

Mohammed A. Al-Khalifah

M E C H A N I C A L E N G I N E E R

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Education

Bachelor of Science: Engineering
Minor: Psychology
University of Southern Indiana

December 2020
Evansville, IN

Skills and Proficiencies

- Graphic and Decal Designer
- Rube Goldberg Machine
- Cable Welding
- Vehicle Electrical System
- Cutting Plotter
- Microsoft Office
- SIMS 4
- SolidWorks
- Multisim
- MATLAB
- Java Coding
- FlexiSIGN Pro
- SAP
- Bilingual: Arabic, English

Relevant Coursework

Engineering 491: Senior Design - this course was to provide an opportunity for synthesis of technical, professional, and general knowledge for engineering students. Design problems provided by industrial sponsors were studied by small teams of students to develop solutions using engineering design, while considering realistic constraints such as economic factors, safety, reliability, aesthetics, ethics, and social impact. Formal written and oral reports to faculty, industrial sponsors, and invited guests were required.

The following report presents a design for an automated solar tracking mount that allows a solar telescope to continuously track the sun throughout a day. The tracking mount is intended to be used with a Coronado Personal Solar Telescope provided by USI, for educational and recreational use to observe the sun. After exploration of several types of solar tracking systems it was determined a passive assembly, meaning no computer controller, had the most potential for the desired application. The report then discusses the design development and build process of a proof of concept solar tracker, in section 3, to prove the passive assembly would in fact be a suitable system for the project. Results from the proof of concept build were satisfactory and the project then advanced to the final design phase. The final design of the project is discussed in section 4 of the report and details the design development and the actions still needed to complete the project. Click [here](#) for a copy of the finalized report.

Process Integration using SAP ERP 431 - this online course provided an overview of Enterprise Resource Planning Systems (ERP systems) and enterprise software, which provide means for the holistic, real-time integration of the key business processes (e.g. materials management, production planning and control, quality management, transportation and logistics, warehouse management, and sales and distribution) of manufacturing companies. Students learned how ERP systems facilitate process integration using the SAP ERP software and production data from a fictitious company. To assure learning, students were required to work, using the SAP ERP software, on a variety of hands-on exercises in which we created transactions that generated an effective and timely flow of information and operational (i.e., transactional) data across the involved functional areas of the company, which enabled the real-time integration of business processes.

Engineering 362: Manufacturing Processes I - this course was a survey of traditional and non-traditional manufacturing processes including machining, welding, fabrication, plastics processing, assembly, and shop safety. I participated in laboratory exercises to learn to program and operate robots, CNC machines, and other automation technologies.

Experience

Independent Electrical and Mechanical Engineer - Jun 2009 to Current
Evansville, IN

- Repairing vehicle electrical systems such as vehicle system wiring, stereo installations, amplifiers and speakers using car circuit tester.
- Car mechanic repairing knowledge.
- Designing and installing decals for interior and exterior home design.
- Creating custom automotive decals and labels with flexiSIGN pro.

Certifications

Project Management Fundamentals, Lawrence Technological University 2015

Human Resources Strategies and Methods, Lawrence Technological University 2015

Intensive English Program, University of Southern Indiana 2015

Intro to Machinery and Machine Guarding, Northern Illinois University 2020

Occupational Safety and Health Administration OSHA, United States Department of Labor
(Anticipated August 2020)