4-VA: A Presentation to JCOTS' Electronic Meetings Advisory Committee

Joy Hughes, Ph.D.
Executive Director of 4-VA
GMU's Vice President of Information Technology

October 15, 2012

Universities Collaborating to Achieve Virginia's Goals for Higher Education

4-VA Mission

Promote inter-university collaborations that leverage the strengths of each partner university in order to accomplish much more than any individual university could achieve alone.

4-VA Current Projects

- Share courses among 4-VA universities
- Mount online degree completion programs
- Improve research competitiveness
- Configure a State-wide video network
- Improve success of students in STEM courses & programs at 4-VA universities

Sharing Courses via TelePresence

- Current Shared Courses: Chinese, Arabic, Turkish, InterAgency Intelligence Analysis.
- Planned Shared Courses: Robotics, Advanced STEM seminars.

Online Degree Completion Programs

Current 4-VA Online Programs:

- Housed at JMU: Online BIS degree with several STEM concentrations.

- Housed at Mason: Online BAS degree with concentration in Technology Innovation.

Planned 4-VA Programs: Online Health Informatics, Online Organizational Development.

Increase Research Competitiveness

- Current Projects: Research presentations on hot topics such as “big data” are being shared among the 4 universities.

- Planned Projects: Joint grant submissions flowing out of the relationships built as result of meeting via TelePresence.

State-wide Video Network

Progress: 501-C3 networking association formed; governance structure established; video switching equipment installed at the 4-VA universities; a technical working group established with techs from the 4-VA schools as well as technical staff from other Virginia research universities.

FY'13 Tasks: Define requirements, develop a proposed architecture, and pilot some multi-institutional video events.

4-VA STEM Goal: Virginia as #1 STEM State

Virginia does have the most STEM jobs of any state.

Virginia does not produce sufficient STEM graduates to meet current workforce needs.

Virginia's STEM graduates sometimes don't have the skills needed by employers.

Prediction: by 2018 some 600,000 STEM jobs in Virginia will go unfilled.

4-VA asked "Why do these Workforce Problems Exist?"

- Held conference for 66 biology faculty from 30 public colleges and universities.

- Interviewed STEM K-12 coordinators.

- Interviewed corporate leaders.

Challenges Identified

- Poor articulation across sectors causes student dropout: AP Tests, Dual Enrollment, Community College Variations, etc.
- Courses do not give students practice in being scientists or technologists or innovators so students lose interest and companies decry poor skills of some of those who do graduate.
- Burgeoning interest in the Life Sciences has resulted in “efficient” intro courses that are lecture focused and have many hundreds of students. Students fail or lose interest.

4-VA STEM Projects to Address Issues

1. Fix Articulation Problems: Needs a Multi-Agency effort (SCHEV, VDOE, VCCS, College Board).

2. Provide Easy to Use Gateway to Electronic Information Resources: Include online courses as well as course modules, simulations, pre-test items, etc. to increase student interest and success while also improving productivity.

4-VA STEM Projects to Address Issues

3. Redesign STEM Courses: Focus on inquiry based learning and integrate electronic resources that increase student success.

4. Share Advanced STEM Seminars: Share these across universities in order to help students get prepared for the newest careers and STEM innovations.

QUESTIONS?