



# ACM Competency Model of Core Learning Outcomes and Assessment for Associate-Degree Curriculum in **Information Technology**

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# Outline

- Process
- The IT Curricular Guidance
- Degree and Certificate Correlations
- Discussion

# The Process: Phase 1 (2011-2012)

## Determine need for & nature of guidance

- Compelling need for IT curricular guidance for the associate-degree level
- Guidance should be built on a framework of **core learning outcomes**
- Accompanied by meaningful evaluation metrics
- Influenced by
  - Current and future needs of business and industry
  - New and emerging technology
  - International perspectives
  - Certifications
  - Related curricula
  - Government and standards bodies

# The Process: Phase 2 (2012-2014)

## **Review related existing guidance and ontologies**

- U.S. Dept. of Labor IT Competency Model
- ACM IT Baccalaureate Guidelines
- European e-Competence Framework
- CSTA Computer Science Standards

## **Convene subject matter experts from**

- business and industry
- two-year college faculty
- assessment experts

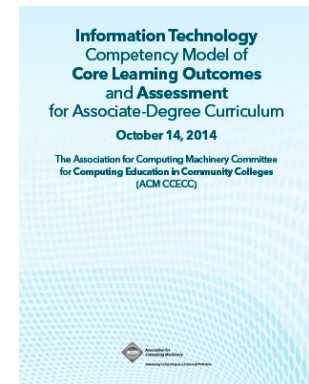
## **Draft core IT learning outcomes and assessment rubrics**

## **Strawman and Ironman drafts available for public review and comment**

# The Process: Phase 3 (2014 - )

## Final report approved October 2014

- Available at CAPSpace.org and in the ACM Digital Library
- [capspace.org/ITreport/](http://capspace.org/ITreport/)
- <http://dl.acm.org/citation.cfm?id=2686614>
- ACM order #99914 for a hard copy  
(Only pay shipping & handling)



## Collect certificate and degree correlations

- More on this later...

# IT Curricular Guidance

- 50 student learning outcomes of core IT competencies
- Three-tiered assessment rubric for each learning outcome
- Mappings to other curricula and frameworks, including
  - ACM IT Baccalaureate Guidelines
  - U.S. Dept. of Labor IT Competency Model
  - Common Criteria for Information Technology Security Evaluation
  - European e-Competence Framework
  - CSTA Computer Science Standards
- Correlations that align a variety of certificate and degree programs with the core IT learning outcomes

# IT Curricular Guidance

- Champions include
  - MPICT
  - BATEC
  - CSSIA
  - CSTA
  - CyberWatch
  - Cisco
  - Google
  - Intel
  - Microsoft
  - IBM
  - Maricopa Community College District
  - Portland Community College
  - Bluegrass Community and Technical College
  - Union County College
- “Champions appreciate the importance of robust associate-degree IT programs, make a commitment to the academic foundations of IT students, and promote education that meaningfully prepares graduates as future employees and practitioners.”

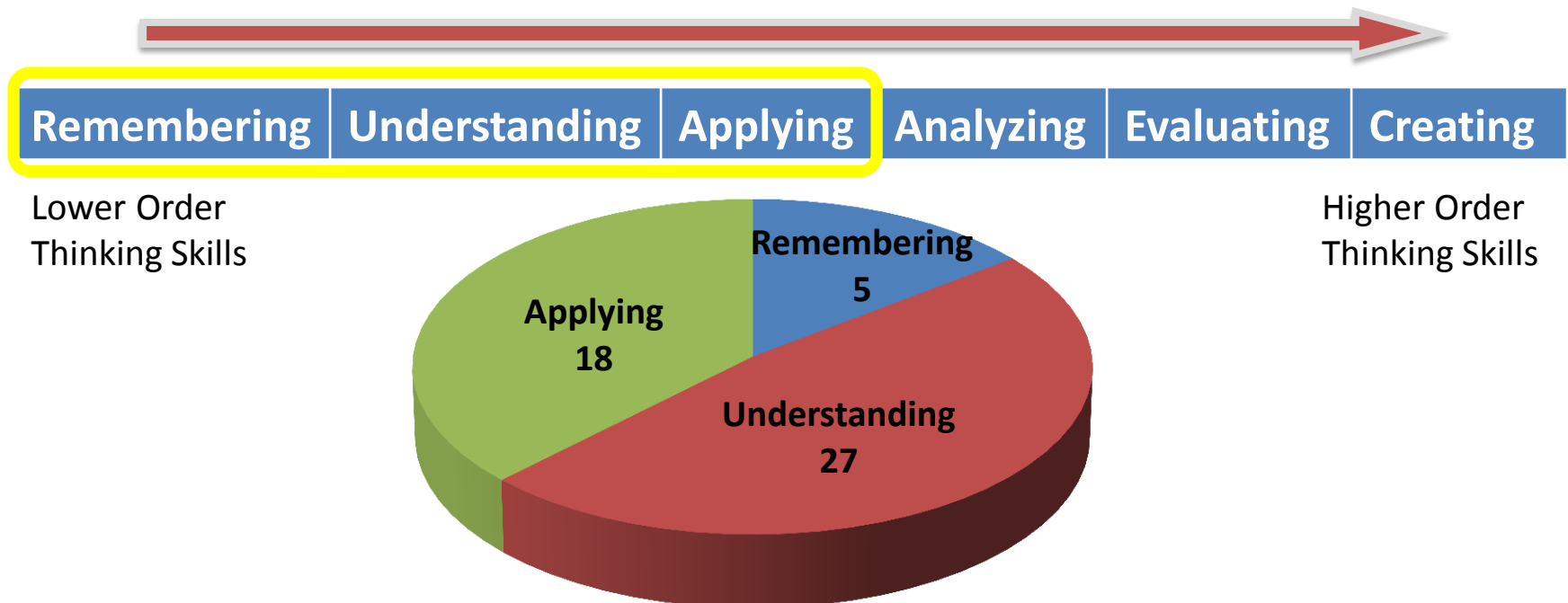
# Using the Guidance

- [capspace.org/ITreport/](https://capspace.org/ITreport/) “How to use this Competency-based Curricular Guidance” pg 7
- Conducting program reviews to update and create curriculum
- Creating program outcomes
- Facilitating program and course articulation
- Crafting course and program assessments
- ...



# The 50 Learning Outcomes

- Include both technical and behavioral outcomes
- Organized in 12 program outcomes
- Span the first 3 levels of Bloom's Revised Taxonomy



# Degree and Certificate Correlations

- Growing collection of correlations that align a degree or certificate program with ACM's core IT learning outcomes
  - [capspace.org](http://capspace.org) → Curricula → Program Inventory → Institutional Computing Programs or Certificates Correlated with the ACM CCECC Program
- Correlate your program!
  - [capspace.org/correlation/](http://capspace.org/correlation/)



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