



Theory & Application of Forging & Die Design Course Plan

	Tuesday, July 11	Wednesday, July 12	Thursday, July 13	Friday, July 14
8am	Free	1. Introduction to Forging (Clarke)	12. Design Exercise (Clarke)	20. Preforming for Impression Die Forging (Janiszewski)
9am	Free	2. Physics Fundamentals 3. Mechanical Fundamentals (Clarke)	13. Forging Materials, ferrous (Clarke)	21. Impression Die Forging (Janiszewski)
10am	Free	4. Thermal Fundamentals 5. Contact Fundamentals (Clarke)	14. Forging Materials, nonferrous (Clarke)	22. Die Block Design (Janiszewski)
11am	Free	6. Concepts of Stress and Strain (Kraft)	15. Die Materials (Clarke)	23. Trimming & Special Processes (Janiszewski)
12pm	XX	Lunch	Lunch	Lunch
1pm	Optional Plant Tour: SIFCO Industries	7. Material Behavior (Kraft)	16. Forging Equipment (Miller)	24. Economics in Die Design (Janiszewski)
2pm		8. Forging Work, Force, and Friction (Kraft)	17. Forging Design & Stimulation (Miller)	25. Metal Flow and Die Filling 26. Die Wear in Hot Forging (Scott)
3pm		9. Forging Loads (Kraft)	18. Forging Defects 19. Forging Die Failures (Miller)	27. Low Cost Methods for Making High Quality Forgings (Scott)
4pm	Free	10. Forging Loads 11. Wrap Up (Kraft)	Problem Solving Session	28. Concurrent Part Engineering (Hausermann)
5pm	Free	Problem Solving Session	Problem Solving Session	29. Die Sinking Concerns (Hausermann)
Evening	Networking Dinner - Location TBD	Free	Free	Free
Instructors on Hand	Clarke	Clarke, Kraft	Clarke, Miller	Janiszewski, Scott, Hauserman
	TBD	FIA Headquarters	FIA Headquarters	FIA Headquarters