

# Curriculum Vita

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### Earned Degrees:

|      |                   |  |
|------|-------------------|--|
| 1980 | BA in Mathematics | Westmont College (Santa Barbara, California)                 |
| 1981 | MS in Mathematics | University of Oregon   |
| 1985 | Ph.D.             | University of Oregon<br>Dissertation Topic: Successor Groups |

### Major Fields of Interest:

Mathematics education (K-12), primarily developing classroom activities implementing NCTM standards and meeting Oregon curriculum standards

Abstract algebra (finite groups and commutative rings) and development of proof abilities, primarily related to innovations in undergraduate education

### Academic Appointments:

|                          |                            |              |
|--------------------------|----------------------------|--------------|
| Assistant Professor      | Southern Oregon University | 1987-1990    |
| Associate Professor      |                            | 1990-1997    |
| Professor                |                            | 1997-present |
| Assistant Professor      | Gonzaga University         | 1985-1987    |
| Graduate Teaching Fellow | University of Oregon       | 1980-1985    |

## **Administrative Appointments (all at Southern Oregon University):**

Science, Technology, Engineering, and Mathematics Division Director 2014-present  
Charged with oversight of programs in Natural Sciences (Biology, Chemistry, Environmental Education, and Physics) and Computational Sciences (Computer Science and Mathematics), including serving as hiring and budgetary authority overseeing a budget of approximately \$4M.

### *Achievements include:*

- Built the new Division structure and operations following the break-up of the College of Arts and Sciences, including: staff support structure for programs, establishing and refining divisional policies and procedures, adapting programmatic and budget structure to new structure, reestablishing record keeping for division and shifting from paper to digital format.
- Oversaw the temporary exodus and return of all science programs and laboratories to vacate the Science building for 1 year during a retrofit. Worked with programs, Facilities, and Legal following the return to remedy problems arising from the remodel.
- Participated in design and implementation of standardized loading and course maximums policy under newly created Associate Vice Provost for Academic Resource Management.
- Worked with programs to review and tighten course planning, offerings, and instructor assignment to make better use of resources and reduce number of low enrollment courses (under 10).
- Worked closely with Computer Science program, turned reworked hiring approach to be more competitive, turning around history of failed searches. Process will completely replaced all CS faculty by 2020 (1 resignation/3 retirements).
- SOU representative to the Higher Education Coordinating Commission's Committee reviewing and finalized the allocation formula for the Engineering Technology Sustainable Funds (ETSF) the provide additional support to engineering and technology programs at the public universities in Oregon.

Mathematics Department Chair (0.5-0.67 FTE admin) 1995-2003 and 2008-2014

### *Achievements include:*

- Led department in a substantial restructuring of the major requirements; although necessary to deal with budget cuts, the changes were also managed to result in more stable class sizes, a stronger cohort model, and a more attractive major.
- Found space in the department for a majors' study room, which facilitated greater bonding of majors by providing them a "home" within the department. While small, the room includes study areas, small computer lab, and lounge-like amenities.
- Significantly increased the number of majors, their sense of belonging and their commitment to the major.
- Moved control of departmental self-support funds from extended campus programs to the department. This change allowed the department to hire a permanent

developmental mathematics instructor and stabilize funding for non-work study student tutors.

- Led in improving the reputation of department on campus (from elitist to team player)
- Implemented placement testing and improved advising for non-majors.
- Oversaw implementation of new interdisciplinary Statistics Minor and Applied Mathematics Professional Science Masters.

Chief Negotiator for the Associated Professors of Southern Oregon University 2005-2014

*Achievements include:*

- Led the development and implementation of a significantly improved compensation plan for faculty.
- Maintained a healthy and supportive working relationship with the administration, resulting in reaching a successful conclusion without the difficulties of our sister institutions (impasse, mediation, preparations for striking, etc.).
- Led the development and implementation of a substantial mid-contract revision to both the bargaining agreement and faculty bylaws, which clarified the employment and compensation of temporary faculty and created permanent professional and professorial faculty roles.
- In addition to bargaining duties, worked closely with administrative offices across campus to effectively implement agreements within their respective areas of responsibility, including budgeting, payroll, and human resources.

