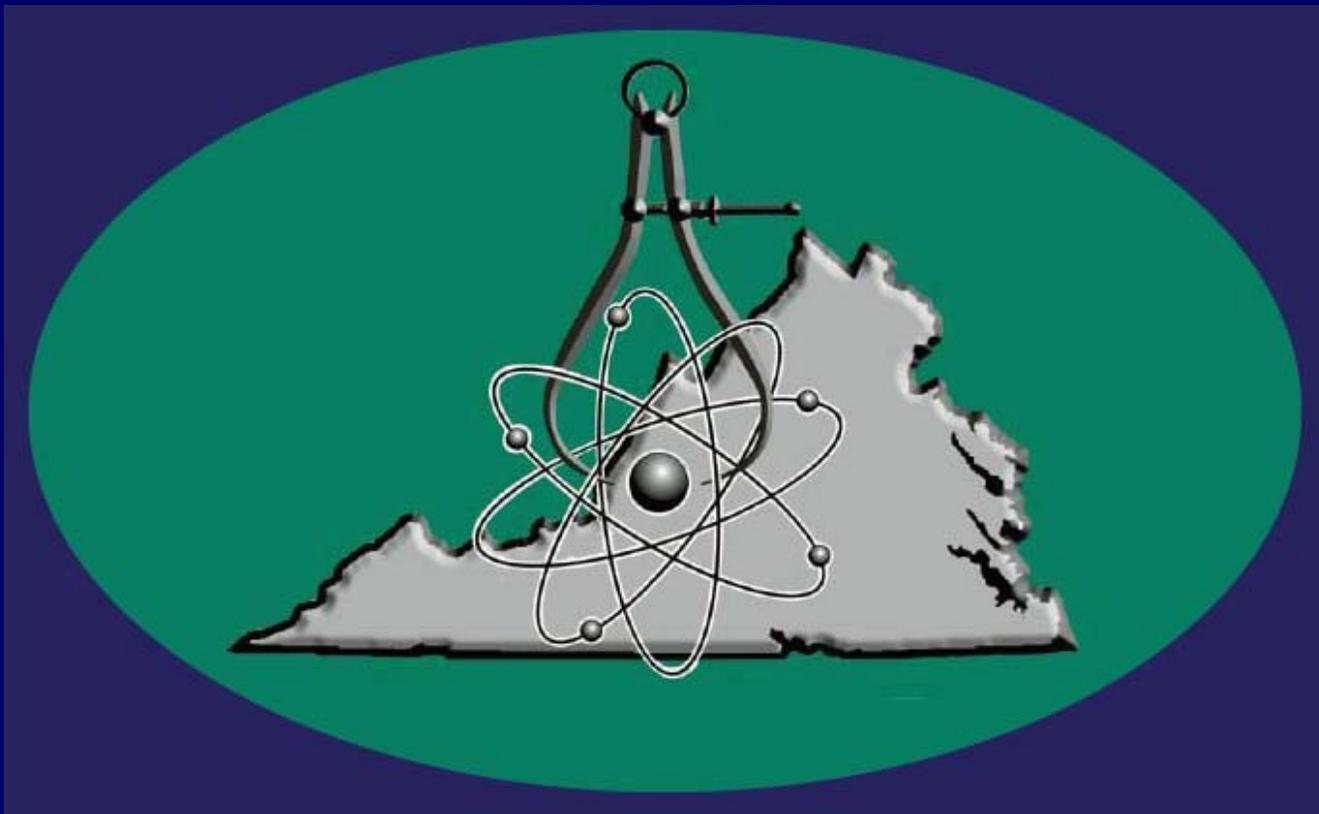


# The Virginia Partnership for Advanced Nanotechnology Education



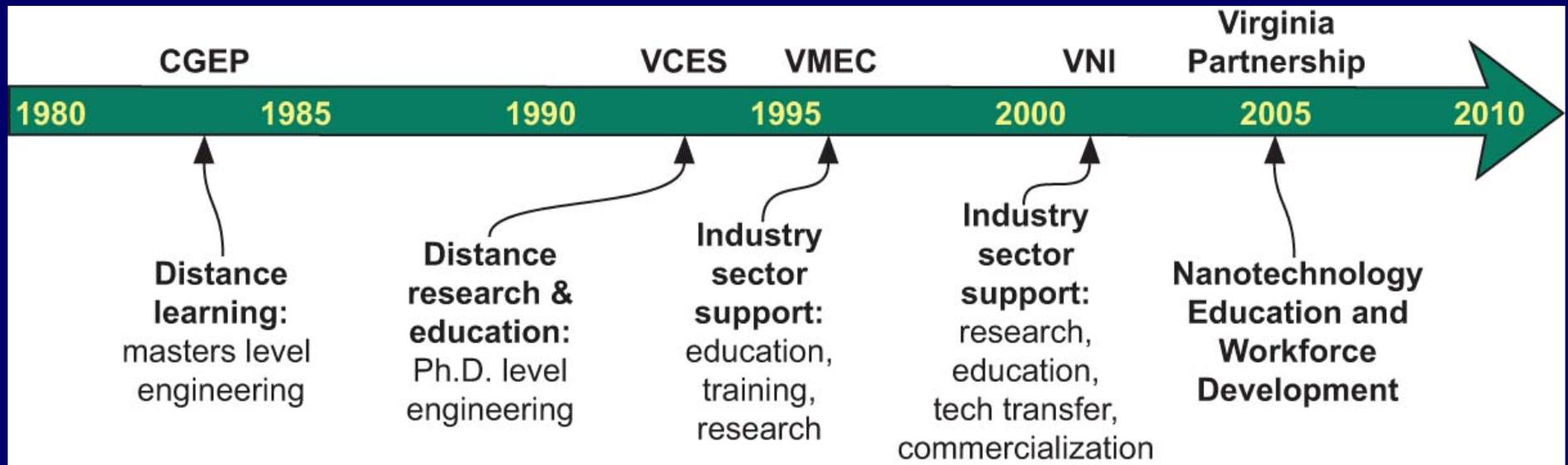
# Personal Introduction

- Dr. James F. Groves
  - Ph.D. in Materials Science and Engineering, 1998, University of Virginia
  - State-chair of Commonwealth Graduate Engineering Program (2004-2007)
  - Associate Director of UVA's Center for Nanoscopic Materials Design, a NSF MRSEC
  - Assistant Professor in UVA Dept. of Materials Science and Engineering

# Virginia Partnership for Advanced Nanotechnology Education

- Commonwealth Graduate Engineering Program (CGEP)
- Virginia Microelectronics Consortium (VMEC)
- Virginia Consortium of Engineering and Science Universities (VCES)
- Virginia Nanotechnology Initiative (VNI)

# Virginia Partnership for Advanced Nanotechnology Education



# Commonwealth Graduate Engineering Program (CGEP)

- Commonwealth and University funded, \$5.5 M / yr
- Over 7200 enrollments in 2004-2005
- GMU, ODU, VCU, UVA, and VT
- Web site:  
[cgep.virginia.gov](http://cgep.virginia.gov)

