ACTIVITIES AT LWTC
SEPTEMBER 2006 through DECEMBER 2008

Presented in Reverse Chronological Order

William Bricken

SUMMARY OF ACTIVITIES

TEACHING AND WORKING WITH STUDENTS

Taught twenty-eight 5-unit quarter courses.
Supervised twenty-two ABED and supplemental math courses.
Many positive comments from students.

WORKING WITH FACULTY/STAFF

Participation in aspects of:
- math department administration.
- cross-departmental activities,
  esp. MMDP, ECE, Engineering Graphics, Academy.
- global outcomes initiative and accreditation.
- placement office COMPASS testing.

SERVICE (COLLEGE, COMMUNITY, INDUSTRY)

Grant proposals submitted to Honda, NSF, DoEd.
College in the High School advisor.
Presentation at Washington State math teachers conference.
Guest lecturer at East China Normal University.

PROGRAM MANAGEMENT/ADVANCEMENT

Design and implement Math Department Assessment Plan.
Review and revise departmental textbook selections.
Contributed to development, design and construction of MathLab.
Introduce new departmental Math 90 exam.
Evaluation, refinement and management of Math80 department exam.
Contributed to course descriptions, outlines and objectives.
Initiation of new courses.

PROFESSIONAL DEVELOPMENT

Animation system programming (Mathematica 6.0 and Cheetah3D).
Design of innovative architectures for nano-scale computation.
Book of readings “Teaching for Innovation”.
Book draft “Foundations of Spatial Arithmetic”.
Contributions to the
Boundary Institute for the Study of Simplicity.

========== TEACHING AND WORKING WITH STUDENTS ==========

HIGHLIGHTS 9/06 through 12/08

Tally of 5-unit courses taught over 9 quarters (28 courses total):

Math80	Pre-algebra	2
Math90	Introductory Algebra	9
Math99	Intermediate Algebra	8
Math102	Quantitative Reasoning	5
Math107	Math in Society	2
Math141	Precalculus	1
Math146	Statistics	1

Supported and taught (individual tutoring and supervision):

ABED30	Arithmetic Skills	5
ABED40	Arithmetic Skills	5
Math70	Pre-algebra Modules	4
Math85	Algebra Modules	5
Math95	Algebra Modules	3

---------- THIRD TENURE REPORT, DECEMBER 2008 ----------

COURSES TAUGHT

1/09 Projected courses, Winter 2009

Math99	Intermediate Algebra	ABED30	ABE Math I
Math102	Quantitative Reasoning	ABED40	ABE Math II
Math107	Math in Society	Math95	Factoring Module

9/08 Autumn 2008

Math99	Intermediate Algebra	ABED30	ABE Math I
Math102	Quantitative Reasoning	ABED40	ABE Math II
Math107	Math in Society	Math95	Factoring Module

7/08 Summer 2008

Math99	Intermediate Algebra	ABED30	ABE Math I

Math102 Quantitative Reasoning	ABED40 ABE Math II
Math102 Quantitative Reasoning	Math70 Elements of Arithmetic
	Math85 Pre-algebra Module

4/08 Spring 2008

Math90 Intro Algebra	Math70 Elements of Arithmetic
Math99 Intermediate Algebra	Math85 Pre-algebra Module
Math102 Quantitative Reasoning	
Math107 Math in Society	

1/08 Winter 2008

Math90 Intro Algebra	ABED30 ABE Math I
Math90 Intro Algebra	ABED40 ABE Math II
Math99 Intermediate Algebra	Math95 Factoring Module

---------- SECOND TENURE REPORT, NOVEMBER 2007 ----------

9/07 Autumn 2007

Math90 Intro Algebra	Math70 Elements of Arithmetic
Math90 Intro Algebra	Math85 Pre-algebra Module
Math99 Intermediate Algebra	

7/07 Summer 2007

Math90 Intro Algebra	ABED30 ABE Math I
Math99 Intermediate Algebra	ABED40 ABE Math II
Math102 Quantitative Reasoning	Math85 Pre-algebra Module

4/07 Spring 2007

Math90 Intro Algebra	ABED30 ABE Math I
Math99 Intermediate Algebra	ABED40 ABE Math II
Math114 Precalculus	Math95 Factoring Module

1/07 Winter 2007

Math80 Basic Math	Math70 Elements of Arithmetic
Math90 Intro Algebra	Math85 Pre-algebra
Math99 Intermediate Algebra	

---------- FIRST TENURE REPORT, DECEMBER 2006 ----------

9/18/06 Begin teaching, Autumn 2006

Math80 Basic Math
Math90 Intro Algebra
Math120 Statistics

Developed own curriculum, teaching style, classroom management, etc. for these classes

11/27/06 -- 11/29/06

Managed cancellation of classes during snow.

