

Pavan K Pillalamarri Ph. D.

Arizona State University
College of Integrative Sciences and Arts
Mesa, AZ

Email: pavan.pillalamarri@asu.edu
Phone: 405-385-4861

Summary

- Ten plus years of college level teaching experience (8 years full time)
- Experience teaching Physics, Engineering, Computer Science courses at various levels
- Worked successfully with students of diverse background, cultures and special needs
- Successfully use a variety of active learning techniques to satisfy learning outcomes and increase student retention
- Effectively used technology in the classroom to enhance learning experience
- Effectively used Supplemental Instructors, Tutors, IP's, TA's, Achievement coaches to maximize learning
- Ability to lead student research projects at various levels (Honors projects, course projects and Individualized Instruction).
- Research/Project based assessment built into my courses
- Excellent knowledge of laboratory methods to achieve efficient and precise outcomes
- Extensive experience in new curriculum development (Online, face-2-face and hybrid delivery modes) and curriculum revision using active learning strategies
- Courses designed to promote Self-Efficacy and help develop a Growth mindset
- Trained in Mental health first aid
- Served on various interdisciplinary as well as in discipline committees at the Department, College and State levels
- Developed Learning Outcomes and actively served on Program level Assessment Committees
- Mentor students as a Physics club faculty advisor

Courses Taught

Physics: Calculus based Physics (Physics –I, II, III), Algebra based Physics (Physics – I, II), Intro to Physics, Physics labs – I & II

Engineering/Applied Physics: Engineering Statics, Engineering Dynamics (Vector Mechanics and vibration), Engineering Thermodynamics, Electronics Circuits and Measurement, Intro to Engineering

Computer Science: Scientific Programming using MATLAB

Curriculum Development

- Developed and taught the Intro to Engineering online course (2013) (Online project-based)
- Developed and taught the Electronics Circuits and Measurement Lecture (2019) (Project based)
- Developed and taught the Electronics Circuits and Measurement Lab (2019)
- Developed and taught the Scientific Programming in MATLAB course (2014) (Project based)
- Continually revise curriculum in all courses based on formative and summative assessments and student/peer feedback
- Revised lab curriculum, to suit delivery via distance learning.

Committees Served

- College Curriculum Development Committee (6 years)
- Physics/Astronomy/Engineering Program Assessment Committee (2 years)
- Part time and Full-Time faculty hiring committees
- Lab Supervisor hiring committee
- Engineering Course Coordinator (4 years)
- New Mexico State Level Course Standardization Committee (1 year)

Student Engagement/Success

- Faculty Advisor: Physics club (5 years at CNM and ASU)
- Organized Student Physics demonstrations for High school students and the public
- College liaison to the Santa Fe Institute in Organizing the “Computational Thinking” symposium for STEM students (‘13)
- Certified in Mental Health First Aid (‘15)

Awards

- Teaching Excellence award, Central New Mexico Community College (2016)
- Outstanding Student Organization Advisor (Physics League), Central New Mexico Community College (CNM) (2015)
- Outstanding Recitation Teaching Assistant, Oklahoma State University (2006 - 2007)

Professional Development

- **Organizer and Facilitator:** Radical Teaching Co-operative at CNM to help faculty solve issues related to pedagogy using a structured tuning protocol. (3 years)
- Successfully completed a yearlong training course at the “New Faculty Institute”, Central New Mexico community college
- Earned Credits towards Teaching and Learning Online Certificate (CNM)
- Attended the Conference for teaching and learning (‘13, ‘14, ‘15) organized by CNM
- Attended the Winter conference organized by AAPT (‘13)
- Participated in CAT training workshop (‘15) Developed CAT instruments to enhance critical thinking among students
- Mentor to new faculty (3 years at CNM)
- Earned the Global Advocacy Certificate to create a globally diverse campus at ASU (‘19)
- Completed the Self efficacy, growth mindset plus creating a culturally responsive pedagogy program as part of the “Faculty Leadership and Professional Development Institute” (organized by NMEPSCoR, NAPE) (‘16)

Research Projects

- **Director of research for Innovation-** Agriculture project (Summer ‘14): Lead a group of students and performed research and provided recommendations on implementing an Agriculture (Campus as a living lab) project at Central New Mexico community college

- **Co-Investigator** in a research project to improve Critical thinking skills in Community College students via the CAT instrument (Critical Thinking Assessment Test)
- **Research Interests:** Physics Education, Condensed Matter Physics, Monte Carlo methods, Numerical techniques, Computational Science, Image processing
- Experience guiding Honors projects, over 40 course projects and projects at the PHY 400 level. (In fields related to Diffusion limited growth: tumor models, Image processing, game development, solid state physics, statistical mechanics, electronics, and many more)

Teaching Experience

- **Applied Physics Lecturer** Aug'17- current
Arizona State University, Polytechnic Campus
- **Physics/Engineering Full Time Instructor** Aug '13 – Aug'17
Central New Mexico Community College
- **Physics Recitation Instructor** Jan' 12 – May '13, Aug '06 – May '07
Oklahoma State University
- **Physics Lab Instructor** Jan '10 – May '10, May '11 – Dec '11
Oklahoma State University
Colorado State University Aug'04 – May '05

Education

- PhD (Physics)** May 2013
Oklahoma State University, Stillwater, OK
Dissertation: “*Electronic Structure Simulations of Inorganic Nanowires*”
- M. Tech. (Computational Techniques in Physics)** May 2004
University of Hyderabad, India
Thesis: “*Computational modeling of Bio-physical growth processes*”
- M. Sc. (Physics)** March 2002
Sri Satya Sai Institute of Higher Learning, India
Thesis: “*Efficiency Calibration of a Large Volume HPGe Detector*”

Outreach

- Volunteer at Career Technical Education open house for high school student
- Volunteer at events encouraging women from choosing STEM careers
- Judge at INTEL ISEF ('19)
- Organized high school visits to demonstrate and explain Physics concepts
- Volunteer to organize new student orientation at Oklahoma State University
- Volunteer at Project share: Cook and serve meals to the homeless (Albuquerque)
- Member, Disaster & Rescue Management group Sri Satya Sai Organization, Hyderabad, India
- Secretary at the SPS local chapter at Oklahoma State University

Publications

- Thushari Jayasekera, **Pavan K Pillalamarri**, J.W. Mintmire and Vincent Meunier, "Effect of Phase-Breaking Events on Electron Transport in Single -Wall Nanotubes", Int J Quantum Chem **108**, 2896 (2008)