**CGEP** Commonwealth Graduate Engineering Program

Home Student Login Instructor Login

degree **PROGRAMS**

[Home](#) > [CGEP Overview](#) > Degree Programs

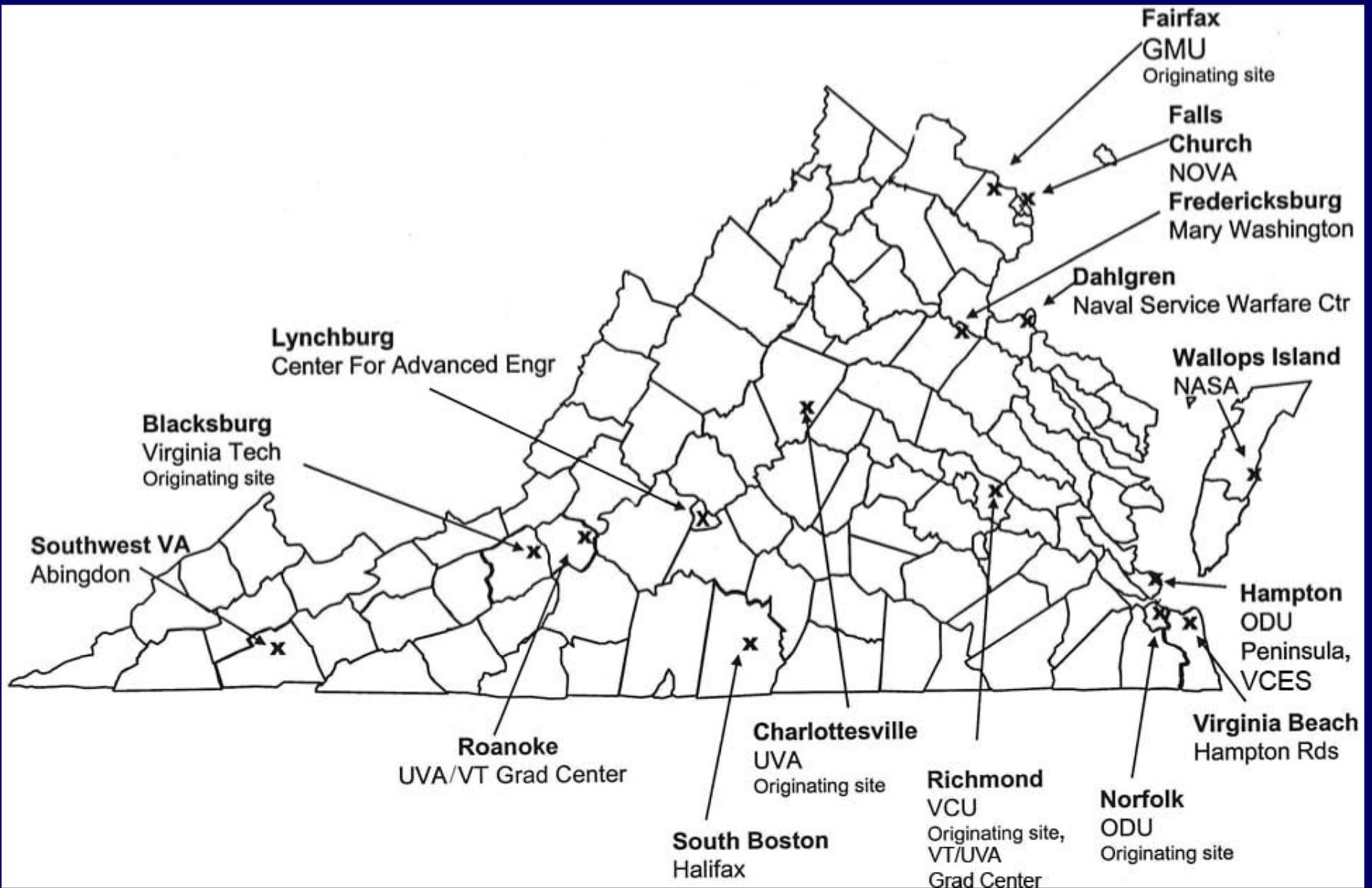
Below is a complete listing of CGEP Degree Programs

<b>Old Dominion University</b> Design and Manufacturing Engineering Management Experimental Methods Modeling and Simulation Manufacturing & Design Coastal Engineering (certificate)	<b>Virginia Commonwealth University</b> Masters of Science in Engineering
<b>Virginia Tech</b> Civil Engineering (Environmental and Infrastructure) Computer Engineering Electrical Engineering Engineering Administration Systems Engineering (Interdisciplinary)	<b>University of Virginia</b> Chemical Engineering Civil Engineering (Structural) Electrical Engineering Engineering Physics Materials Science and Engineering Mechanical and Aerospace Engineering Systems Engineering

**Frequently Asked Questions**

[Administrators](#) - All Material Copyright 2005 CGEP - [Contact Us](#)

