# AstroTech Summer School 2020 Sessions

(preliminary list, September 2019)

**Designing and building instruments:**
Summer school participants will design, build, and test a spectrograph over the course of successive lab activities. Lab activities will feature hands-on work with instrument hardware and open-ended problem solving on small teams. Activities include:

- Intro to optics
- Intro to spectroscopy
- Science cases and conceptual spectrograph design
- Project management and systems engineering
- Diffraction gratings
- Detectors and control software
- Opto-mechanical assembly
- Integration, testing and commissioning

**Career development activities:**
The summer school will include sessions supporting personal and professional success in the field of astronomy instrumentation. Summer school participants will meet with professionals in instrumentation who bring a wide range of educational and career experiences, including environments such as telescopes, universities, and industry. Sessions include:

- Instrumentation career pathways (veteran instrumentalist panel and discussions)
- Strategies and resources for persistence
- Effective and inclusive teamwork

**Making instrumentation inclusive:**
AstroTech will bring together a group of instructors and participants interested in making the field of astronomical instrumentation more inclusive of people from diverse backgrounds. Sessions will focus on a range of topics, such as strategies for overcoming barriers to equity and inclusion in the field of instrumentation, and ways of building inclusive environments informed by social science research (including ways that participants will practice building inclusive team environments at AstroTech).