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.
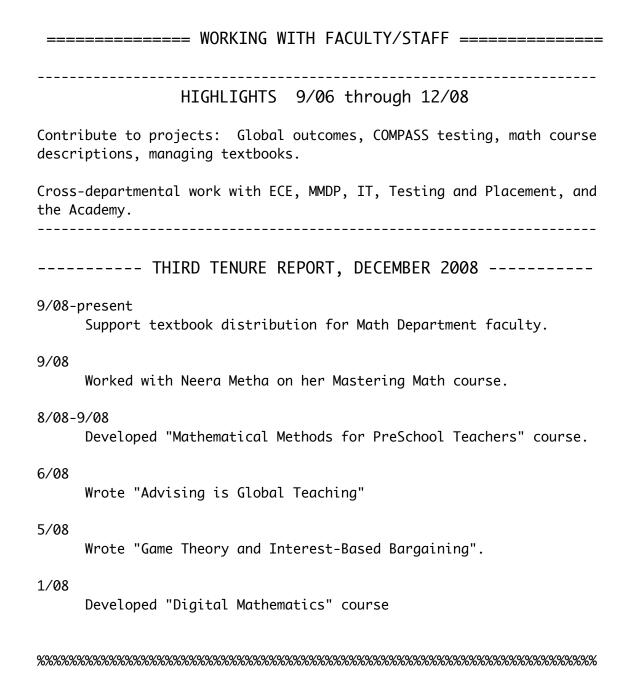Initiation of new courses.

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

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        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
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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

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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.

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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.

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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.

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