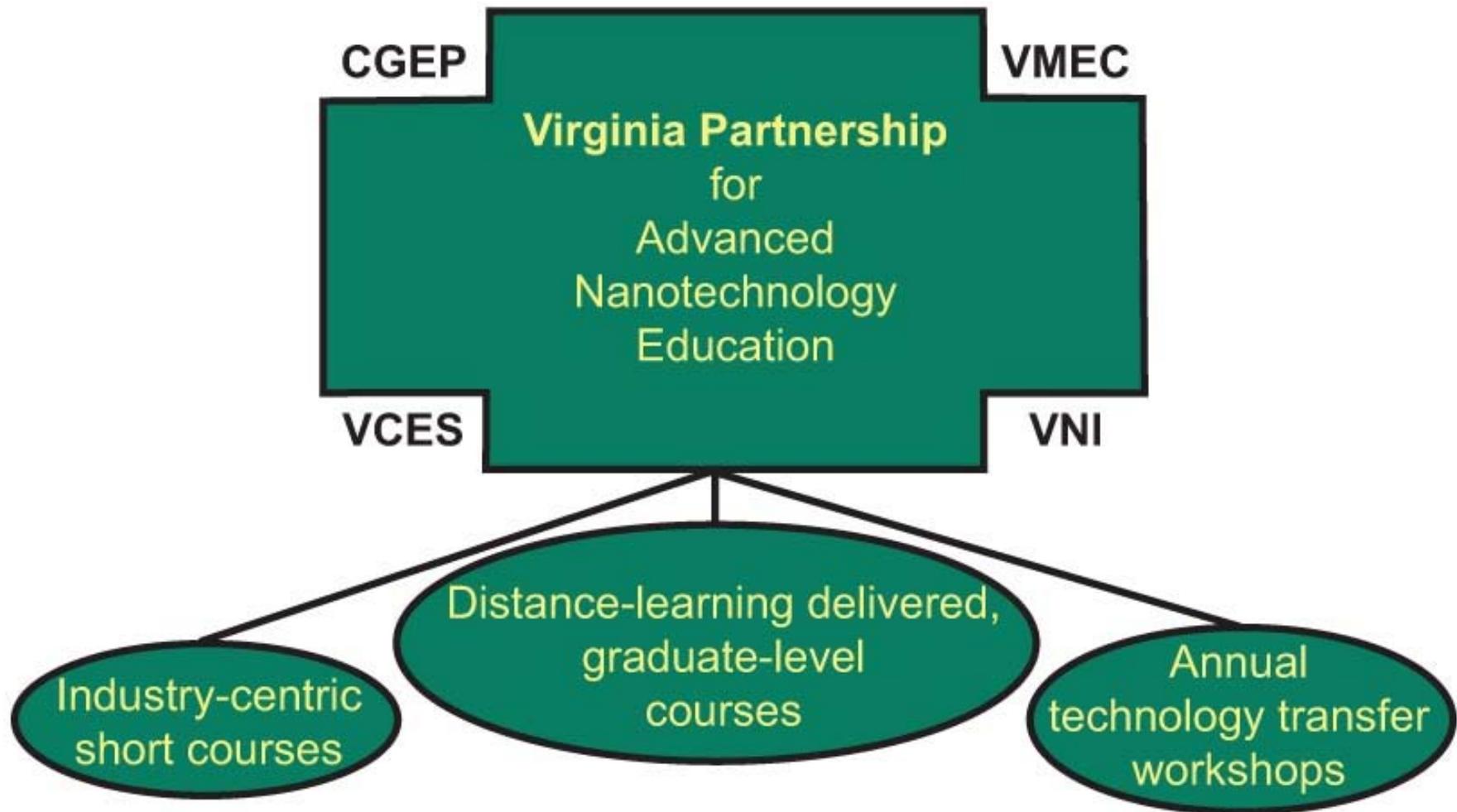
# CGEP Broadcast Network in Virginia



# Virginia Partnership for Advanced Nanotechnology Education

- College of William and Mary
- George Mason University
- Old Dominion University
- University of Virginia
- Virginia Commonwealth University
- Virginia Tech
- Norfolk State University
- Hampton University
- Virginia State University

