

Vita for David Manuel

Contact Information

TAMU Department of Mathematics
College Station, TX 77843-3368
Phone: (979) 845-3261 (dept)
E-mail: dmanuel@tamu.edu
Office: Blocker 328E

Education

M.S. in Applied Mathematics, Texas A&M University, 1994
B.S. in Applied Mathematical Sciences, Texas A&M University, 1990
SBEC Certified Teacher, grades 6-12, State of Texas, 1991

Employment

Texas A&M University Department of Mathematics

Instructional Associate Professor (2020 – present)
Instructional Assistant Professor (2013 – 2020)
Senior Lecturer (2000 – 2005, 2008 – 2013)
Lecturer (1994 – 2000)
Graduate Assistant Teaching (1993 – 1994)

Texas A&M University-Qatar Department of Mathematics Senior Lecturer (2005 – 2008)

Blinn College Part-time Mathematics Instructor (1995 – 2005)

Stephen F. Austin Middle School, Bryan, TX Teacher, 7th grade Mathematics (1991 – 1993)

Curriculum Development

Designed Python curriculum for MATH 151/152 Computer Labs (2019-present)
Designed instructional video series for TAMU Math Learning Center on MATH 150/151/152 Python instruction (2020)
Designed *Calculus with MATLAB* for use with Cody Coursework of MathWorks (2016)
Designed Math 696, Mathematical Communication and Technology to train new graduate students to teach (2014)
Designed instructional videos to accompany *MATLAB: An Introduction with Applications*, Gilat, Wiley & Sons, Inc., 5th edition (2013)
Designed MATLAB Curriculum for MATH 151/152 Computer Labs, Texas A&M University and Texas A&M University-Qatar (2007 – 2014)
Worked with Amy Austin on pilot redesign of MATH 151/152 (Engineering Calculus I and II) computer lab and recitation for Engineering Cluster sections (2010 – 2012)
Designed Credit-by-Exam and Credit-by-Exam Templates for MATH 151/152 (Engineering Math I and II), Texas A&M University-Qatar (2008)

Awards

Leadership in Teaching with Technology Award (2021)
Award for Leadership in Online Instruction, Texas A&M Department of Mathematics (2020)
Outstanding Service Award, Texas A&M Department of Mathematics (2004, 2019)
Distinguished Achievement Award in Teaching, Texas A&M College of Science (2015)
Student Led Award for Teaching Excellence, Texas A&M University (2008, 2009)
Outstanding Teaching Award, Texas A&M Department of Mathematics (2000)
Outstanding Graduate Assistant Teaching Award, Texas A&M Department of Mathematics (1994)

Teaching

Texas A&M

MATH 131 (Mathematical Concepts: Calculus)
Week in Review MATH 131
*Course Coordinator MATH 131
MATH 140 (Mathematics for Business & Social Sciences)
*Course Coordinator MATH 140
MATH 141 (Finite Mathematics: now MATH 168)
MATH 142/142H (Business Calculus)
MATH 147 (Calculus for Biological Sciences I)
MATH 148 (Calculus for Biological Sciences II)
MATH 151 (Engineering Mathematics I)
Week in Review MATH 151
*Course Coordinator MATH 151
MATH 152 (Engineering Mathematics II)
Week in Review MATH 152
*Course Coordinator MATH 152
MATH 166 (Topics in Contemporary Mathematics II)
Week in Review MATH 166
*Course Coordinator MATH 166
MATH 171 (Analytic Geometry and Calculus)
Video Week in Review MATH 171
MATH 172 (Calculus)
Video Week in Review MATH 172
MATH 251/253 (Engineering Mathematics III)
MATH 308 (Differential Equations)
MATH 365 (Structure of Mathematics I)
MATH 366 (Structure of Mathematics II)
MATH 696 (Mathematical Communication and Technology)

Blinn College

MATH 0312 (Intermediate Algebra)
MATH 1314 (College Algebra)
MATH 1324 (Math for Business and Social Sciences I)
MATH 1325 (Math for Business and Social Sciences II)
MATH 2412 (Pre-Calculus Math)
MATH 2413 (Calculus I)

*-Course coordinator provides oversight to all instructors teaching the course that semester. In MATH 151 and MATH 152, they are also responsible for writing the departmental midterm exams.

Service

Administrative Positions

Director of TA Training, Dept of Mathematics, Texas A&M University (2014 – present)
Exam Proctoring Coordinator, Dept of Mathematics, Texas A&M University (2020). Duties included scheduling and training of Graduate Students for Zoom proctoring of Online Exams and serve as Helpdesk Representative for Honorlock
Oversaw Core Curriculum Recertification for MATH 166 (2017)
Calclab Manager, Dept of Mathematics, Texas A&M University (2008 – 2014). Duties included managing personnel and curriculum related to MATH 151/152 MATLAB Laboratories
Academic Advisor, Mathematics, Texas A&M University (1999 – 2005, 2012 – 2014)

Organizational Membership

CoMInDS (College Mathematics Instructor Development Source, MAA Professional Development Community)

Committee Membership

Subcommittee I&T (2021-present): Oversees the process of promotion to Instructional Associate Professor (co-chair 2022)

Department of Mathematics Outreach Committee (2008 – present: coordinates outreach activities to schools and the general public)

IT Security Committee (2018 – 2020): promoted Information Security Awareness in the department)

MATH 696 Distance Learning Subcommittee (2020)

