

Second Semester TA Training Checklist

EML2322L TA's will be asked to complete second semester projects to demonstrate proficiency with the tasks detailed below. Tasks can only be signed off by senior lab TA's. Please complete each task on a part of your choosing, one of the TA Training Parts on the course website, or one of the TA Projects listed on the TA Google Sheet. Before attempting a task, thoroughly review the link below and ask a senior TA to check your setup and technique before proceeding to ensure you don't damage equipment or tools.

| TA Name: | | Semester: | Checklist Rev: C | |
|----------|-------------------|--|------------------|------|
| Level | Category | Task / Document | Completed | Date |
| Basic | General Knowledge | Review ALL of the first semester's level BASIC tasks so you are knowledgeable and confident about each and prepared to teach them to new TAs | | |
| Basic | General Knowledge | Complete First Semester TA Training Assessment | | |
| Basic | General Knowledge | TA Student Shop Assessment | | |
| Basic | General Knowledge | Calculating Speeds and Feeds | | |
| Basic | General Knowledge | Speeds and Feeds Assessment | | |
| - | Reference Link | TA Training Parts link | | |
| - | Reference Link | TA Projects Google Sheet link | | |
| - | Reference Link | Review the Lab Resources page | | |
| - | Reference Link | Machining Tips for Various Materials | | |
| Strong | Engine Lathes | Using a collet chuck | | |
| Strong | Engine Lathes | Indicating adjust tru chucks | | |
| Strong | Engine Lathes | Using + indicating a four jaw chuck | | |
| Strong | Engine Lathes | Precision boring and measurement | | |
| Strong | Engine Lathes | Using part-off tools | | |
| Strong | Engine Lathes | Using live center | | |
| Strong | Engine Lathes | Using compound slide to cut shallow taper | | |
| Strong | Engine Lathes | Cutting external threads with a die | | |
| Strong | Engine Lathes | Rigid tapping | | |
| Strong | Engine Lathes | Single point threading and thread measurement | | |

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|----------|--------------------------|---|--|--|
| Strong | Engine Lathes | Knurling | | |
| | | | | |
| Strong | Milling Machines | Tramming vise parallel to X axis | | |
| Strong | Milling Machines | Using 5C collet block | | |
| Strong | Milling Machines | Rigid tapping | | |
| Strong | Milling Machines | Using alternative vise jaws | | |
| Strong | Milling Machines | Precision boring and measurement | | |
| | | | | |
| Strong | Roll-In / Do-All Bandsaw | Changing bandsaw blade | | |
| | | | | |
| Strong | Fasteners | Attend advanced fastener lecture so you understand how to use fasteners properly, and how to fix them when someone else doesn't | | |
| Strong | Rivets | Rivet selection and use | | |
| Strong | Clekos | Cleko clamp selection and use | | |
| | | | | |
| Strong | Metrology | Using ID micrometers | | |
| Strong | Metrology | Using telescoping bore gages | | |
| Strong | Metrology | Using gage blocks & gage pins | | |
| Strong | Metrology | Different types of indicators and their uses (dial, drop, coaxial) | | |
| | | | | |
| Advanced | AWJ | Abrasive Water Jet | | |
| Advanced | Engine Lathes | Changing chucks | | |
| Advanced | Engine Lathes | Changing lathe inserts | | |
| Advanced | Milling Machines | Tramming head normal to X-Y plane | | |
| Advanced | Welding | TIG Welding | | |
| Advanced | TM-2 CNC Milling Machine | Create lathe gage (CNC, CAM, setup, cutting) | | |



advanced training is not required for all TAs, but using these skills pay 1.5 times normal payrate