# Virginia Partnership for Advanced Nanotechnology Education



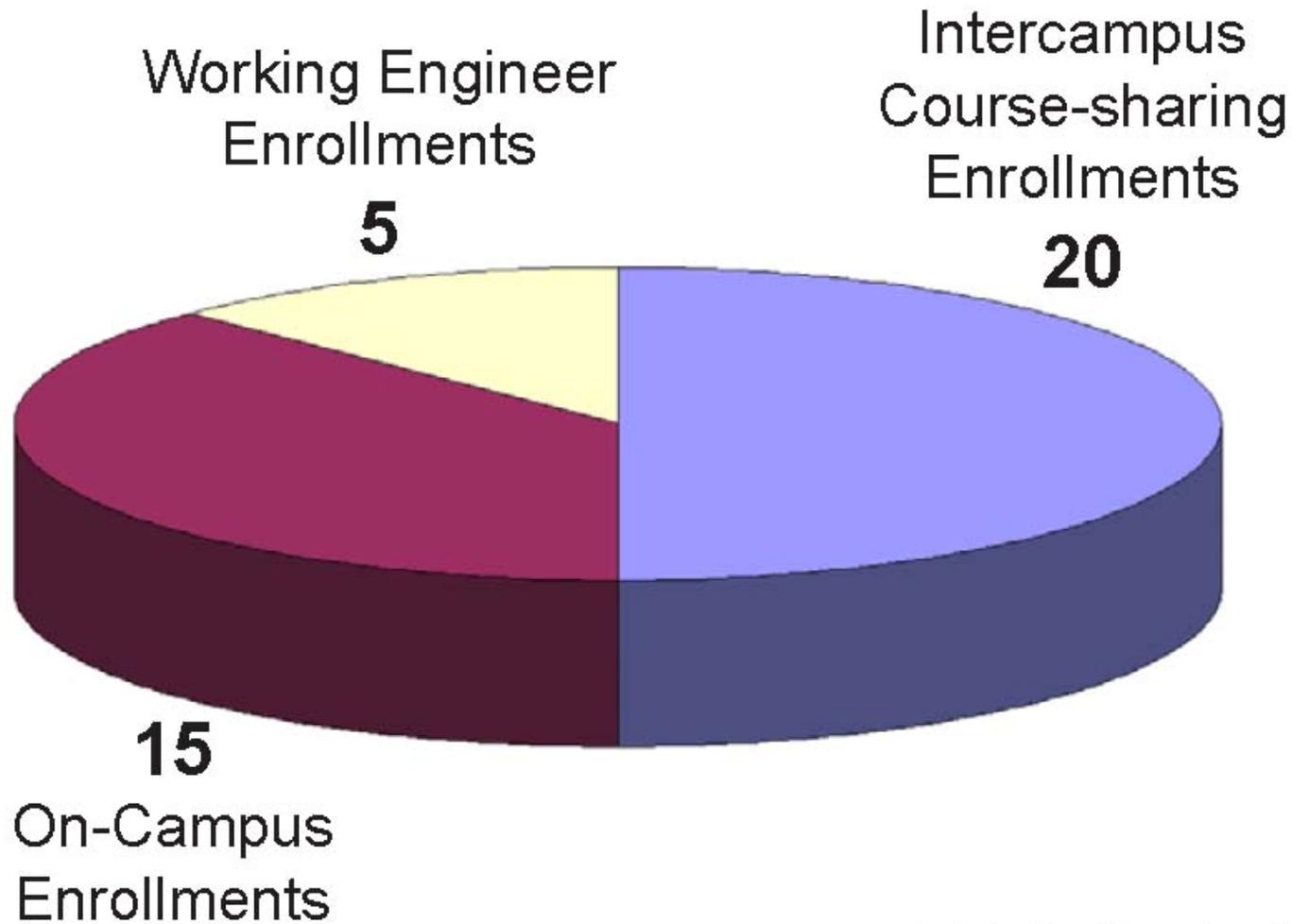
# Graduate Course Sharing

- Areas of course focus
  - Nanomanufacturing
  - Nanoscience Modeling and Simulation
  - Nanomaterials and Characterization
  - Nanoelectronics
  - Nanobiotechnology

# Graduate Course Sharing

- Two year cycle of ~24 courses
- Areas of course focus overseen by “track coordinators” and informal faculty groups
- Graduate certificates offered in areas of focus
- Courses taught faculty at the six Ph.D. granting science and engineering schools
- Include HBCU’s as receive sites, then as curriculum contributors

