



We cordially invite you to attend the 17th annual Capstone Design Project Competition at the Western Sarnia-Lambton Research Park. This is a very special event for Western University's Chemical and Biochemical Engineering fourth year students and faculty, our local industries, and our Sarnia-Lambton community.

On **March 31, 2023**, 11 teams of students will present their Capstone Project Designs to fellow students, faculty, volunteer judges from industry, and Sarnia-Lambton community members.

The topics covered include: Biomass Thermochemical Conversion Processes, Carbon Dioxide Utilization and Hydrogen Production, and Chemical Production and Resource Recovery. Please join us.

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**Friday, March 31, 2023**  
**8:45 AM to 1:30 PM**  
**Registration at 8:30 AM**

Western Sarnia-Lambton Research Park  
1086 Modeland Road  
Sarnia, Ontario N7S 6L2

**R.S.V.P.**

Marcella Rottman

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Lunch and Refreshments Are Provided

Please Enter at the Research Park's Main Reception Entrance



## Capstone Design & Competition: Friday, March 31, 2023

Room 1	Biomass Thermochemical Conversion Processes
Room 2	Carbon Dioxide Utilization and Hydrogen Production
Room 3	Chemical Production and Resource Recovery

8:30 - 8:45	Arrival and Registration		
8:45 - 9:00	Welcome		
	<b>Biomass Thermochemical Conversion Processes</b>	<b>Carbon Dioxide Utilization and Hydrogen Production</b>	<b>Chemical Production and Resource Recovery</b>
9:00 - 10:20	Forest Residues to Ethanol via Gasification and Mixed Alcohol Synthesis  Students: Austin Dearlove, Jack Woodall, Mia Van Oirschot, Vanessa Benitah	Process for the Synthesis of Methanol from CO <sub>2</sub>  Students: Elisa Skøtt, Babak Farzaneh, Sam Moorsom, Chas Seldon	Co-Product Recovery from Sugarcane Bioethanol Production  Students: Alexander Law, Andrew Markham, Isabella Parent, Ashley Richard, Mark Soeder
	Blue Ammonia Production from Sugarcane Bagasse  Students: Adi Venkatesh, Nicole Davies, Jay Sangameswar, Nicholas Sanghera, Jovan Williams	Applications of Dark-Fermentation and Photo-Fermentation in the Production of Biohydrogen  Students: Akash Chanderdat, John Gacnik, Kate Gogan, Adam Jang, Irin Thomas	An Integrated Process for the Production of Polyethylene from 2nd Generation Bioethanol  Students: Amandeep Mudhar, Christopher Chiba, Bikramjit Toor
10:20 - 10:40	Break		
10:40 - 12:00	Biomass Conversion to Bio-Oil and Methane  Students: Aliza Hassan, Brianna Ming, Junhao Sun, Ryan Alfonso Falcon, Xuelei Zhang, Ziqin Qin	AquaGen: Generating Aqua Hydrogen Through Methane Pyrolysis  Students: Kaitlin Cacic, Chloe Chong, Monica Perlotto, Ciara Pinto, Cole Beattie	Phosphorus Recovery from Activated Sludge of Municipal Wastewater  Students: Somar David, Xiangyuan Huang, Zhipeng Chu
		Utilizing Industrial CO <sub>2</sub> Emissions in the Production of Green Methanol  Students: Abubaker Elneihoum, Vince Jiang, Adam Shubert, Basil Zammo, Michael Zeljeznjak	BAJA ME Ltd. - Bioethanol Fuel Production from Sugar Beet Fermentation  Students: Megan Estabrooks, Erin McLean, Brooke Crawford, Jessica Sprunt, Alyssia Burgos, Adam Sawyer
12:00 - 13:00	Lunch and Judges' Final Deliberation		
13:00 - 13:30	Closing Remarks & Awards		