Accelerated Baccalaureate Program Director (0.25-0.33 FTE admin) 1998-2008

*Achievements include:*

- Took program from pilot status at the end of the FIPSE grant to an established university program.
- Doubled the number of participating majors.
- Implemented second admission point, which increased the average number of participating students by 125%.
- Maintained an average three-year graduation rate of 80%.

Special Assistant to the Provost for Honors Restructuring (0.33 FTE admin) 2007-2008

*Achievements include:*

- Led redesign program to build on existing components, but better meet National Collegiate Honors Council recommendations and dramatically reduced the overall budget.
- Led Honors Council in developing program components, including mission statement, assessment plan, evaluation instruments, curricular guidelines, admissions criteria, and satisfactory progress criteria.
- Hired a program assistant and together established administrative procedures for recruitment and record keeping.
- Secured Forest Hall in the Cascade Complex for an Honors Residence Hall beginning Fall 2008.

- Secured Faculty Senate approval for restructured program and increased participation in honors across campus by increasing student enrollments, types of courses available, and involving more faculty in teaching honors courses, several from departments that had not previously participated.
- Passed program to new director and continued to mentor that faculty member in 2008-2009.

Faculty Senate Chair (0.25 FTE release from teaching)

1996-1998

**Courses Taught (ordered from most frequent to least frequent):**

Lower Division:

Introduction to the major course with a historical focus  
 single-variable calculus  
 precalculus courses  
 mathematics courses for prospective K-7 teachers  
 linear algebra  
 finite/business mathematics courses  
 problem solving course

Upper Division:

introductory and advanced abstract algebra courses  
 transition to abstract mathematics/introduction to proof and higher mathematics  
 mathematics courses for prospective 5-12 teachers  
 senior capstone  
 axiomatic geometry  
 point-set topology/metric spaces

**Projects Advised:**

Masters Theses and Graduate Projects:

Alan McCreedy, Group Theory and the Symmetries of Nature, 1989/90  
 Dorrette Long, Math Anxiety, 1992

Senior Honors Projects:

Laura Kustiner, Galois Theory and the Unsolvability of the Quintic, 1989/90  
 Aaron Curtis, Galois and the Cyclotomic Equation, 1992/93  
 Shawn Lanier, Galois Theory and the Unsolvability of the Quintic, 2002/03  
 Matthew (Kitt) Schlatter, Cryptography: A Brief Exploration of Three Types of Public Key Cryptosystems, 2010/11  
 Sage Piersel, Crystallographic Group Theory, 2011/12  
 Evan Laslsey, Zermelo-Fraenkel Set Theory and the Foundations of Mathematics, 2012/13

Senior Capstone Projects:

Mark Schwarz, Identification of Two-Dimensional Symmetry Groups, 1997/98  
 Ryan Bauer, Game Theory, 1999/2000  
 Elijah Bunnell, Galois Theory, 2005/06  
 George Harpham, Games and Group Theory, 2005/06  
 Jerod Michel, Cyclotomic Polynomials, 2005/06

Joseph Nelson, Mersenne Primes, 2005/06  
Krista Weisz, Asymmetric Cryptosystems, 2005/06  
Stacey Anderson, The Euclidean Group, 2006/07  
Sarah Dalton, Fractal Geometry, 2006/07  
Martini Machado, Free Groups and Generators & Relations, 2006/07  
Ivan Murphy, Platonic and Archimedean Polyhedra, 2006/07

McNair Projects:

Jarod Michel, The Birth of Abstract Algebra, Summer 2005

**Papers and Workshops Presented:**

*Academic:*

“Successor Groups and Ordered Division Rings,” AMA/MAA Joint Meetings, San Antonio, January 1987.

