the adjunct faculty, but it would be nice to do so since the adjuncts have been an important part of the teaching of mathematics at Grand Valley.) I also plan to include a chronological description of each of the following:

1. The appointments of people to faculty positions in mathematics.
2. When mathematics faculty left their positions at Grand Valley.
3. The tenure decisions for mathematics faculty members.
4. The promotions for mathematics faculty members.

Perhaps more important than this chronology, I also hope to document the accomplishments of the mathematics faculty at Grand Valley. For this, I plan to include the following (probably in chronological order):

1. A description of the sabbatical awards granted to mathematics faculty members. If possible, on the Internet version of this history and with permission of the faculty member, I would like to include links to their actual sabbatical proposals and sabbatical reports. (I think this would be very helpful to faculty members planning to write a sabbatical proposal.)
2. A description of awards granted to mathematics faculty members. This would include awards from Grand Valley State University and awards from outside organizations.
3. A description of the publications by mathematics faculty members. This would minimally include books and articles in professional journals.
4. A listing (perhaps with descriptions) of presentations and workshops given by mathematics faculty members.

This part of the project (and perhaps the narrative history) would be a "living" document in that once it has been created, additions can be made each year. I intend to keep working on this document during my remaining years at Grand Valley (retirement is not too far away).

5. Timetable.  
Indicate estimated dates for each of the significant steps in the project plan. Be as specific as possible. Include an explanation showing whether the project can be completed in the time available. If the sabbatical leave is being used to begin a longer term project, state when you expect the whole activity to be completed.\*

At first I thought this would be a relatively easy project to complete, but as I thought about what I would like included, I came to realize that this will be an ongoing project for several years. Following is a proposed timetable.

1. Academic year 2006-07. During this time, I plan to discuss the project with Dr. Lynn Mapes and plan to learn about doing historical research. In particular, I will need to find out what is available in the university archives and where else I could find historical information about Grand Valley. During this time, I also plan to contact as many former members of the mathematics community at Grand Valley, tell them about this project, and invite them to share their experiences with me. I will also study the histories of the mathematics departments described in Part 3 - Evidence of Preparation.

2. Summer 2007. I plan to continue with the work that was started during the prior academic year. In addition, I plan to start the process of gathering information dealing with the issues and items described in Part (4) - The Project Plan. I also plan to discuss this project with as many current members of the department as possible. In particular, I would like to have them describe their professional background in mathematics, the reasons they chose to accept a position at Grand Valley, and their experiences at Grand Valley.

3. Fall Semester 2007. This will be the semester I will be on sabbatical leave. I plan to have weekly meetings (at a minimum) with Dr. Lynn Mapes to discuss the progress of this project. I will continue the process of gathering information for this project. Also, during this time, I plan to interview current members of the department. I also plan to interview as many former members of the Grand Valley mathematics community as possible and to discuss issues similar to the ones I plan to discuss with the current members. In late September, I will probably begin the process of writing the history of mathematics at Grand Valley. For the narrative history, I will solicit the assistance of Dr. Mapes since I am certain that he will be able to provide valuable advice and editorial assistance with this part of the project. I hope that I will be able to work on the part of the project that deals with "faculty accomplishments" on my own.

4. After Fall 2007. I plan to continue working on this project. I would like to have a first version of this history available on the Internet by the end of the 2007-08 academic year. My best guess is that it will take at least another year to have a version that is ready for printing. I will, of course, be soliciting help from several people for reviewing and editing the document before it is printed.

6. Benefit to one's own or other units.

A clear relationship between the proposed sabbatical leave and a proposer's academic unit shall be demonstrated. If your project is to benefit a unit other than your home unit, describe that situation. Attach signed, written verification of that benefit from the head of that other unit. If not, please indicate that no other unit will benefit.

Most faculty members within the Department of Mathematics have been hired in the last ten years. Although they may get some sense of the history of mathematics at Grand Valley from interactions with others in the department, this project will give them the opportunity to learn the rich history of mathematics at Grand Valley, and hopefully, better appreciate the department and Grand Valley State University. This project will also give

the department valuable resources to help document its accomplishments and an Internet site that can be updated to reflect new accomplishments.

Although this project may not directly affect other units, I hope it will serve as an example of what can be done as part of the overall History of Grand Valley Project being written by Dr. Travis and Dr. Mapes.

7. Arrangements with people or other institutions.

If the project requires collaboration with other institutions or persons, describe the collaboration and provide evidence that the institutions or persons involved agree with the arrangements.\*\* If not, please indicate that no collaboration is necessary or planned. For books, indicate interest of potential publisher if available. You may append correspondence.

8. Other relevant information.

9. Appendices.

a. Attach copies of previous sabbatical reports in the Appendix.

b. Attach a copy of your curriculum vitae in the appendix.

This should be current and complete. Include a list of publications, exhibitions, performances, and productions.

c. Attach letters of support or other supporting documentation.

D. If modification is made after a step in the review process but prior to the College Personnel Committee recommendation, incorporate the modification into the appropriate section of the final proposal as opposed to appending pages. If changes are proposed after the final approval but before or during the sabbatical period, prior consultation with the chair of the unit should occur and a new formal plan document must be approved by the Dean and the Provost before implementation of the proposed plan.

E. Final Report. Each faculty member returning from sabbatical leave will provide a written account of the sabbatical activities and accomplishments and deposit copies with his/her appointing officer and unit head, the Provost, the President, the Research and Development Center, and the library. The report shall be filed no later than the end of the first semester after return to campus and shall include an account of the financial remuneration received during the sabbatical leave. Failure to complete the approved sabbatical project, submit a final report or



participate in dissemination of sabbatical work may negatively affect an annual salary adjustment and decisions on future sabbatical proposals.

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\*In such a case, your sabbatical report is to be made as scheduled by the policy stated in the Administrative Manual even if the entire project is unfinished. Report on whatever was accomplished during the sabbatical leave.

\*\*If there is a possibility of creating Intellectual Property during a sabbatical and you are involved in external collaboration with another university, business or organization, it is important to review the GVSU and collaborating institution Intellectual Property Policy (IPP) prior to initiating work activities. For support in the IPP review contact GVSU legal counsel.

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