# Graduate Course Sharing

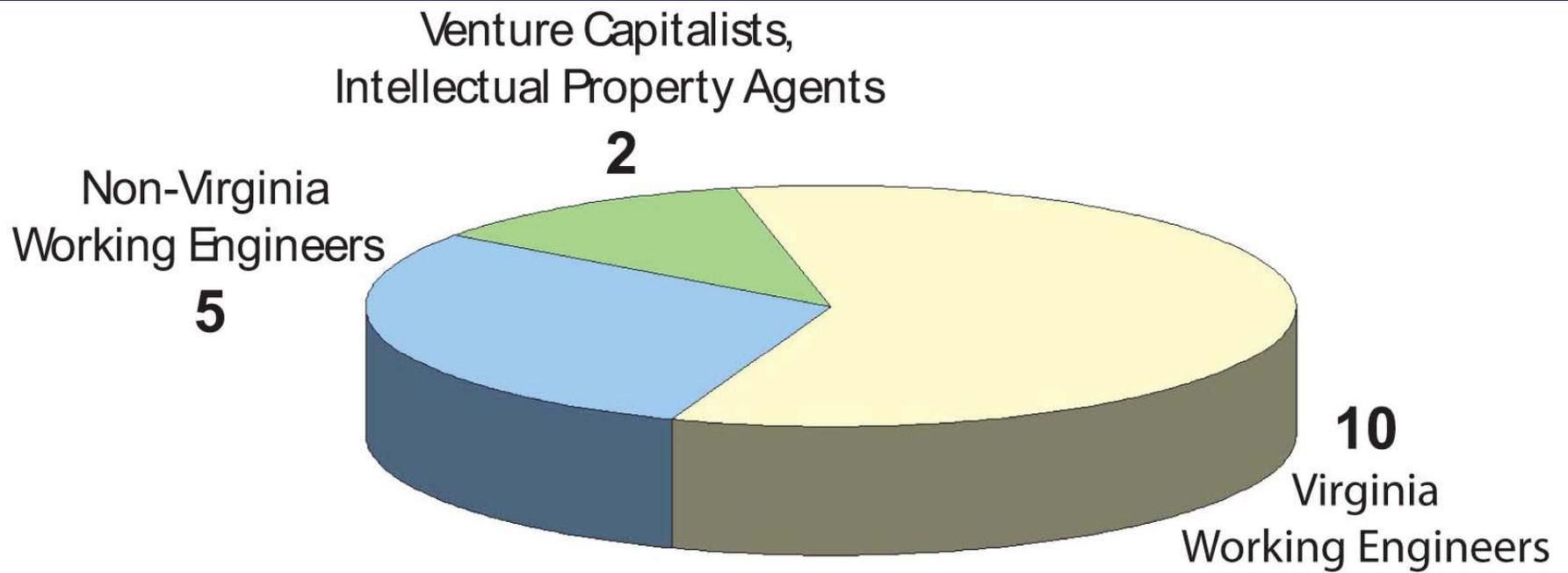


**Total: 40 students / class**

## Industry-centric short courses

- Topics selected through corporate survey
- Designed for working engineers who do not have time for graduate courses and programs
- More applied knowledge than graduate courses