College of Science/College of Engineering Math Task Force Committee (2018 – 2019: created to design Python curriculum in MATH 151/152 to supplement curriculum in ENGR 102)

Online Homework Committee (2012 – 2018)

MATH 152 Alignment Committee (2017: designed syllabus for MATH 152 which aligned with Texas Higher Education Coordinating Board standards for the course)

High School Math Contest Writing Committee (2000 – 2004, 2008 – 2016, 2018)

Department of Mathematics Engineering Math Committee (2008 – 2014)

Subcommittee L (2010, chair 2011: responsible for Senior Lecturer Promotion process)

Lecturer Core Committee (2010 – 2011: manage issues related to non-tenure-track faculty)

Qatar Math Standards Committee, Education Institute, Supreme Education Council, State of Qatar (2007 – 2008: made recommendations for the national mathematics curriculum of Qatar)

Dean's Faculty Advisory Council, Texas A&M University-Qatar (2006 – 2007)

Dean's Faculty Advisory Council, TAMU College of Science (2004 – 2005)

Math 171/172/221 course restructuring committee (2002)

Math 151 Common Exam Committee (1996: responsible for writing MATH 151 common exams)

Leadership Programs

Posse Immersion Program, Texas A&M University (2015 – present: prepare incoming first-generation STEM students to succeed at Texas A&M)

Summer Educational Enrichment in Mathematics (SEE-Math) Program (Instructor 2002 – present, Assistant Director 2009 – 2013, co-Director 2014 – present. Middle school mathematics summer day camp, presented fully online in 2020)

TAMU Derivative Bee (2012 – 2019: Founder and Coordinator of annual Differential Calculus contest for Texas A&M and high school students)

TAMU Integral Bee (2011 – 2020: Coordinator of annual Integral Calculus contest for Texas A&M and high school students)

Coordinator of the first Gulf Cooperation Council Math Olympiad in Doha, Qatar (2008)

Faculty Advisor, Aggie Locks of Love (2004 – 2005)

Professional Talks

“*The Algebra of Rubik's Cubes*”, TAMU Mathematics & Statistics Fair (2018)

“*The Evolution of TA Training at Texas A&M*”, MAA/AMS Joint Math Meetings (2017)

“*Group Theory of the Rubik's Cube*”, Mentoring Through Critical Transition Points Pre-REU seminar (2010-2013)

“*Enrichment Activities for Middle School Students*”, Conference for the Advancement of Mathematics Teaching (2009-2010)

“*Proofs of the Pythagorean Theorem*”, Brazos Valley Math Teachers' Circle (2008)

“*SEE-Math: Summer Educational Enrichment at Texas A&M for Middle School Students*”, Conference for the Advancement of Mathematics Teaching (2008)

“*Sets and Groups*”, Professional Development, Al-Bayyan Independent Secondary School (2007)

“*Toothpicks, Triangles, Tangrams, and Pythagoras*”, Qatar Math and Science Teachers' Association Conference (2007)

Presentations

“*Symbolic Logic*”, SEE-Math (2021)

“*Map Coloring*”, SEE-Math (2012, 2016, 2021)

“*Cryptography*”, SEE-Math (2016-2017, 2021)

“*King Arthur Problem*”, SEE-Math (2020)

“ *$a + b + ab$* ”, SEE-Math (2020)

“*Platonic Solids*”, SEE-Math (2007-2013, 2015-2017, 2019)

“*Euler Numbers*”, SEE-Math (2010-2015, 2017-2019)

“*Rubik's Group Theory*”, (4-part mini-series) SEE-Math (2009-2010, 2014, 2019)

“*The Game of Set*”, SEE-Math (2018)

“*Mathematical Games*”, SEE-Math (2018)

“*To Infinity and Beyond*”, SEE-Math (2018)

“*The Algebra of Rubik's Cubes*”, Mathematics and Statistics Fair (2018)

“*Proofs Without Words*”, SEE-Math (2017)

“*Golden Ratio*”, SEE-Math (2017)

“*Tangram Origami*”, TAMU Math Circle (2017)

“*Euler Circuits*”, SEE-Math (2015)

“*Rubik's Group Theory*”, (3-part mini-series) TAMU Math Circle (2014 – 2015)

“*Pick's Theorem*”, SEE-Math (2012-2014)

“*Introduction to iClickers*”, TAMU Department of Mathematics (2012)

“*Pythagoras Proofs*”, SEE-Math (2009, 2011)

“*Search Ranking*”, SEE-Math (2008, 2010)

“*Mobius Strips*”, KOR Education School (2008)

“*Mathematics Enrichment*”, American School in Doha (2007: after-school program for Middle School students)

“*Toothpicks and Pythagoras*”, SEE-Math (2002 – 2004, 2006-2007)

“*Venn Diagrams*”, SEE-Math (2004 – 2006)

“*Foundations of Calculus*”, Gear-Up Program for Port Isabel HS students (2003)

Other Information

Recent departmental teaching ratings (last 5 years):

2017 – 2021 Excellent

Publications/Grants/Research Projects worked on:

Supreme Education Council, State of Qatar, “*Qatar Math Standards Committee: Final Report and Recommendations*”, 2008

NSF, “*Writing for Assessment and Learning in the Natural and Mathematical Sciences*”, (2004 – 2008: faculty participant. PI: Dr. Nancy Simpson, amount: \$481,850)

NSF “*Texas Collaborative for Excellence in Teacher Preparation*”, (2003: faculty participant. PI: Dr. Mauro Castro, amount: \$6,004,500)