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========== WORKING WITH FACULTY/STAFF ==========

HIGHLIGHTS 9/06 through 12/08

Contribute to projects: Global outcomes, COMPASS testing, math course descriptions, managing textbooks.

Cross-departmental work with ECE, MMDP, IT, Testing and Placement, and the Academy.

---------- THIRD TENURE REPORT, DECEMBER 2008 ----------

9/08-present
Support textbook distribution for Math Department faculty.

9/08
Worked with Neera Metha on her Mastering Math course.

8/08-9/08
Developed "Mathematical Methods for PreSchool Teachers" course.

6/08
Wrote "Advising is Global Teaching"

5/08
Wrote "Game Theory and Interest-Based Bargaining".

1/08
Developed "Digital Mathematics" course

---------- SECOND TENURE REPORT, NOVEMBER 2007 ----------

12/07
Wrote “How Measurement Works”.

9/07-present
Extended discussion of Global Outcomes, critical thinking project, and rubrics. Made recommendations for improvement, joined the Global Outcomes Committee.

5/07 and 10/07
Participate in MMDP advising days.

5/07 and 11/07
Discussed NSF and DoEd grant proposals with John Gabriel. Integrated MMDP faculty and students into grant proposal tasks and funding.

1/07-present
Work with Placement office to develop new procedures for administering COMPASS placement tests.

1/07-present
Work with Academy faculty and administration.

1/07-present
Participate in ASC meetings and organization.

4/26-28/07
Attend Washington State Community College 2007 Mathematics Conference

1/07-present
Assumed departmental responsibility for book ordering.

12/06-present
Attend and participate in the usual collection of administrative meetings (division, departmental, ASC, basic skills, placement, tenure, orientation, ...)

Quarterly
Participate in Advising Day, advise students.

---------- FIRST TENURE REPORT, DECEMBER 2006 ----------

11/1/06
Participate in accreditation interviews

10/06
attended faculty meetings of IT and MMDP to coordinate math offerings spoke with several other faculty about math needs of their programs

10/06
email and talk with Academy faculty several times; progress reports on Academy students enrolled in my classes

9/06 - 10/06
Many orientation meetings; familiarize with College facilities, systems, infrastructure and support

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========= SERVICE (COLLEGE, COMMUNITY, INDUSTRY) =========

HIGHLIGHTS 9/06 through 12/08

Contribution to Global Outcomes Committee.
Grant proposals to Honda, NSF, DoEd.
Present at Washington State math teachers conference.
College in the High School advisor.
East Chine Normal University visit and teaching handbook.

---------- THIRD TENURE REPORT, DECEMBER 2008 ----------

7/08-8/08
Prepared "Global Objectives by Course" analysis

4/08
Wrote "How Societies Fail"

2/08
Wrote a series of memos for the Global Outcomes Committee
-- "The Assessment Plan"
-- "Assessment Without and With Three Syllable Words"
-- "Some Assessment Tools and Methods"
-- "Exercises for Program Goals"
-- "Multiple Levels of Analysis: Detail and Recommendations"

12/07 - present
Continue to serve as Math advisor for College in the High School Program. Maintain support and administration of Cedarcrest CiHS math course.

---------- SECOND TENURE REPORT, NOVEMBER 2007 ----------

9/07 - present
Continue to serve as Math advisor for College in the High School Program. Maintain support and administration of Cedarcrest CiHS math course.

8-11/07
Write, assemble, and refine Department of Education Grant

Proposal, "Curriculum Software for Comparing Symbolic and Manipulative Formal Systems". Rejected 05/08.

4/26-28/07
Gave presentation (two times) at Washington State Community Colleges 2007 Mathematics Conference.

4-5/07
Write, assemble, and refine NSF Grant Proposal, "Development of Boundary Math Software". Rejected 11/07.

3/16/07-4/1/07
Visit to East China Normal University in Shanghai. Taught two classes, 10 hours each (one hour per day for two weeks).

1/07-present
Continued participation in College in the High School Program.

---------- FIRST TENURE REPORT, DECEMBER 2006 ----------

11/1/06 - 11/15/06
Drafted DoE Institute of Education Sciences proposal.
Did not finish in time for submission -- try again in April 2007

11/06
Participate in discussion with Academy members about Math courses. Initiate looking for new curriculum materials, and for funding sources.

