

## ASM Materials Camp 2024 (Internal Draft Schedule-subject to change)

Monday, June 3 <sup>rd</sup> – PSCC Campus			
Time	Activity	Staff	Room
8:30-8:45	Check in and making sure all permission forms have been turned in	Mary, Shane, Megan, TJ	MC 143
8:45 – 9:00	Welcome and introductions to the Materials Camp- All students and staff introduce themselves, discuss stipend Introduction to Material Science- Show Chalmers University ( <a href="#">What is Materials Science?</a> ) Video General Safety Discussion Individual safety discussions focusing on specific pieces of equipment at later dates	Mary Shane, Megan, TJ	MC 143
9:30 – 10:15	Introduction to Material Science in general and then transition into polymers and 3-D printing	Mary (general materials) Shane (polymers and 3-D printing)	MC 143
10:15-10:30	Break		
10:30-noon	Presentation on 3-D Printing basics and the technology (stl files, slicing, layer height, fill, speed/temp, etc.) campers pick their pattern from four predetermined solid models 3-D printer Group 1 starts print Group 2 does their POP slip casting mold	Shane  Mary, Megan	MC 143
Noon-12:45	Lunch- Students responsible for their own lunch. Bring their own or purchase at PSCC cafeteria		
12:45-1:15	MS demos Newspaper, ice, and frozen newspaper composites demo, heat/shrink tubing, LC's with color changing spoons, N-95	Trevor. Mary and Megan	
1:15-1:45	Presentation on other materials/methods used with 3-D printing (specifically at MDF)	Trevor and ?	
1:45-2:15	Group 2 starts their print and Group 1 does their POP slip Casting Mold	Shane Mary and Megan	CET lab
2:15-3:45	MDF (including 15 minutes travel to MDF and 15 minutes travel back to PSCC - Tour is 2:30 - 3:30PM)	Shane, Cliff, Megan, Trevor, Amy, Jay, Amy, Ben, ?	
3:45-4:00	Check on print jobs	Shane	
4:00	Adjourn – Pick up outside of McWherter Building	Shane, Mary Megan, TJ	

Tuesday, June 4 <sup>th</sup> –UT Campus			
Time	Activity	Staff	Location
8:30 – 8:40	Welcome back – Questions?	Mary	Ferris 502
8:40 –	Lecture on basics of Ceramics	Claudia and William	?
	Ceramic Activity	Claudia and William	?
<i>Sometime during the morning session....</i>	<i>Claudia and William- could the students pour their slip into their POP molds sometime this morning maybe right before a break? – It will take 5 minutes to pour the slip into the molds and after a 15-minute wait time, they will need to drain the slip- another 5 minutes.</i>	<i>Mary</i>	<i>Wherever you are meeting!</i>
Noon – 1:00 PM	Lunch- Students responsible for their own lunch- bring a sack lunch or purchase at student union	Mary, Megan, TJ	Student Union
1 – 2 PM	Continuation of Ceramics Module	Claudia and William	?
2 - 3	Scintillation Materials Research Center (SMRC) Tour	TBD	SERF 301
3:0-4:00	Short presentation on basic concepts of metals with demos including Nitinol, magnet falling through copper tube, coke can,	Mary	Ferris 502
4:00	Adjourn – pick up outside of Ferris Hall on Middle Drive		

Wednesday, June 5 <sup>th</sup> - UT Campus			
Time	Activity	Staff	Location
8:30 – 9:30	Presentation on aluminum and casting techniques, rolling/other manufacturing methods Poster Presentations	Janet Janet and Megan	Ferris 502
9:30 - 11:00	Open Sand Casting of aluminum object using pattern that was 3-D printed (½ students)  Presentation/testing on tensile and 3-point bend tests with finishing of green body if time permits (½ students)	Janet and Jerry  Mary, Sarah, and Megan	DO 229 DO 601
11:00-11:15	Break and walk back to Ferris Hall		
11:15-noon	High Entropy Alloy Presentation (required in order to receive stipend \$\$)	Dr. Liaw	Ferris 510
noon -12:30	Lunch provided for the students- pizza (students will need to bring their own lunch if the have specific dietary requirements such as gluten-free or lactose intolerant)	Mary and TJ	Ferris 508
12:30-2:45	Field trip to Arconic (including commute time- tour from 1-2PM)	Cliff, Olga, Janet, Mary, Megan, TJ?	Alcoa
2:45-4:00	Open Sand Casting of aluminum object using pattern that was 3-D printed (½ students)  Presentation/testing on tensile and 3-point bend tests with finishing of green bodies if time permits (½ students)	Janet and Jerry  Mary, Sarah, and Megan	DO 229 DO 601
4:00	Adjourn – pick up outside Ferris Hall Middle Drive		

Thursday, June 6 <sup>th</sup> - UT Campus			
Time	Activity	Staff	Location
8:30 – 10:45	Finish 3-point bend tests (if necessary) Lecture on Poster Presentations and work on project and poster	Janet, Mary, Sarah, Megan, TJ	DO 601 and Ferris 502
10:45 – 11:30	Navigating the application process to a university	TBD	Ferris 502
11:30 – 12:30	Lunch- Students responsible for their own lunch- sack lunch or purchase at student union		Student Union
12:30 – 1:00	Transportation over to IAMM	Mary (van driver), Megan, Claudia (Chaperones)	
1:00-2:30	Neural Network Activity	Yishu Wang Mary, and Megan	IAMM 300
2:30 – 3:30	Characterization using IAMM XRD and Microscopy labs with the data collection/analysis associated with the activities covered in the ceramics module (is this enough time? Could maybe make the Neural Network Activity shorter)	Claudia, ...	IAMM
3:30 – 4:00	Transportation back to campus	Mary (van driver), Megan, Claudia (Chaperones)	
4:00	Adjourn- Pick up outside of Ferris Hall Middle Drive		

Friday, June 7 <sup>th</sup> – PSCC			
Time	Activity	Staff	Location
8:30 - 9:00	Final edits on poster and groups go into different rooms to practice presentation	Shane, Mary, Megan, TJ, others welcome!	MC 131/116
9:00-9:45	SAE Formula One car Demo? Or Tensile Testing on Instron/ impact testing on Charpy?	Shane	Parking lot Or MC 119
9:45-10:30	Presentation by Beth Snipes and Introduction of Judges, Acknowledgements	Beth	MC 131
10:30 – 10:45	Group 1		MC 131
10:45 – 11:00	Group 2		MC 131
11:00 – 11:15	Group 3		MC 131
11:15 – 11:30	Group 4		MC 131
11:30 – noon	Judges deliberate – Certificates to campers- closing remarks	Shane, Mary, etc.	MC 131
Noon	Adjourn – pick up McWherter Building		