

Jonathan M West
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PROFESSIONAL OBJECTIVE

To bring my passion for teaching and helping others and my extensive real-world engineering experience to the classroom to make engineering education exciting and practical for the students.

SKILLS

I have experience and proficiency to teach courses or perform engineering work in any of the following fields:

- Software languages: C, C++, Python, TCL, VHDL, Javascript, PHP, HTML, LabVIEW, Matlab/Octave, SPICE
- Circuit analysis, electronics, computer logic design
- Circuit board design and layout: high power, digital, analog, RF
- Systems and controls
- Power electronics, electrical machinery
- Power distribution
- Photovoltaics and renewable energy
- Digital signal processors: hardware and software
- Robotics, Robot Operating System, Gazebo simulation
- Engineering mathematics
- Digital image processing
- FPGA (Xilinx and Altera)

PERSONAL

I have worked in the engineering field for many years doing a broad variety of disciplines including robotics, power systems, embedded systems programming, circuit board design, microwave radar systems, FPGAs, data analysis, neural networks and database programming. The wide variety of work that I have performed allows me to understand the many different aspects of complex problems instead of narrowly focusing on a single specialty. My years of experience give me a thorough understanding of real-world applications which I can bring to classroom to ensure that the students learn the practical application of the theory they learn. My missionary work is a reflection of my desire to use my abilities and knowledge to benefit other people which I will apply to the students to give them the best possible education and help them succeed.

EDUCATION

UNIVERSITY OF NEW MEXICO, Albuquerque, NM

Doctor of Philosophy, Engineering, December 2017

Concentration: Systems and Controls

Master of Science, Electrical Engineering, December 2013

Concentration: Power Electronics

Bachelor of Science, Electrical Engineering, *Cum Laude*, May 1995

EMPLOYMENT HISTORY

Weber State University, Ogden UT

- ECE Instructor (2020-present)

SENSPEX Inc., Albuquerque, NM.

- Electrical Engineer (2019-2020)

GRAND CANYON UNIVERSITY, Phoenix, AZ.

- Instructor (2018-2019)

UNIVERSITY OF NEW MEXICO, Albuquerque, NM.

- Lecturer III (2018)
- Graduate Assistant (2017)
- Research Assistant (2016-2017)
- Teaching Assistant (2015-2016)

Taught courses listed above. My doctoral research was based on the Army Research Labs Micro Autonomous Systems and Technology robotics program which concluded September 2017.

SOUTHWESTERN INDIAN POLYTECHNIC INSTITUTE, Albuquerque, NM.

- Adjunct Instructor (2014-2017)
- Director of Technology for NASA TCU-ELO I-C-MARS program (2014-2017)

Taught courses listed above. Mentored student teams including the first place winning NASA Swarmathon team. Designed and built NASA Mars Yard Robotics system.

APPLIED TECHNOLOGY ASSOCIATES, Albuquerque, NM.

- Electrical Design Engineer (2010-2013)

Lead Electrical Engineer on several key projects. System-level electrical design. Analog and digital circuit design, layout and test. Software and firmware programming. Detailed design documentation and presentation.

BOEING/SVS, Albuquerque, NM.

- Electrical Design Engineer (2008-2009)

Electrical system design including military safety-critical designs and documentation.

ELECTRO-SCIENCE TECHNOLOGIES, Albuquerque, NM.

- Electrical Design Engineer (2003-2008)

Embedded processors, radar systems, signal processing and pattern recognition, neural networks

ALBUQUERQUE INNER-CITY MINISTRIES, Albuquerque, NM.

- Director (2001-2002)

Director of Church based mission to minister to and educate the poor and homeless in Albuquerque.

MANZINI BIBLE SCHOOL, Manzini, Swaziland.

- Assistant Director and Instructor (2000-2001)

Managed operations and taught classes at a preacher/vocational school in Africa.

SVS Inc, Albuquerque, NM.

- Electrical Design Engineer (1997-1999)

Electrical design work including FPGA, CPLD, analog and digital circuit designs.

MANNA INTERNATIONAL, Cap Haitian, Haiti.

- Missionary (1995-1996)

Missionary work including relief and development, construction, vehicle and building maintenance, vocational teaching and water well drilling.

TEACHING EXPERIENCE

Weber State University, Ogden, UT

- ECE4100 Controls (Spring 2021)
- ECE3110 Microelectronics I (Fall 2020)
- ECE3110 Microelectronics I (Fall 2020)
- ECE3120 Microelectronics II (Spring 2021, 2020)
- ECE1270 Circuit Analysis I (Fall 2020)
- ECE5120/6120 Analog VLSI (Fall 2020)

GRAND CANYON UNIVERSITY (GCU), Phoenix, AZ

- ESG-202 Introduction to Electronics (Fall 2018)
- EEE-320 Electronics and Devices (Fall 2018)
- EEE-202 Circuit Analysis (Spring 2019)
- ESG-441 Power System Analysis and Design (Spring 2019)
- EEE-302 Advanced Circuits (Spring 2019)

UNIVERSITY OF NEW MEXICO (UNM), Albuquerque, NM. ¹

- ECE231 Intermediate Programming (Spring 2018)
- ECE495/595 Design of Autonomous Mobile Robots (Spring 2018)
- ECE483/583 Power Electronics (Fall 2014, Fall 2015, Fall 2017)
- ECE495/595 Power Electronics II (Spring 2015, Spring 2016)
- ECE482/582 Electric Drives and Transformers (Spring 2015, Spring 2016)

SOUTHWESTERN INDIAN POLYTECHNIC INSTITUTE (SIPI), Albuquerque, NM.

- ENGR290 Renewable Energy (Summer 2014)
- ENGR290 Robot Operating System (Spring 2015, Summer 2016)
- ENGR211 Circuit Analysis (Spring 2015)
- ENGR290 Introduction to Modeling and Simulation (Summer 2015)
- ENGR290 Introduction to Programming in C++ (Summer 2015)
- COSC121 Introduction to Programming (Fall 2015)
- PHY102 Conceptual Physics (Fall 2015)
- ENGR290 Introduction to Circuit Analysis (Fall 2015)
- ENGR290 Swarmathon Robotics (Spring 2017, Spring 2017)

In my years of teaching I have taught basic and advanced Electrical Engineering courses including programming in several languages. I have been heavily involved in ABET certified curriculum development and student advisement and mentorship and have received very positive reviews for all of my courses. I have taught diverse student bodies including the exclusively Native American students at SIPI. I have also been instrumental in acquiring and sustaining grants and involving students in extra-curricular activities and competitions such as the NASA Swarmathon (SIPI),

¹Graduate classes before 2018 taught with Dr. Jane Lehr as Instructor of Record

Wisconsin Space Grant First Nations Launch (SIPI) and the F1/10 Autonomous car race (UNM). At Weber State I have acquired an ARCC grant to purchase robotics hardware for the robotics lab and have received an NVIDIA Jetson Nano 2GB Grant which provided 12 GPU boards to the robotics program.