

ENGINEERING EXPO II SPRING 2016 SOE

Department	Senior Design Project Titles 2016
CBE	1. <i>Ethanol, Whey Not?</i>
	2. <i>Alternate Method for Sour Water Stripping Design</i>
	3. <i>Biomass Gasification and Fischer- Tropsch Catalysis to Alcohols</i>
	4. <i>Production of Non-Alcoholic Beer via Distillation and Reverse Osmosis</i>
	5. <i>Clean Drinking Water for the Residents of Flint Michigan</i>
	6. <i>Sugarcane Bagasse to Ethanol</i>
	7. <i>Treatment of Wastewater for Reuse (1st Place 2016 WERC Competition)</i>
	8. <i>Gas to Liquids- Ethanol to Ethylene</i>
	9. <i>CO₂ recapture from Fermentation Process</i>
	10. <i>Recombinant Sf9 Trivalent Influenza Vaccine Production Platform</i>
CE	11. <i>Serenity Mesa Rehab Facility Renovation</i>
	12. <i>Rio Bravo over South Diversion Channel</i>
	13. <i>West I-40 Channel Improvements</i>
	14. <i>Senegal Learning Center</i>
	15. <i>Washington/ Jefferson Drainage Issue, Grants, NM</i>
	16. <i>Waste Water Treatment Plant Reuse Pump Station and Piping System for Portales, NM</i>
ECE	17. <i>Replication and Identification of Clinical Subgroups in a Structural MRI Dataset for Schizophrenia</i>
	18. <i>Genetic Data Preprocessing System</i>
	19. <i>Extend a WebApp to Allow Manual Annotation of Solar Images by Multiple Users</i>
	20. <i>A WebApp to Support Digital Video Database Annotation</i>
	21. <i>Intelligent Prosthetics Project</i>
	22. <i>Helmholtz Cage Software Control System</i>
	23. <i>Helmholtz Cage Power Control Unit</i>
	24. <i>K1 Chlorine Generation Controls System</i>
	25. <i>Drone-Borne Sensor and Communication System</i>
	26. <i>A low-cost and versatile Jumbotron</i>
	27. <i>Open Source Virtual Reality</i>
	28. <i>In-Situ Temperature Monitor for Molecular Beam Epitaxy</i>
	29. <i>Internet of Things (IoT) Security System</i>
	30. <i>Energy Water Nexus</i>
	31. <i>Wide Bandgap Inverter Drive</i>
	32. <i>Image Processing Hardware Acceleration for CubeSats</i>
	33. <i>Smart Multi-Network Internet of Things Unit</i>
	34. <i>Design of an Elevator State Machine</i>
	35. <i>"PoWifi"</i>
	36. <i>High Voltage Pulsed Power Supply</i>
	37. <i>Ultra-Uniform Electrical Microheater with Control Circuit for High-Q Optical "WGM" Microresonators</i>
	38. <i>QDEX-based data capture and visualization</i>
	39. <i>Control System for High Precision Pressurization and Fabrication of Micro-Structured Optical Fibers</i>
	40. <i>Pulsed High Current Power Supply for Laser Diodes</i>

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ME	<i>41. Coanda Drone for package delivery service</i>
	<i>42. Ice Chest made of solid-state electronics</i>
	<i>43. Drink Cooler that spins cans in ice to shorten the cooling cycle time</i>
	<i>44. Landscaper Bogie to aid the elderly in dealing with their landscaping needs</i>
	<i>45. Soccer Trainer that shoots out soccer balls in unpredictable directions</i>
NE	<i>46. 30 MWt, Passively Cooled, Solid Core Nuclear Power System for Commercial Seafaring Vessels</i>
	<i>47. 1.0 MWt, Passively Operated Submersible Nuclear Power System</i>
	<i>48. Low Enrichment, High-Flux Reactor for Moly-99 Medical Isotope Production</i>
	<i>49. 10 MWt Small Modular Fast Reactor, Cooled by Natural Circulation of Liquid Sodium (FRANCIS)</i>
	<i>50. Coated Particle $^{241}\text{Am}^{203}$ Fueled 100 We Radioisotope Thermoelectric Generator for Long-Life Space and Planetary Missions</i>

