

# Lesker U

## Basic Vacuum Technology



## Saab ETIC Nanofabrication Laboratory, University of Massachusetts Lowell

### Vacuum Basics

- Technical Resources for Basic Vacuum
- Gas-solid Interactions
- Flow Regimes
- Conductance
- Pumping Speed
- Gas Load
- Outgassing
- Pump Throughput
- System Modeling

### Physical Vapor Deposition

- Book Resources
- Major PVD Methods
  - Thermal Evaporation
  - E-Beam Evaporation
  - Sputtering
- Deposition and Film Growth
- Practical Technical Issues

### Intro to Leak Detection

- Technical Resources for Leak Detection
- Types of Leaks
- Detection Methods
- Basics of Helium-based Leak Detectors
- Practical Guidelines

### Course Schedule

- Wednesday, March 16th, 2016
- Vacuum Basics 9:00 a.m. to 11:30 a.m.
- Intro to Leak Detection 11:30 a.m. to 12:30 p.m.
- Lunch will be provided to registered attendees
- Break-out session on Leak Detection 1:00pm – 3:00pm (attendance limited)
- Physical Vapor Deposition 1:00 p.m. to 4:00 p.m.

**Location:** SAAB Emerging Technologies & Innovation Center - Perry Atrium

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