

Curriculum Vitae.

Ms. Courtney L. Thornberry

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Profile:

I am a highly motivated individual with a passion for efficiency and organization. I have a vast technical background, combined with leadership skills that have proven effective in many different environments and situations. I work well both individually and as a team player. I bring the ability to listen and think analytically and critically. I have an aptitude to coordinate all members of a team resulting in positive solutions and great accomplishments.

Employment:

University of Warwick, WMG

01/2012 – Present

A university located in Coventry, UK with about 20,000 students. WMG is a collaborative innovation and research center that is a part of the university.

Position: Engineering Doctorate Student

Duties:

- Research Product Lifecycle Management (PLM) for applications for Small to Medium-sized Enterprises (SMEs)
- Work with Formula Student team to understand team organization, structure and knowledge transfer
- Work with other EngD students at Warwick on group projects
- Research various topics on collaboration

IUPUI-Engineering & Technology Department

08/2009 – 12/2011

An urban university (Indiana University Purdue University Indianapolis) located in the capital city of Indianapolis in the state of Indiana

Position: Research assistant for two professors

Current Duties for Dr. David Goodman:

- Helped to design testing equipment for local industries and facilitating a partnership between the university and industry
- Assisted a professor with research publications and renewable energy course material

Previous Duties for Dr. Rongrong Chen:

- Developed two different methodologies for cathode fabrication
- Established a performance testing methodology for the cathode that analysed surface hydrophobicity, gas permeability and electrochemical testing, such as CV and ORR
- Doubled cathode performance through design improvement

Richard G. Lugar Center for Renewable Energy

01/2010 – 12/2011

A research institution located on IUPUI's campus in Indianapolis establishing a connection between university research and industrial innovation in renewable energy technology

Position: Intern

Duties:

- Developed a process for maintaining the Center's website and blog using Six Sigma methodology (DMAIC)
- Interviewed researchers and write about their work related to the mission of Center for a quarterly newsletter
- Assisted the Business Manager with Center activities, including forums and conferences

Ivy Tech Community College

08/2009 - 01/2010, 05/2011-12/2011

A community college that serves the state of Indiana and helps students earn technical and associate degrees

Position: Math and Physics Tutor

Duties:

- Assisted community college students in learning objectives for various levels of math, from basic algebra, statistics and calculus, introductory physics courses and accounting
- Problem-solved to explain material in a manner that each individual student may be able to build confidence and understanding of materials
- Have assisted in improvements of 40% or more on exams scores for students with whom I worked.

Army Research Laboratory

07/2010 – 08/2010

A US Department of Defense research facility, located in Adelphi, Maryland, just outside of Washington DC

Position: Lab Technician (STEP program)

Duties:

- Researched common contaminants of both PEM and AAEM fuel cells.
- Applied Rotating Ring Disk Electrode (RRDE) Electrochemical (EC) testing,
- Found that low concentrations boost the performance of non-Pt catalysts by 5-10% in an alkaline environment, which could lead to lower cost and higher durability in fuel cell technology
- Presented and discussed research at a laboratory forum

University of Toledo-Department of Physics & Astronomy

08/2007 – 08/2009

A university located in Toledo, Ohio with about 20,000 students

Position: Graduate Teaching and Research Assistant

Duties:

- Taught recitation and lab courses for Physics 2070 and 2080 (algebra-based, college level physics)
- Worked with students on a classroom/individual basis and subsequently earned very high/positive evaluations from students in these courses
- Performed spectroscopic ellipsometry on thin film CdTe photovoltaics
- Presented a poster at the IEEE 2009 PVSC Conference in Philadelphia
- Wrote a master's thesis based on this research (Pending defense)

Ball State University-Department of Physics & Astronomy

09/2003 – 05/2007

A university located in Muncie, Indiana with about 20,000 students

Position: Planetarium and Research Assistant

Duties:

- Researched binary star systems, including a research trip to Kitt Peak, Arizona to work on a 1-meter telescope
- Presented results in department and at an all-campus symposium
- Researched, wrote and begun production of a planetarium show about binary star systems with professor in the Physics and Astronomy Department
- Used Photoshop and Vegas Video to post-produce planetarium shows
- Organized the complete lay-out of a planetarium production

Education:

Bachelor of Arts, 2007

Ball State University Muncie, Indiana

Major: Physics

Minors: German, Astronomy

GPA: 3.5/4.0

Masters of Science, 2011

IUPUI Indianapolis, Indiana

Major: Technology

(Fuel cell research)

GPA: 3.8/4.0

Masters of Science (ABD)

University of Toledo Toledo, Ohio

Major: Physics

(Photovoltaic research)

GPA: 3.5/4.0

Professional Qualifications:

- CLRA (College Learning and Reading Association) Advanced Tutor Certification
- Proficient in Microsoft Office package
- Proficient in Adobe CS5 package (including Premiere video editing, Contribute website editing and Photoshop),
- Proficient in C++
- Proficient in various lab analysis tools such as: MatLab, WVASE, MultiStat, CorrWare and Origin
- Proficient in both Microsoft and Linux operating systems

Awards:

- **Baker Student Award for Fuel Cell Research, honourable mention**, Fuel Cell Seminar, San Antonio, TX, October 2010
- **Outstanding Senior Award**, Ball State Dept of Physics and Astronomy, May 2007
- **McGaughey Leadership Scholarship**, Academic Year, 2005-06
- **Presidential Scholarship**, Academic Years 2003-04, 2004-05, 2005-06, 2006-07
- **Indiana Space Grant Consortium Scholarship**, Academic Years 2005-06, 2006-07

Professional Conferences:

- **Fuel Cell Seminar**, San Antonio, TX, October 2010
 - **Poster Title: Membrane Electrode Assemblies (MEA) for the Alkaline Anion-Exchange Membrane (AAEM) Fuel Cell**
- **IEEE PVSC Conference**, Philadelphia, PA, July 2009
 - **Poster Title: Through the glass analysis of CdTe Solar Cell by Spectroscopic Ellipsometry (SE)**

Professional Memberships:

- **Golden Key International Honour Society Member**, October 2010 – Present
- **Sigma Pi Sigma**, National Physics Honorary Society, April 2005- Present

Activities and Interests:

- **Energy Club at IUPUI** – Founding member, Secretary/ Treasurer, Spring 2010-Spring 2011
- **Society of Physics Students**– President, Spring 2004-2007

References:

Available upon request.