

# Shane A. Szemanek

## Current Address

718 W. College Ave. Apt 7  
State College, PA 16801

## Home Address

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## Contact Information

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## EDUCATION:

**The Pennsylvania State University** (University Park; State College, PA)

*B.S. Mechanical Engineering*

Expected Graduation: May 2014

Minors: Engineering Design and Engineering Mechanics

Overall GPA: 3.29/4.00

### Relevant Courses

Modeling of Dynamic Systems

Mechanical Design & Methodology

Engineering Design

Compressible Fluid Flow I & II (Graduate Level)

Senior Design Project: Boeing VTOL Quadcopter

Junior Design Project: Submersible Water Pump

### Continuing Education

46<sup>th</sup> Annual Comprehensive Short Course in Rotary Wing Technology at Pennsylvania State University

*Topics: Aerodynamics, Dynamics, Stability and Control, Propulsion and Drivelines, Structures, and Acoustics*

## EXPERIENCE:

**Norfolk Southern Corporation**

Enola, PA

(May – August, 2013)

*Mechanical Engineering Intern*

- Designed Interchangeable End of Train Device Rack System using SolidWorks, Inventor, and FEA
- Designed Inventory Replacement System to enhance the coordination of maintenance requirements
- Designed Automatic Equipment Identification Tag and Scanning System
- Redesigned Worker Created Tools for Mass Production on the Railroad
- Performed Daily Safety and Railroad Car Inspections
- Innovation Committee Member

**ArcelorMittal**

Steelton, PA

(May – August, 2012)

*Mechanical Engineering Intern*

- Designed Specimen Cooling Unit through Thermal and Fluid Analysis and using SolidWorks
- Managed Removal and Installation of the Bearing for the Caster's fifty-ton Turret
- Designed Blast Door for Horizontal Duct of Furnace using SolidWorks
- Inspection, Repair, and Refurbishment of Scrap Prep Crane

**PennEngineering and Manufacturing**

Danboro, PA

(January – June, 2009)

*Engineering Intern*

- Product and Patent Research: Found Patents, Fastener Applications, Beneficial companies
- Formulated Excel Spreadsheets for Engineers: Displayed Test Results, Strengths, etc
- Teardown Lab Projects: Pressure Tester and Reverse Engineering of Video Game Consoles
- Product Testing: Pressure Tester, Video Game Consoles, and Fasteners

## CERTIFICATIONS AND SKILLS:

Certified SolidWorks Professional

C-KEGNPJCP2

Machine Shop Certified

Pennsylvania State University

MIG and Stick Welding, Burning, Carpentry, and Metal Working

## COMPUTER SKILLS:

CATIA

SolidWorks

AutoDesk Inventor

ANSYS

MATLAB/Simulink Modelica/Dymola

Microsoft Excel

Microsoft Office

## LEADERSHIP EXPERIENCE:

### Project Management

Norfolk Southern: End of Train Device Rack System, Innovation Committee Member, and Automatic Equipment Identification Tag and Scanning System

ArcelorMittal: Turret Bearing Installation, Crane Refurb., Blast Door

### Senior Design Project Team Leader

Designed and Integrated a Pick-Up/Drop-Off System for a VTOL Quadcopter

### Junior Design Project Team Leader

Designed Submersible Water Pump for Third World Countries

**Assistant Manager of Union Labor:** Norfolk Southern Corporation and ArcelorMittal

## ACTIVITIES:

HEAL: Penn State Dance Marathon Private Interest Group that Raises Money to Fight Pediatric Cancer

Penn State Formula SAE Club (Formula One Racing): Build and Race our own SAE car

ASME (American Society of Mechanical Engineers): Participate in Design Competitions

ANS (American Nuclear Society): Environmental Connection and Community Outreach

Central Bucks High School East Varsity Football and Wrestling (3 years)

## HONORS:

Dean's List: Fall 2012 (4.0 GPA) and Spring 2013 (3.72 GPA)

The National Society of Collegiate Scholars: Inducted as a freshman with a GPA>3.4

PennEngineering Scholarship: Granted upon successful completion of internship