“The SOSM Math Lab: A Resource for You,” OCTM Regional Conference, October 1988.

“Manipulatives and Fractions,” OCTM Regional Conference, October 1989.

“A Writing Intensive Linear Algebra Course – A Successful Experiment,” AMS/MAA Joint Meetings, San Antonio, January 1993.

“From Escher to Conway and Penrose – Create Interesting Tilings Using a Variety of Techniques,”

Northwest Mathematics Conference, October 1993

Western Regional NCTM Conference, October 1994

“Portfolios – A Path to Deeper Understanding,” State of Jefferson Conference, May 1994

“Using Real-world Applications and the TI-82 to Motivate and Develop Mathematical Content while Immersed in the Application,” Canadian Regional NCTM Conference, August 1996, and Northwest Mathematics Conference, October 1996

“More on using Real-world Applications and the TI-82 (or TI-83) to Develop Content While Immersed in the Application,” Northwest Mathematics Conference, October 1997

“Activities for computation and Estimation Benchmarks: Grades 5-10,” Northwest Mathematics Conference, October 1999

“More Activities for Computation and Estimation Benchmarks: Grades 5-10,” Northwest Mathematics Conference, October 2000, and Western Regional NCTM Conference, February 2001

“How Can You Tessellate?” Northwest Mathematics Conference, October 2002

“SOU’s Senior Capstone,” (with Daniel Kim), PNWMAA, June 2003

“Counting Activities, Grades K-2,” Northwest Mathematics Conference, October 2005,  
and Northwest Mathematics Conference, October 2008

“Golden Triangles, Grades 7-12,” Northwest Mathematics Conference, October 2008

*Administrative:*

“Accelerated Baccalaureate Program,” with Al Blaszak, PASS Meeting, Eugene Oregon,  
May 1997

“Southern Oregon University’s Accelerated Baccalaureate Program, Earn a Bachelor’s  
Degree in 3 Years,” with Adriane Hill, AACRAO Conference, Charlotte NC, April  
1999

“Southern Oregon University’s Accelerated Baccalaureate Program, Bachelor’s Degree  
in 3 Years,” with Adriane Hill, AACRAO Conference, New Orleans, April 2000

SOU Workshops

Department Chairs Workshops (with Neil Kunze)

“Money, Money, Money,” SOU Department Chairs Workshop, June 2000

“Faculty Evaluation, Sample Implementation Scheme,” SOU New Department  
Chairs Workshop, April 2001

“Money, Money, Money,” SOU New Department Chairs Workshop, April 2001

“Guiding Faculty from Associate to Full Professor,” SOU Department Chairs  
Workshop, June 2003

“Workshop for New Department Chairs,” SOU New Department Chairs  
Workshop, October 2003

“Dealing with Student Complaints,” SOU Department Chairs Workshop,  
December 2003

“Dealing with Student Complaints, Part 2,” SOU Department Chairs Workshop,  
June 2004

“Promotion and Tenure, Suggestions for Assembling Successful Applications,” SOU  
Faculty Workshop, October 2006

“Workshop for New Department Chairs,” SOU New Department Chairs Workshop,  
October 2006

**Publications:**

*Academic:*

“Teaching Problem Solving with the Game of Stalemate,” Washington Mathematics, Fall 1987

“Dell Crossword Puzzles and Problem Solving,” TOMT, OCT/NOV 1989

Excerpts from Geometry and Spatial Visualization for Grades 4-8 Series

“From Crackers to Trivets: A Study of Tilings – Activity 1,” TOMT, OCT/NOV 1990

“From Crackers to Trivets: A Study of Tilings – Activity 2,” TOMT, DEC 1990

“From Crackers to Trivets: A Study of Tilings – Activity 3,” TOMT, JAN 1991

“From Cubes to Crystals: A Study of Three-dimensional Visualization – Activity 1,” TOMT, MAR/APR 1991

“From Cubes to Crystals: A Study of Three-dimensional Visualization – Activity 2,” TOMT, MAY/JUN 1991

TOMT series co-authored with Mike Murphy, Waluga Junior High School, Lake Oswego, Oregon.

