Senior Design Project Labs

- **Access**
  - Rm.3511 – Senior Design Project Lab: ECE492/3 students only
  - Rm.3503 – Fabrication Lab: Through course coordinator only

- If your card is stolen/lost, you need to report it immediately – follow GMU rules (!)

- Please be careful: It is a privilege to use the lab, and you can lose it easily
Lab Capabilities (Rm.3511)

- Fully functional electronics prototyping and testing
- Mechanical/assembly area
- Soldering equipment
  - Temperature controlled stations
  - Fine tip irons
- Rework equipment (ask if you need one)
  - Hot tweezers; IR station; Hot air station
- Inspection microscope
- Projector to carry dry-runs of your presentations
- Storage lockers
Additional Equipment for Rent

- Microchip PICKit3 In-Circuit Programmer/Debugger (several units available)
- Microchip MPLAB ICD3 Programmer/Debugger
- Digilent Analog Discovery (USB oscilloscope, Waveform generator, Logic analyzer, Digital pattern generator, Spectrum analyzer, Network analyzer, etc.)
- Hot Tweezers for SMD rework
- 40MHz – 4.4GHz USB-based Signal Generator
- 1 GHz USB-based Standing Wave Oscilloscope
- LCR Meter

Please ask if you need anything else
Fabrication Capabilities (Rm.3503)

- **PCB fabrication**
  - LPKF PCB milling machine
  - Design guidance/instructions on the course web

- **3D printing**
  - MakerBot
  - Design guidance/instructions on the course web

- **Laser cutter of construction plastics (acrylic, etc.)**
  - Design guidance/instructions on the course web

- **Soldering and Rework**
  - Solder paste disposer; IR soldering; Hot tweezers; etc.
Let’s Be Absolutely Clear

- Rule number one: Safety first (!)
  - Ask if you are not sure about safety rules
- Silence, please. No social chatting.
- Use the lab only for hardware development and system integration work
  - Please do not hold team meetings there
- You can practice presentations if there is nobody in
- Keep it clean at all time
- No food/drinks allowed
- Taking any equipment outside the lab is strictly prohibited
- Consider that everybody needs to use the lab (on an equal basis)
- No modifications to a security system (!)
- When you leave, look around and turn all equipment off
- Do not occupy mechanical area by storing your hardware on the table and around it
- If you break something or there is any problem with equipment/instrumentation, please contact lab TA

- Electric outlets – do not modify electric connections under the tables