

# Commonwealth Graduate Engineering Program

2011-2012 Annual Report &  
2012-2013 Operating Plan

Rosalyn Hobson Hargraves, State Chair & VCU Director  
Peggy Brouse, GMU Director  
Linda Vahala, ODU Director  
James Groves, UVA Director  
Glenda Scales, VT Director



# Highlights of Activities

- Increase the knowledge, skills, abilities and educational levels of Virginia's engineers
- Alignment of programs with the technology sectors specifically targeted by the Virginia Economic Development Partnership (VEDP) and the Commonwealth of Virginia
- Increase collaboration among faculty at CGEP universities.



# Highlights of Activities

- General stability in course enrollments
- This year experienced a 10% increase in overall student enrollment
- Attributed to marked increase in internet based course enrollment



# Highlights of Activities

- UMW Dahlgren Campus Center for Education and Research Dedication was February 17, 2012
- CAER celebrated it's Grand Opening and Ribbon Cutting ceremony was August 25, 2011



# Webinar Series

- Offered five webinars on cyber security
- Each university hosted a seminar
- Seminars were offered monthly throughout the academic year
- Advertised broadly: CGEP institutions, CGEP partners, and CGEP advisory board member companies



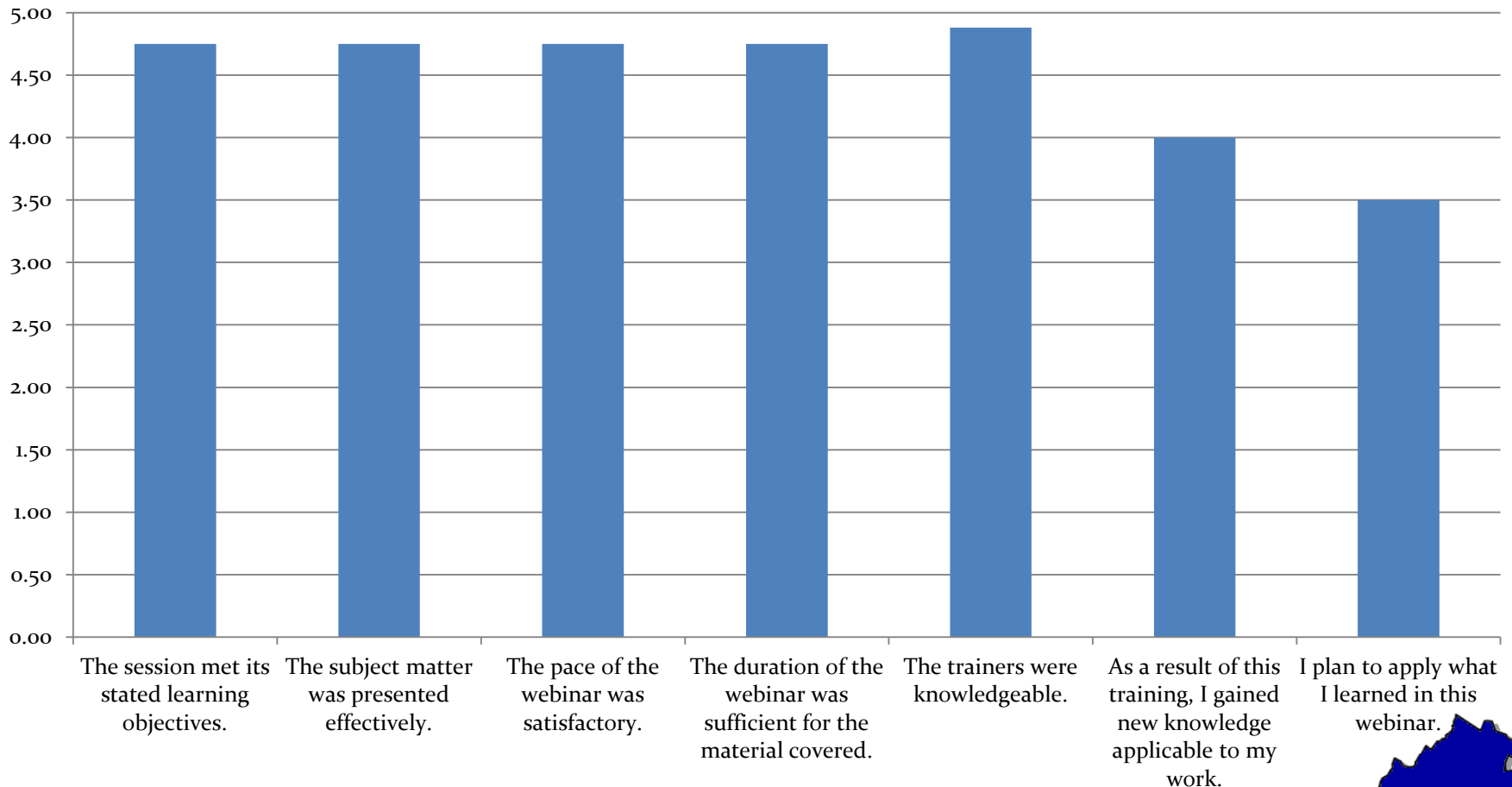
# Webinar Series

- 24 October 2011: Pervasiveness of computing and cybersecurity in an interconnected world, Gurpreet Dhillon
- 8 November 2011: VT – IPv6 at Virginia Tech, Randolph Marchany
- 8 February 2012: GMU – Toward Proactive Mitigation of Advanced Multi-tier Botnets, Brent ByungHoon Kang
- 2 April 2012: ODU – Cybersecurity Risk Governance, Adrian Gheorghe
- UVA – Cryptography and Security, Abhi Shelat



