

**ENGINEERING EXPO III SPRING 2017 SOE**

Department	Senior Design Project Titles 2017
<b>CBE</b>	1. <i>Production of Non-alcoholic American Pale via Reverse Osmosis</i>
	2. <i>Conversion of Biomass Resource to Useful Forms of Energy and Other</i>
	3. <i>Alternative Technology for Sour Water Stripping</i>
	4. <i>Desalination of Brackish Water</i>
	5. <i>Large Scale Algae Production</i>
	6. <i>Disinfection of Irrigation Water in the Mesilla Valley for the Prevention of Foodborne Illnesses and Crop Decay</i>
	7. <i>Development of atomic level models of ion implantation of semiconductor material</i>
	8. <i>Biopharmaceutical Production Facility for Humanized Monoclonal Antibodies as a Treatment for VEGF Overexpression</i>
	9. <i>Supercritical CO2 extraction of Isoflavones from Soybeans</i>
	10. <i>Passive Solar Distillation of Acid Rock Drainage</i>
	11. <i>Economic Recovery of Edible Protein from Cheese Whey by Ultrafiltration</i>
<b>CE</b>	12. <i>Rio Bravo Bridge</i>
<b>ECE</b>	13. <i>Smart Surgical Instruments</i>
	14. <i>Automated Water Disinfection System</i>
	15. <i>3-D Metal Detector-Based Visualization System for Nasogastric Feeding</i>
	16. <i>LED Illuminator for Diabetes Studies</i>
	17. <i>Solar Splash 2: Maximum Power Point Tracking Charge Controller</i>
	18. <i>Portable System for Residual Lung Volume Submersion Measurements</i>
	19. <i>Solar Splash 1: Mobile Motorized Solar Tracking System</i>
	20. <i>High Functionality Mobile Apps for STEM</i>
	21. <i>Variable Resistor Logic Unit (VRLU)/Finite State Machine (FSM)</i>
	22. <i>Modeling effects of ion implantation in semiconductors</i>
	23. <i>Portable System for Residual Lung Volume Submersion Measurements</i>
	24. <i>Modeling Metamaterials</i>
	25. <i>Modeling of Electrodynamical Shakers</i>
	26. <i>Augmented Reality</i>
	27. <i>Vibration Therapy Machine</i>
	28. <i>Data Acquisition (DAQ) System for Transducer-Equipped Toy</i>
	29. <i>Integrated Spectrum Intelligent IoT Gateways</i>
	30. <i>Automated Microheater for Glass Microspheres</i>
	31. <i>Fast risetime pulse generating circuits for laser applications</i>
	32. <i>3D-printed micro-structured optical fiber preforms</i>

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	<b>33. Power electronics for solar-powered desalination</b>
	<b>34. Multispectral Imaging System</b>
	<b>35.</b>
<b>ME</b>	<i>none</i>
<b>NE</b>	<b>36. Portable Neutron Knife (PNK) for Cancer Treatment</b>
	<b>37. RTG Power System for Antarctic Automatic Weather Stations (RTG-PAAWS)</b>
	<b>38. PWR Design with an Accident Tolerant Fuel System</b>