10/06
volunteer as coordinator for new College in the High School Program; prepare to work at Cedarcrest with math faculty

9/15/06 - 10/31/06
Write, assemble, and refine American Honda Grant Proposal with Dave Cunningham and Doug Emory (and help from several others); enlisted John Gabriel and the MMDP faculty. Rejected 12/06.

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========== PROGRAM MANAGEMENT/ADVANCEMENT ==========

HIGHLIGHTS 9/06 through 12/08

Design and implement new math coursework.
Refine Math Department Course Outlines and curriculum structure.
Assess popularity of math teaching styles.
Design and implement Math Department Assessment Plan.
Build MathLab.
Develop and analyze Departmental Math80 Final Exam, and Math90 Final Exam.

---------- THIRD TENURE REPORT, DECEMBER 2008 ----------

12/08
Designed and implemented survey of student preferences for online, hybrid, MathLab and conventional math teaching. Wrote "Math Teaching Style Survey Analysis"

11/08
Designed and developed departmental Math 90 Final Exam.

10/08
Wrote "LWTC Math Department Global Objectives Matrix and Assessment Plan"

9/08
Wrote "College-level Math at LWTC"

9/08
Wrote "The Intermediate Algebra Bottleneck"

1/08 - present
Supported instructors teaching in the Math Lab.

4/08-7/08
Evaluation of texts for M80, M90, M99, M141, M142, M151, M152
New textbook selection and distribution.

4/08 - 6/08
Developed curricula for Math 107.

4/08
Designed, developed, documented, and built curricula modules for Digital Mathematics.

4/08
Reviewed all Math Department course descriptions. Submit revisions to CRC in 11/08.

3/08
Wrote visualization software for quadratic equations, in Mma.

2/08 - 6/08
Collected many (free, web-based or distributed) software demonstrations relevant to Math classes.

1/08 - present
Continued to maintain, modify, analyze, and distribute the department wide Math 80 final exam.

---------- SECOND TENURE REPORT, NOVEMBER 2007 ----------

8/07 - present
Steps toward actualizing the MathLab.

5/07-present
Develop idea of a MathLab.

5-6/07
Review COMPASS testing procedures, make recommendations for improvement.

1/07-present
Preliminary discussion, analysis, and design of a MathLab.

1/07-present
Design, develop, debug, evaluate, publish, and analyze results of new Math80 final exam.

1/07
Reviewed, researched and rewrote (minor changes) Math107 course outline, student competencies, objectives.

---------- FIRST TENURE REPORT, DECEMBER 2006 ----------

12/06

prepare materials for tenure review, Year 1

10/06

review and analyze Math80 final exam for consistency with new text; make suggestions to align test with new textbook

10/06

rewrite Phil106 course description

9/7/06 - 9/8/06

New faculty orientation, Olympia

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================ PROFESSIONAL DEVELOPMENT ================

HIGHLIGHTS 9/06 through 12/08

Research on virtual manipulatives, axioms for diagrammatic math, and nano-technology silicon circuit design.
Spatial Arithmetic book (draft).
Software programming of animation systems for math.

---------- THIRD TENURE REPORT, DECEMBER 2008 ----------

11/08
Attended the NCTM regional conference. Wrote conference report.

2/08 - present
Wrote 100 pages of Mma code for Additive Systems demo.

6/08
Refined axiomatic approach to Additive Systems.

4/08
Wrote short piece for AI Magazine,
"Simplicity Rather Than Knowledge".

2/08 - 8/08
Contributed to Boundary Institute proposals to FQXI, NSF, Microsoft, and DARPA.

---------- SECOND TENURE REPORT, NOVEMBER 2007 ----------

8/07 - present
Secured grant of Mathematica 6.0 software system from Wolfram Research. Began programming parallel, visual models of arithmetic computation, including addition, subtraction, multiplication, and division.

6/07 - 10/07
Presentation at Hewlett-Packard Research Labs, Palo Alto.
Intensive study of nano-technology computing architectures.

4/07 - present
Continuing participation in and technical contributions to the

Boundary Institute for the Study of Simplicity.

3/07
Assembled a 300 page book of readings for East China Normal University.

3/07
Finalized an 11-minute animated and narrated video of Spatial Arithmetic operations.

12/06-present
Wrote most of a book on Spatial Arithmetic. 300 pages finished in rough draft. Text is about 70% done.

12/06-present
Read several relevant math books (see reading list)

---------- FIRST TENURE REPORT, DECEMBER 2006 ----------

11/06 - 12/06
Began study of Hilbert, Frege, Godel in the context of the formalization of arithmetic.

8/1/06 - 9/15/06
Developed a "compelling" animated video for Spatial Arithmetic, as a supplement to funding proposals.

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