

MATE 316 Spring 2020

Term Project Topics

- 1. Solidification Behaviour and Microstructural Development in Nickel Based Superalloys**
- 2. Inoculants and Inoculation Mechanisms in Cast Irons**
- 3. Solidification Behavior of Commercial Mg Alloys**
- 4. Dendrite Growth in Li Ion Batteries**
- 5. Microstructural Development during Solidification of Duplex Stainless Steels**
- 6. Solidification Under Reduced or No Gravity**
- 7. Thermal Analysis of the Solidification of Cast Iron**
- 8. The Effect of Scandium on the Solidification Microstructure and Mechanical Properties of Aluminum Alloys**
- 9. Solidification Defects in Cast Aluminum Alloys**
- 10. Non-Destructive Testing and Inspection of Solidification Defects in Cast Materials**
- 11. Solidification Behaviour and Microstructural Development During Selective Laser Sintering**
- 12. Solidification Behaviour and Microstructural Development During Spray Deposition**

MATE 316 Term Projects

- Projects will be assigned on a "first come, first served" basis.
- You will be working in teams of 2.
- *You can come up with your own project topic as long as it is within the scope of this course and has my approval!*
- Please email me to inform about the project you want to study.
- The last day to send an email for this is **Friday, February 28th**, 2020. If I do not hear anything from you by this date, then I am going to assign you a project.

Evaluation of the Presentations

- **Organization + Illustrations + Grammar**
- **Content (Clarity & Quality)**
- **Delivery Tone/Style + Time Management (≈ 20 min.)**
- **Subject Knowledge + Handling of Questions**