“How High is the Ceiling,” TOMT, DEC 1991

Reprinted, Virginia Mathematics Teacher, Spring 1992

“How Tall Is That Tree?” TOMT, DEC 1992

“How Far Is It Across?” TOMT, JAN/FEB 1993

“How Tall Is It?” TOMT, DEC 1994

“How Proportional Is It?” TOMT, JAN/FEB 1995

Excerpts from Statistics Activities for Grades 3-7 Series

“A Typical Student, Activity 1,” TOMT, OCT/NOV 1992

“A Typical Student, Activity 2,” TOMT, DEC 1992

“A Typical Student, Activity 3,” TOMT, JAN/FEB 1993

“A Typical Student, Activity 4,” TOMT, MAR/APR 1993

“A Typical Student, Activity 5,” TOMT, MAY/JUN 1993

“Newton’s Method and the TI-81,” TOMT, MAY/JUN 1994

“High Roller,” TOMT, MAY/JUNE 2001

“Number Scrabble,” TOMT, SEP 2005

*Administrative:*

“The Appropriate Use of Computational Tools in Mathematics Education, The position Paper of the Oregon Mathematics Education Council,” OMEC, Spring 1990

**Grants, Honors and Awards:**

“Activities for Developing Geometry and Spatial Visualization Skills, Grades 4-8,” 1989/90  
(principle author of materials developed by SOU team under Eisenhower grant, John Engelhardt was principle investigator)

“Statistical Activities for Grades 3-7,” 1990/91 (principle author of materials developed by SOU team under Eisenhower grant, John Engelhardt was principle investigator)

INPUT Project Award (Business Math), 1996/97

Oregon Council of teachers of Mathematics (OCTM) 2009 Area Recognition Award for  
“dedicated leadership and service to students, staff, schools, and citizens of Oregon.”

Outstanding Service Award, College of Arts and Sciences, Southern Oregon University,  
2009-10

### **Academic Honors:**

Phi Kappa Phi  
Omicron Delta Kappa  
Sigma Xi

### **Professional Affiliations:**

National:

Mathematical Association of America  
National Council of Teachers of Mathematics

Regional:

Oregon State Mathematics Council  
Teachers of Teachers of Mathematics

Offices Held:

President, Teachers of Teachers of Mathematics, 1995/96 & 1996/97  
Treasurer, Teachers of Teachers of Mathematics, 1997-2018

### **Textbooks Reviewed:**

Mathematics for Elementary Teachers, A Contemporary Approach (3<sup>rd</sup> Edition), Musser and Burger, Prentice Hall, 1993

Foundations of Higher Mathematics (3<sup>rd</sup> Edition), Fletcher and Patty, PWS-Kent, 1995

Abstract Algebra, An Introduction (2<sup>nd</sup> Edition), Hungerford, Saunders College Publishing, 1997 (reviewed in 2010)



## Other Faculty Service:

### *Select Departmental Committees:*

Personnel Committee, 1987/88, 1989-1995, 2004-2008; Chair, 1990-1993  
Assorted Curriculum Committees, 1987-1992, including  
Ad Hoc Linear Algebra Committee Chair, 1989/90  
Graduate Committee Chair, 1992-1994  
Math Lab Coordinator, 1988-1995, 2004-2006, 2008-present  
Mathematics Education Committee, 1988/89, 1990-1992, 1997-1999, 2004-2014  
Representative to University Teacher Education Committee, 2005/06  
Representative to the Southern Oregon Cadre, 2005/06  
Math Club Advisor, 1989/90 (organizer and original advisor)  
Mth 158 Course Coordinator, 1990-1997

