

Curriculum Vitae

KEVIN R. COOK

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Education: B.S. Mechanical Engineering Technology, Montana State University, 1984
M.S. Industrial and Management Engineering, Montana State University, 2003

Professional Registrations: Professional Engineer, State of Montana (#13525PE)

University Experience: **Montana State University**
Department of Mechanical and Industrial Engineering **Bozeman, MT**

Associate Professor – Mechanical Engineering Technology 8/10 to present
Assistant Professor – Mechanical Engineering Technology 8/05 to 6/10
Adjunct Associate Professor – Mechanical Engineering Technology 6/03 to 8/05
Adjunct Assistant Professor – Mechanical Engineering Technology 8/95 to 6/03

- Provide quality classroom and laboratory instruction within the Department of Mechanical and Industrial Engineering (M&IE)
 - Develop new course and laboratory material in support of Mechanical Engineering Technology (MET) curriculum
 - Utilize research and creative activities to improve teaching and student learning
 - Support the department, college, and university through service activities
 - Serve on state and national technical and education committees
 - Advise undergraduate students in the MET program
 - Serve as MET program coordinator for the M&IE Department
 - Support accreditation requirements within the MET program
 - Interact with and support student concerns on a day-to-day basis
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Industrial Experience: **Montana Design Services** **Eureka, MT**

Private Consulting Activities 5/96 to 8/2008

- Performed various engineering consulting activities for a small design firm
- Activities mostly related to sawmill equipment design and improvement, industrial dust collection, manufacturing process enhancement and conveyor equipment design were performed

Gibson Guitar Company - Montana Division **Bozeman, MT**

Engineering Manager 1/95 to 8/95

- Managed day to day activities of the production support staff
- Designed and implemented production enhancement tooling and equipment
- Developed and implemented a quality improvement program
- Managed maintenance and improvements to the physical plant
- Lead design team responsible for product enhancements and new product development

**Industrial
Experience – cont.:****Boeing Commercial Airplane Group****737/757 Airplane Tooling Organization****Renton, WA*****Tool Engineering Supervisor******6/92 to 1/95***

- Provided tool engineering resources and expertise to integrated product definition teams developing the next generation 737 airplanes
- Developed and administered the schedule, budget, and objectives of the next generation 737 body structures tool engineering project
- Managed work load, schedule, budget, and manpower requirements
- Developed and implemented process improvement opportunities
- Served as a member of the Montana State University Industrial Advisory Board
- Served as Renton Tool Engineering Training Focal and College Relations Representative
- Instructed a course in Managing for World Class Competitiveness

Supervisor - Special Assignment to Montana State University***8/91 to 6/92***

- Developed and instructed a senior level course in Tool Design (MET 448)
- Developed and instructed a Basic Manufacturing Processes Lab (MET 256)
- Developed and instructed an Advanced Manufacturing Lab (ME 480)

Specialist Engineer / Design Lead***12/90 to 8/91***

- Assigned jobs to designers, monitored progress, facilitated problem resolution and provided design support and expertise
- Designed special purpose tooling for efficient airplane manufacture - utilizing conventional and computer aided design techniques
- Participated on numerous Quality Improvement Teams

***Senior Engineer
Engineer******11/87 to 12/90
3/85 to 11/87***

- Designed special purpose tooling for efficient airplane manufacture - utilizing conventional and computer aided design techniques
- Investigated and resolved tooling related problems
- Provided CATIA (CADD system) expertise to designers, investigated CATIA system problems and coordinated resolution
- Assigned as Project Team Leader of an interdivisional team chartered to develop standards and procedures for the use of CATIA in all Boeing Commercial Airplane Tool Engineering Divisions
- Participated on a Design/Build Team in a new product development group. Developed design concepts, provided manufacturability input, provided process input on product manufacturing plans

Courses Taught at Montana State University:

- ✓ ETME 498 / MET 476 – MET Internship
- ✓ ETME 492 / MET 470 – Special Projects
- ✓ ETME 425 / MET 465 – Building Systems
- ✓ ETME 422 / MET / ME 454 – Heating, Ventilating, Air Conditioning, and Refrigeration (HVAC&R)
- ✓ MET 455 – HVAC&R Lab
- ✓ ETME 415 / MET 449 / ME 448 – Design for Manufacturability and Tooling
- ✓ ME 448 – Design of Tools
- ✓ ETME 341 / MET 345 – Machine Design and Machine Design Lab
- ✓ ETME 400 / MET 401 – MET Senior Seminar
- ✓ ETME 340 / MET 340 – Mechanisms and Mechanisms Lab
- ✓ ETME 215 / ME 255 – Manufacturing Processes
- ✓ ETME 216 / MET 256 – Manufacturing Processes Lab
- ✓ ETME 100 / MET 101 – MET Freshman Seminar
- ✓ EIND 371 – Introduction to Computer Integrated Manufacturing
- ✓ EMEC 103/ MET 119 – CAE I: Engineering Graphics Communications
- ✓ ETME 203 – Mechanical Design Graphics

Research / Creative Activity Interests:

- ✓ Coordinating and providing design/build service support to researchers and research centers
- ✓ Curriculum improvement through development of new lab equipment and learning procedures
- ✓ Curriculum improvement through development of interactive learning and teaching techniques
- ✓ Assessment of program level effectiveness
- ✓ Engineering education improvement

Service Activities:

- ✓ Mechanical Engineering Technology Program Coordinator, Montana State University (2005-present)
- ✓ M&IE Professor Search Committee Member, 2013 – 2014
- ✓ Vice Chair, American Society of Mechanical Engineers, Montana Senior Section (2013 - present)
- ✓ Chair, Mechanical Engineering Technology Departments Heads Committee (METDHC), American Society of Mechanical Engineers (2010-2012)
- ✓ Member, ASME Center for Education Board of Directors, 2008-2012
- ✓ Vice Chair, Mechanical Engineering Technology Departments Heads Committee (METDHC), American Society of Mechanical Engineers (2008-2010)
- ✓ Secretary, Mechanical Engineering Technology Departments Heads Committee (METDHC), American Society of Mechanical Engineers (2007-2008)
- ✓ Member, M&IE Promotion and Tenure Committee, 2009-2011(excused 2010)
- ✓ Chair, Mechanical Engineering Technology Curriculum Review Project, MSU, 2006-2007
- ✓ Co-Moderator, Engineering Technology Division, Mechanical ET Capstone & Design Projects, ASEE, 2007
- ✓ Reviewer, Engineering Technology Division, ASEE, 2007-present
- ✓ Member, American Society of Mechanical Engineers (ASME), 1996-present
- ✓ Student Section Advisor, ASME, MET student section, MSU, 1996-2006
- ✓ Member, American Society of Engineering Education (ASEE), 2005-2013
- ✓ Registered Professional Engineer, State of Montana, License # 13525PE
- ✓ MIE Department Head Search Committee Member, 2005
- ✓ MET Professor Search Committee Member, 2005 – 2006
- ✓ MET Student Internship Coordinator for MET students, MSU, 2005-present
- ✓ MET Program Certifying Officer
- ✓ MET Representative to M&IE Department Scholarship Committee
- ✓ M&IE Tenure Review Committee member

Professional Memberships

- ✓ American Society of Mechanical Engineers (ASME)
- ✓ American Society of Engineering Education (ASEE)

Publications:

- Fisher, K., Cook, K., "Teaching Problem Solving in Engineering using Analysis and Simulation," *Proceedings of the 2011 ASEE Annual Conference and Exposition*, Vancouver, British Columbia, 2011
- Cook, K., Adam, S., Anderson, S., Goeres, D., Walker, D., Cunningham, A. "Implementing a Formal Collaborative Mechanical Engineering Technology Internship Program with Campus Research Activities" *Proceedings of the 2010 ASEE Annual Conference and Exposition*, Louisville, Kentucky, 2010.
- Cook, K., Larson, R., "Mechanical Engineering Technology Senior Year Course Integration Model", *Proceedings of the 2008 ASEE Annual Conference and Exposition*, Pittsburgh, Pennsylvania, 2008.
- Cook, K., Larson, R., Fisher, K., "Mechanical Engineering Technology Curriculum Enhancement: A Process Review of Program Level Change", *Proceedings of the 2007 ASEE Annual Conference and Exposition*, Honolulu, Hawaii, 2007.
- Fisher, K., Cook, K., "Improving Learning of Engineering Graphics from a through a Combination of Techniques," *Proceedings of the 2007 ASEE Annual Conference and Exposition*, Honolulu, Hawaii, 2007.
- Cundy, V.A., Cook, K.R., Cox, D.R., Larson, R.E. and Martindale, W.R., "Mechanical Engineering Technology Curriculum Revision Experiment at Montana State University", *2000 International Mechanical Engineers Congress & Exposition (IMECE), MET Department Heads Committee (METDHC)* Orlando, FL, Nov. 2000.
- ETME 415 (Design for Manufacturing and Tooling Course) - Supplemental Text (MSU use only), 1992 (revised 2002, 2004, 2008, 2010, 2012).
- ETME 425 (Building Systems Course) – Supplemental Text (MSU use only), 2004 (revised 2010, 2012)
- Marley, R.J., Cook, K.R., Gebhardt, A.J., Sharp, C. and Wine, D. L., "Dynamic Wrist Strength" *XIVTH Annual International Occupational Ergonomics and Safety Conference '99*, Orlando, FL, 1999.

Conference Presentations:

- Incorporating Lean Manufacturing Techniques into any Business Model, Helena, Montana, November 8, 2013, Joint Engineers Conference
- Development of a Biofilm Coupon Holder and Sampling Test Kit, Bozeman, Montana, 2010, Montana Biofilm Science & Technology Meeting
- Implementing a Formal Collaborative Mechanical Engineering Technology Internship Program with Campus Research Activities, Louisville, Kentucky, 2010, *ASEE Annual Conference and Exposition*
- Mechanical Engineering Technology Senior Year Course Integration Model , June, 2008, Pittsburgh, Pennsylvania, 2008, *ASEE Annual Conference and Exposition*
- Mechanical Engineering Technology Curriculum Enhancement: A Process Review of Program Level Change, June 25, 2007, Honolulu, Hawaii, *ASEE Annual Conference and Exposition*.
- Improving Learning of Engineering Graphics through a Combination of Techniques, June 26, 2007, Honolulu, Hawaii, *ASEE Annual Conference and Exposition*.

Current Research / Creative Activity Projects:

- *Improving Educational Quality, Increasing Throughput, Decreasing Cost, Improving Manufacturing Lab Education in M&IE*; Proposal for Expenditure of our State Allocation of Performance Funding, \$79,078.00,
- *Development of a Manufacturing of Composite Materials Course at MSU-Bozeman, NASA EPSCoR, \$49,490, 1/2/13 to 12/31/13 (D. Miller, PI; K. Cook, Co-PI, Robb Larson, Co-PI)*
- *Development of "Design for Manufacturing and Tooling" text and lab manual*
- *Manufacturing Center Equipment Evaluation, MSU Strategic Investment Proposal (not funded), \$76,413, 03/15/13 to 02/01/14, (K. Cook, PI) Note: Partially funded through COE EFAC at \$29,215.00.*

Currently Pending Research / Creative Activity Projects:

- *Revision/Development of Design for Manufacturing curriculum within the MIE Department.*

Awards:

- Outstanding MET Instructor, MSU M&IE Dept., 1992, 1996, 1998, 2000, 2001, 2002, 2003, 2004, 2006.
- Nominated for Excellence in Service Award, 2009
- Nominated for MSU Presidents Excellence in Teaching Award, 2010
- Awarded the Montana State University College of Engineering Excellence in Service Award, 2010-2011