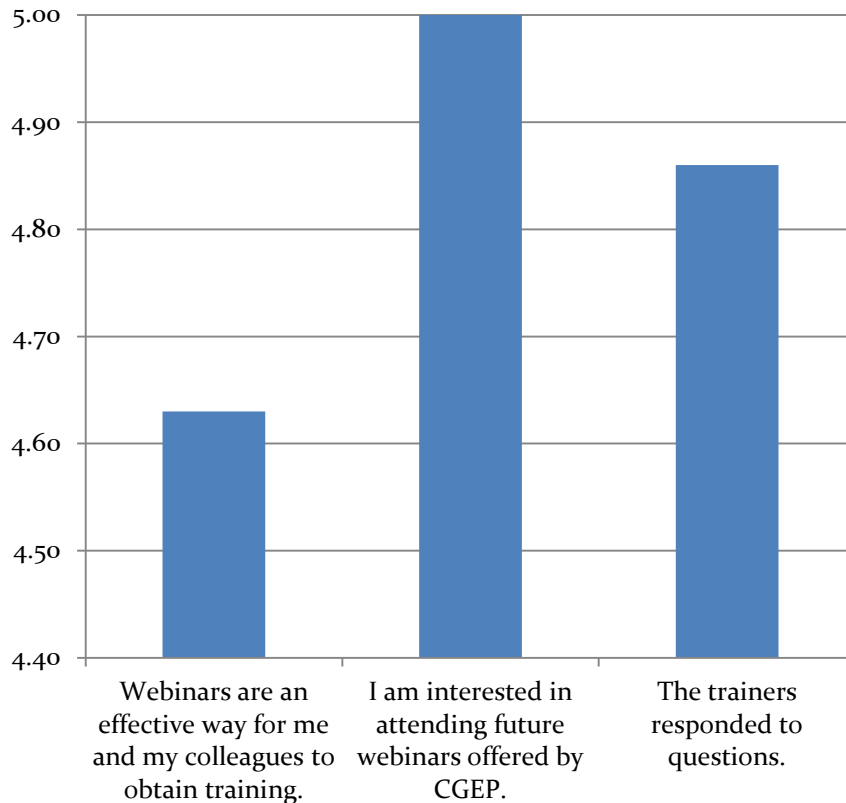
# Webinar Series Update

## Evaluation Survey Results



# Webinar Series Update

## Survey Results Continued



## Selected Survey Comments

- It was an interesting presentation that provided an easy way to remain up to date on security related topics.
- IT security is a hot topic in our organization at the moment. Any webinars on this subject are valuable.
- Flexibility and instruction set. All went very smoothly! Having it recorded and being able to listen to it at a later date also a big plus!
- I will use this information as an as needed basis.





# Delivery Method Transition

- Moving to online delivery

The screenshot displays the Elluminate Live! software interface. The main window shows a "Whiteboard - Main Room (Scaled 98%)". The whiteboard content is titled "Introduction to Organic Chemistry" and features a curriculum overview for Professor Chandler. The overview is organized into three columns representing months: January, February, and March. The January column lists "Introduction to Organic Compounds", "Hydrocarbons", "Acids and bases", "Structure & Reactivity", and "Lab". The February column lists "Multifunctional Compounds", "Carbohydrates", "Proteins", "Lab", and "Group Research - New compound synthesis". The March column lists "Examples of Organic Reactions", "Introduction to Reaction Mechanisms", "Review", and "Exam". Below the curriculum overview, it says "Curriculum Overview - Professor Chandler". The interface also includes a "Participants" list on the left, a "Chat" window, and a "Teleconference available" indicator at the bottom.



[http://www.illuminate.com/Products/Elluminate\\_Learning\\_Suite/Elluminate\\_Live!/?id=79/](http://www.illuminate.com/Products/Elluminate_Learning_Suite/Elluminate_Live!/?id=79/)

May 22, 2012

9



# Online Delivery



UVA faculty member teaching in classroom and Online with guest expert joining in class instruction

- Online enrollment increased 54% over last year
- 36% of total enrollment was online up from 25% last AY
- Contributed to a 10% increase in overall enrollment
- Transition is resource-intensive

# Resources Required

- New hardware
  - At the classroom, instructor, and student level
- New software
  - For the class environment itself, for use during class sessions, for class backup, and for out-of-class connections
- New processes
  - For faculty and student training, for handling of student materials, for support of class sessions, and for tracking of system performance



# Massively Open Online Courses

- Several online graduate engineering programs: Purdue, UIUC, Iowa State, WPI, etc.
- New Model: Stanford, MIT, Georgia Tech, Udacity, Udemy
  - Leading experts offering online courses with open enrollment free of charge
- Stanford University
  - Artificial Intelligence: 160,000 students, 190 countries, 44 languages
  - Machine Learning: 13,000 completed
  - Introduction to Databases: 7,000 completed



# Massively Open Online Courses

- Are these courses viewed favorably by employers?
- Will these classes offer credentialing that employers value?
- What are the implications to continuing education programs?
- What do employers want?



# Massively Open Online Courses

- Opportunity for supplemental instruction/training
- Informative: a low cost introduction to topics
- Employers investigate with due diligence
- Not seen as a credentialing option. BS and MS degrees viewed as premier credentialing tools
- Continue to monitor



# Critical Topics

- Improvements in seminar series
- Closer relationships with companies
- Advertising/Marketing
- Remaining aligned with Strategic Plan



# Final Thoughts

- New State Chair: Linda Vahala from Old Dominion University
- In our quest for continuous improvement quality online courses and programs requires resources
- Special Thanks
  - Directors
  - Administrators
  - Volunteer Advisory Board
  - SCHEV's continued support