### Colleague Evaluation Committees:

|                               |                        |
|-------------------------------|------------------------|
| John Engelhardt, 1990 (chair) | Irving Lubliner, 2009  |
| John Whitesitt, 1992          | Curtis Feist, 2010     |
| Reider Peterson, 1994 (chair) | Larry Shrewsbury, 2010 |
| Kemble Yates, 1998            | Jim Hatton, 2010       |
| Dusty Sabo, 2000              | Francie Bostwick, 2010 |
| John Engelhardt, 2001         | Curtis Feist, 2011     |
| Daniel Kim, 2002              | Kemble Yates, 2012     |
| Dusty Sabo, 2007              | Francie Bostwick, 2012 |
| Daniel Kim, 2009              | Dusty Sabo, 2013       |

### *Select School of Science Committees:*

Physics Search Committee, 1993/94  
Scholarship Committee, 1993-2003

### *University Committees:*

University Financial Aid and Awards Committee, member, 1987-1990  
Ad Hoc Committee on Academic Advising, 1989-1993  
Academic Standards Committee, 1990-1995; Chair, 1992-1995  
Courtesy Committee, 1990-1993  
Director of Advising Search Committee, 1991  
Assistant Lab Manager (Computing Services) Search Committee, 1991  
Scheduling Committee, 1991/92  
Faculty Senate, 1994-1998, 2000-2002, 2008-2014

### Associated Posts:

Faculty Senate Hearing Committee, 1994/95, 2000/01 (chaired hearing panel)  
Faculty Senate Advisory Council, 1995-1998  
Campus Planning Committee, 1995/96  
Faculty Senate Chair, 1996-1998  
Constitution Committee, 2000-2002; Chair 2001/02 and 2008-2014  
Includes overseeing major updates to all sections of the bylaws, including  
faculty governance, promotion and tenure criteria, and faculty evaluation.

Faculty Mac Users Group, 1995-97 (organizer and convener)  
BASIS Committee, 1995-97  
Accelerated Baccalaureate Committee, 1996-present; Director 1998-2008  
Student Mac Users Club Advisor, 1998/99  
Academic Policies Committee, 1998-2000, 2004-2007; Chair, 1999/2000, 2007  
Phi Kappa Phi Chapter Steering Committee, 1998-2000  
    Offices Held: Secretary, 1998/99, 1<sup>st</sup> Vice President, 1999/2000  
Focused Accreditation Report Committee, 1998/99  
APSOU Executive Board, 1999-2003; ex officio 2004-present (chief negotiator)  
    Offices Held: Treasurer, 2000-2003, Bargaining Team member, 2000-2002  
OQAT Grant Steering Committee, 1999-2002  
CAPP Implementation Team, 2001-2003  
Provost Search Committee, 2002/03  
Ad hoc Committee that developed Department Chairs' Manual, 2004/06  
Ad hoc Compensation Committee, 2004/05  
Joint Taskforce on Professional Faculty, Chair, 2006  
Joint Taskforce on Grievances, Chair, 2006  
Honors Workgroup, Chair, 2007  
Honors Council, 2007-2014  
CAS CBA/Bylaws Team, Chair, 2007-2009  
Academic Advising Committee, 2008-2011  
Legislative Action team, 2009

*Off-Campus Committees and Offices:*

Oregon Mathematics Education Council member, 1988-1992  
    Offices held: Chair-elect, 1989/90, Chair, 1990/91, and Past-chair, 1991/92  
Directed Regional Mathematics Contests in 1989, 1990, 1991, 1992, 1993, 1994, and  
    1995  
Trinity Respite Center Advisory Board, 2000-2006 (financial consultant)  
Pacific Northwest Mathematics Association of America Distinguished Teaching Award  
    Selection Committee, 2004 and 2005  
Praxis Exam Item Writer, 2006