



Updating Curricular Guidelines for Associate-Degree Computer Science Programs

ACM CCECC: Elizabeth Hawthorne, Cara Tang, Cindy Tucker

CS-Cyber Task Force Team Leaders: Teresa Moore, Lambros Piskopos, Christian Servin

Agenda



Introductions

ACM CCECC

CS-Cyber Task Force

Work so far

Activity in Groups

Which CS2013 KUs are appropriate for Associate-Degree programs?

What's missing?

What cyber content should be included?

Summary & Wrap-Up

ACM CCECC & CS-Cyber Task Force



Committee for Computing Education in Community Colleges
Celebrating **40++ years** of service to computing education

CS-Cyber Task Force

Formed November 2015

3 Teams

Teresa Moore, Lead

Colleen Case
Becky Grasser
Amardeep Kahlon
Khallai Taylor
Carole Tharnish

Lambros Piskopos, Lead

Michael Bauer
Bryce Barrie
Nancy Jones
Shamsi Moussavi
Robert Surton

Christian Servin, Lead

Larry Forman
Charles Hardnett
James Kolasa
Pam Schmelz

Background



2009: Guidelines for Associate-Degree Transfer Curriculum in Computer Science

2013: Curriculum Guidelines for Undergraduate Degree Programs in Computer Science – CS 2013

New knowledge area: Information Assurance and Security (IAS)

2015: BoF @ SIGCSE: Perspectives on How CS 2013 Influences Two-Year College Programs

Standing room only!

2015: Joint task force on Cybersecurity Education formed – ACM, IEEE-CS, AIS-SEC, CEP

2015: NSF C5 Project – Catalyzing Computing and Cybersecurity in Community Colleges

2016: Computer Science for All – U.S. Government initiative
(www.whitehouse.gov/blog/2016/01/30/computer-science-all)

CS-Cyber Work



Divide CS 2013 knowledges areas (KAs) into 3 groups, form 3 teams

First pass at each knowledge unit (KU): Appropriate for associate-degree level?

Yes, No, or Partial/Maybe

First draft of learning outcomes for each KU

Sources: CS 2013, CEP, NICE, NSA CAE2Y, IT 2017 v0.51, Bloom's Taxonomy

This session will focus on which **KUs** are appropriate for associate-degree level

Tomorrow's affiliated workshop will focus on **learning outcomes** and **assessment**

CS 2013 Knowledge Areas



Team 1, Teresa

Computational Science

Graphics and Visualization

Human Computer
Interaction

Information Management

Social Issues and
Professional Practice

Team 2, Lambros

Information Assurance
and Security

Networking and
Communication

Architecture and
Organization

Operating Systems

System Fundamentals

Team 3, Christian

Algorithms and Complexity

Discrete Structures

Programming Languages

Software Development
Fundamentals

Software Engineering

Not included by choice

Intelligent Systems

Platform-based Development

Parallel and Distributed Computing

Activity



Form groups based on KA clusters

Survey – take individually: www.surveymonkey.com/r/CS-Cyber

Discuss which KUs are appropriate for associate-degree level

Discuss missing content

Consider influence of cybersecurity

Survey – take as group: www.surveymonkey.com/r/CS-Cyber

Group report out

Discussion summary

Stay Involved with CS-Cyber



Become a reviewer

Give us a business card with “CS-Cyber Reviewer” written on the back

OR

Send a text to **37607** :

In the body include **355902** and your **name** and **email**
(www.polleverywhere.com/free_text_polls/98KzHGuuWB85ie4)

Visit our booth or attend another ACM CCECC event at SIGCSE

Follow us on Twitter throughout the conference **@ACMccecc**

Other ACM CCECC Events at SIGCSE



Booth in Exhibit area: #114

Enter our raffle to win cool tech prizes

Community College Reception sponsored by Intel Education

7pm tonight, Nashville room

Scrumptious desserts

Network with colleagues

Gadget giveaways!

Affiliated Event: Community College Curriculum Development Workshop: Computer Science and Cybersecurity

Saturday, 3pm– 6pm, L1 room, RSVP to acm.ccecc@ccecc.acm.org