# Industry-centric short courses

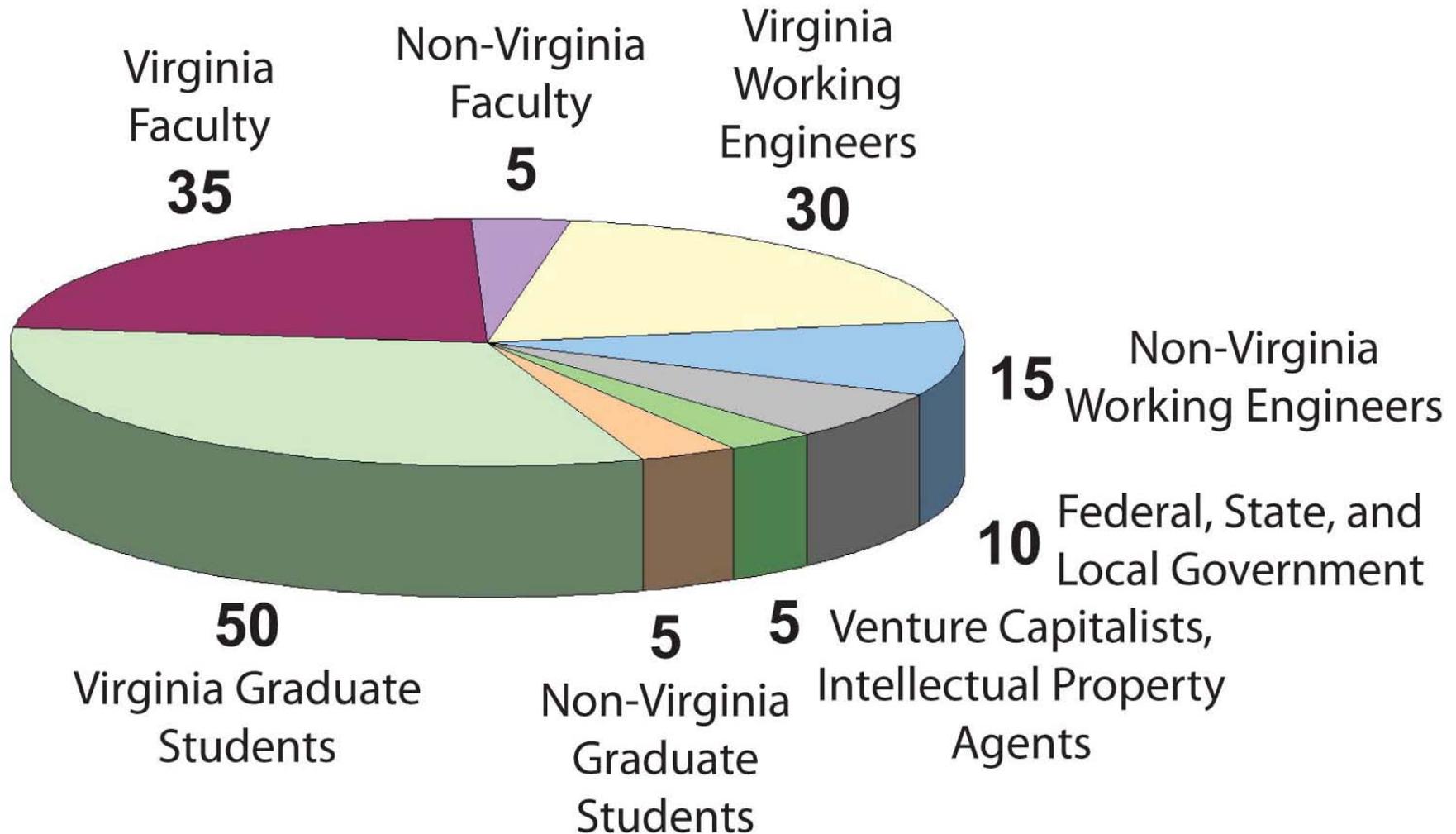


**Total: 17 students / course**

# Annual Technology Transfer Workshops

- Focus on graduate students
- Highlight will be graduate student presentation competition judged by corporate panel based on transformational potential

# Annual Technology Transfer Workshops



**Total: 155 attendees / workshop**

# Companies Supportive of General Vision

- BAE Systems
- Infineon Technologies
- Luna Innovations
- Materials Modification
- Micron Technology
- NanoSonic
- nanoTitan
- Northrop Grumman Newport News
- Philip Morris

# Funding Options Being Pursued

- NSF Partnerships for Innovation proposal
  - Submitted June 3, 2005
  - 2 years, \$600,000
  - Decision made Jan. / Feb. 2006
  - Funding would start June 2006

# Funding Options Being Pursued

- Triple helix cooperation
  - Academic, state, corporate
  - Commonwealth  
\$150 K / yr General Fund
  - Core academic partners  
\$150 K / yr Non-general Fund
  - Corporations  
\$150 K / yr towards workforce diversity
  - Short course, workshop fees  
\$50 K / yr

# Virginia Partnership for Advanced Nanotechnology Education

- Strengthen the Commonwealth's existing workforce
- Prepare a diverse future workforce for the Commonwealth
- Enhance basic research in the Commonwealth
- Stimulate human capital tech transfer
- Increase access to university faculty expertise
- Utilize faculty resources more efficiently
- Create a better networked, more fertile environment for current and future corporate residents