

Cameron S. Lancaster

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Objective

Master's level graduate of Purdue School of Engineering & Technology seeking a position in Energy Engineering. Offer energy-auditing experience in professional environment(s), aiming to improve performance while being energy efficient and cost effective.

Experience

Assistant Lead Engineer, August 2013 to present

Industrial Assessment Center (IAC), IUPUI

- As assistant lead engineer, I train incoming members how to use measuring equipment and familiarize them on our process. The majority of my time is spent collecting and analyzing field data. Once I have prioritized energy saving measures, I compile the recommendations for energy cost savings into a prepared audit report.

Department of Energy Certificate of Energy Management & Assessment (Pending Upon Program Completion)

Teaching Assistant, August 2013 to present

Mechanical Engineering Department, IUPUI

- I conduct and advise lab experiments for students enrolled in Heat and Mass Transfer class.

Engineering Intern, Summer 2013

Hoosier Energy Rural Electric Cooperative, Inc., Worthington, IN

- The purpose of my internship was to update piping & instrument diagrams for a combined cycle power plant. I traveled to the specified plant and red lined the out-of-date drawings by walking down each system pipeline. Then, I used AutoCAD to design the updated P&IDs.

Student Teaching Assistant, August 2011 to May 2012

Physics Department, Indiana State University

- I aided the lab professor in advising the introductory Physics lab courses.

Student Research Assistant, Summer 2011

SURE Program, Indiana State University

Dynamics of Objects with Variable Geometry Wings

- The ultimate goal of this project was to compile video analysis of plastic toy helicopters to actuate terminal velocity as a function of total mass. I developed a release mechanism to remotely drop the "Arrowcopters." Then, I recorded 100+ video trials of each descending Arrowcopter. Using LoggerPro and Microsoft Excel, I created a mathematical model of velocity and acceleration as a function of position. I was then able to compare the terminal velocity values in ordinance to increasing mass.

Physics Tutor, January 2010 to May 2012

Physics Department, Indiana State University

- I assisted students to gain an understanding of Physics problems when they were having difficulty solving the problems themselves.

Student Research Assistant, Summer 2010

SURE Program, Indiana State University

Electrocardiogram Analysis through Time Discrete Fourier Transform

- The objective of this research project was to transform original ECG patient data to determine an alternate method of diagnosing heart conditions. I graphed the original ECG wave patterns. Then, I collaborated with my colleagues to create a Fortran code, and applied a Fourier Transform to the original wave patterns. Next, I combined specific waves within the data and applied the code to compare with the original data. By measuring the frequency differences, it is possible to determine various heart conditions.

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Education

Indiana University-Purdue University Indianapolis (IUPUI)

Master of Science in Mechanical Engineering, Energy Concentration

August 2013 to Present, GPA 3.10/4.00

Indiana State University

Bachelor of Science in Physics, Pre-Engineering Concentration, Minor in Mathematics

August 2008 to August 2012, GPA 2.68/4.00

Activities

Secretary, National Society of Physics Students, Indiana State University, January 2010 to December 2010

Vice-President, National Society of Physics Students, Indiana State University, January 2011 to December 2011

Research Presentations

ECG Research, SURE Symposium, Indiana State University, July 2010

ECG Research, American Physical Society Conference, Dallas Convention Center, Dallas, TX, March 2011

Dynamics of Variable Geometry Wings, SURE Symposium, Indiana State University, July 2011

Skills

- Pro-ENGINEER
- AutoCAD
- Ambitious
- Microsoft Office
- Technical Measuring Devices
- Data Logging
- Goal-oriented
- Computer Programming