

Joseph Roccio

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EDUCATION

University of South Florida

Chemical Engineering, Bachelor of Science

Completed: May 2018 **GPA:** 3.41

Relevant coursework: Process Dynamics & Controls, Chemical Thermodynamics, Product and Process design

Università Edulingua – Macerata, Italy

Italian Language and Culture Program

Duration: May – August 2016

WORK EXPERIENCE

Chemical Engineering Co-op | *Laboratory Engineering*

May 2018 – December 2018

Solvay - Cytec

Stamford, CT

- Developed a new characterization methodology for mining application reagents which reduced required trials by 40% and standard deviation by 50%
- Involved at all steps of lab scale mineral extraction process from ore grinding, floatation, sample prep and elemental assay for copper and copper / molybdenum type ores
- Introduced SOPs for new lab scale characterization techniques critical for timely reagent assessment
- Worked with Design of Experiments and lean six sigma principles for statistical assessment of all obtained data

Chemical Engineering Intern | *Process Engineering*

April 2017 – April 2018

SCS Engineers

Tampa, FL

- Co-lead the writing, technical calculations and economic analysis for renewable energy feasibility reports for clients
- Calculate flare station capacities through mass and energy balances and shell in tube heat exchanger calculations
- Created and revised P & ID diagrams for piping, valves, and pumping equipment at municipal flare stations
- Reduced 3 hours of weekly work utilizing Excel and AutoCAD to streamline monthly and semi-annual report figures

Undergraduate Researcher | *Renewable Hydrogen Production*

August 2016 – August 2017

University of South Florida

Tampa, FL

- Optimized the design and building of a reactor specific to synthesized Cadmium Sulfide photocatalytic nanorods
- Led literature research for the required inorganic reactions and characterization techniques for product synthesis
- Oversee the use of the autoclave, SEM, XRD and other equipment when implementing reactions for each trial to yield usable catalyst product

LEADERSHIP EXPERIENCE

Chem-E-Car Teaching Assistant & Captain

August 2016 – May 2018

USF American Institute of Chemical Engineering

- Coordinate and manage 10+ students in separate groups to finish tasks relevant to completing individual reacting systems for the car
- Lead the design and integration of powering and stopping mechanisms for the car, driven by chemical reactions
- Manage an annual \$10,000-dollar budget split between two cars throughout the span of 8 months for car construction and reaction trials

Peer Advisor Leader

May 2014 – August 2014

University of South Florida – New Student Connections

- Acted as a major resource point for incoming first-year students through organizing and leading orientation-style events that encouraged positive integration into the university

SKILLS

- *Computing* – Word, Excel, Powerpoint, PLC Ladder Logic, MATLAB, ASPEN, AutoCAD, JavaScript
- *Certifications* – Laboratory EH&S, SChE Process Safety, Microsoft Word & PowerPoint
- *Hobbies* – Microcontroller programming, rock climbing, distance running, Front End web development