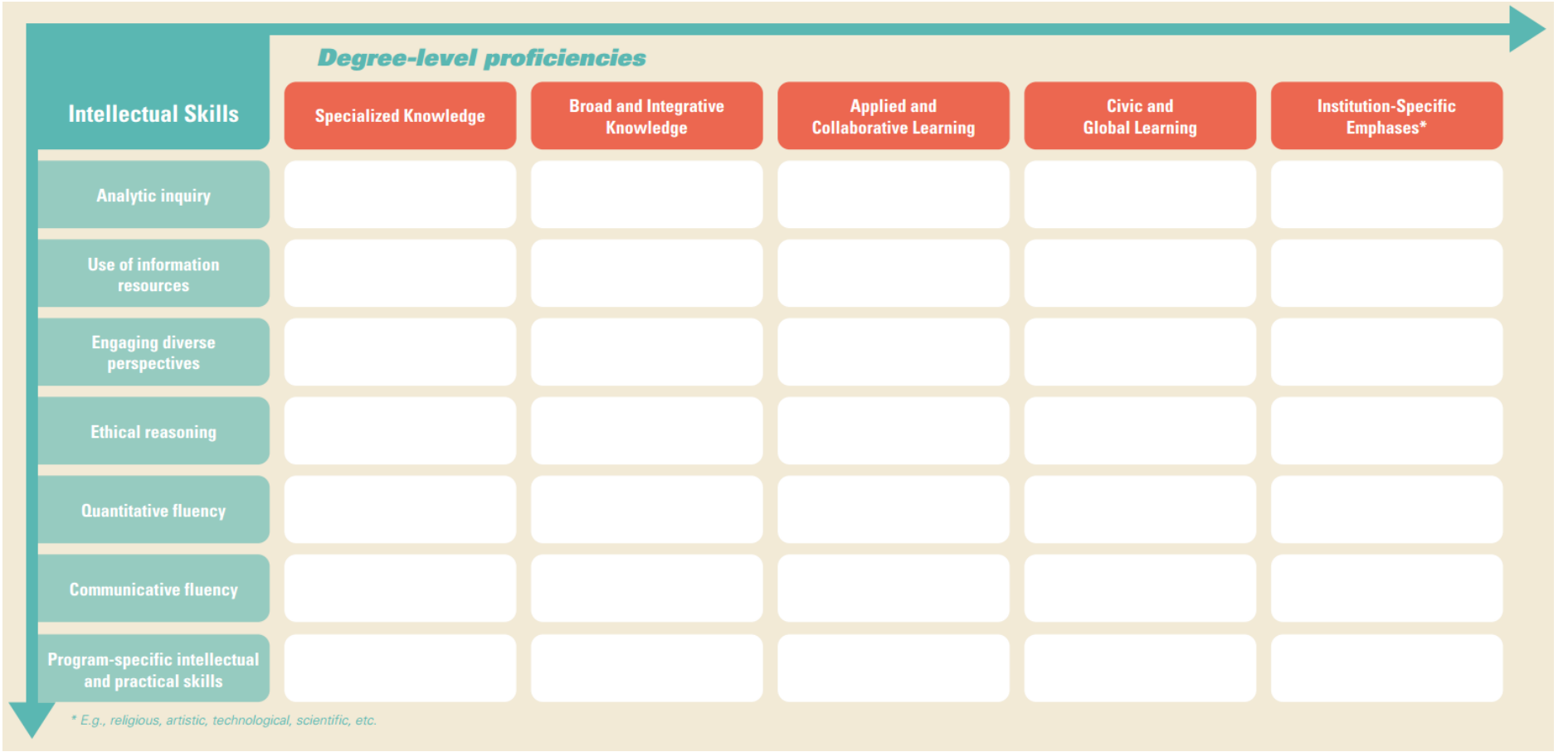
Aligning CBE Programs with National Frameworks

John Milam, Ph.D.
Lord Fairfax Community College

Some National frameworks

- Degree Qualifications Profile (Lumina)
  http://degreeprofile.org/
- Liberal Education and America's Promise (AAC&U)
  https://www.aacu.org/leap
- Competency Model Clearinghouse (DOL)
  https://www.careeronestop.org/CompetencyModel/
- Role-based competencies, such as apprenticeships
  https://www.highered.org/ahima-apprenticeship-programs.php
  http://nimsready.org/the-new-apprenticeship/
- Common Employability Skills
  http://businessroundtable.org/sites/default/files/Common%20Employability_asingle_fm.pdf

Degree Qualifications Profile - Matrix



Degree Qualifications Profile - Grid

1

Specialized Knowledge

This category addresses what students in *any* specialization or major field of study should demonstrate with respect to that specialization. Tuning, a field-specific effort to map learning outcomes, is necessary to describe the concepts, knowledge areas and accomplishments that students in a *particular* specialization should demonstrate to earn the degree.

At the associate level, the student	**At the bachelor's level,** the student	**At the master's level,** the student
Describes the scope of the field of study, its core theories and practices, using field-related terminology, and offers a similar description of at least one related field. Applies tools, technologies and methods common to the field of study to selected questions or problems. Generates substantially error-free products, reconstructions, data, juried exhibits or performances appropriate to the field of study.	Defines and explains the structure, styles and practices of the field of study using its tools, technologies, methods and specialized terms. Investigates a familiar but complex problem in the field of study by assembling, arranging and reformulating ideas, concepts, designs and techniques. Frames, clarifies and evaluates a complex challenge that bridges the field of study and one other field, using theories, tools, methods and scholarship from those fields to produce independently or collaboratively an investigative, creative or practical work illuminating that challenge. Constructs a summative project, paper, performance or application that draws on current research, scholarship and techniques in the field of study.	Elucidates the major theories, research methods and approaches to inquiry and schools of practice in the field of study, articulates their sources and illustrates both their applications and their relationships to allied fields of study. Assesses the contributions of major figures and organizations in the field of study, describes its major methodologies and practices and illustrates them through projects, papers, exhibits or performances. Articulates significant challenges involved in practicing the field of study, elucidates its leading edges and explores the current limits of theory, knowledge and practice through a project that lies outside conventional boundaries.

LEAP ESSENTIAL LEARNING OUTCOMES

Knowledge of Human Cultures and the Physical and Natural World

•Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

Intellectual and Practical Skills, Including

•Inquiry and analysis
•Critical and creative thinking
•Written and oral communication
•Quantitative literacy
•Information literacy
•Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

Personal and Social Responsibility, Including

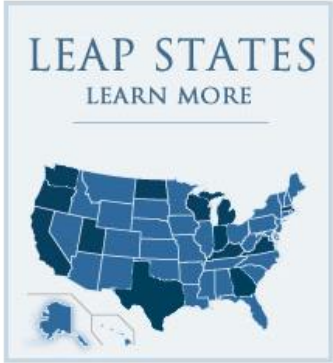
•Civic knowledge and engagement—local and global
•Intercultural knowledge and competence
•Ethical reasoning and action
•Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

Integrative and Applied Learning, Including

•Synthesis and advanced accomplishment across general and specialized studies
•*Demonstrated* through the application of knowledge, skills, and responsibilities to new settings and complex problems

LEAP



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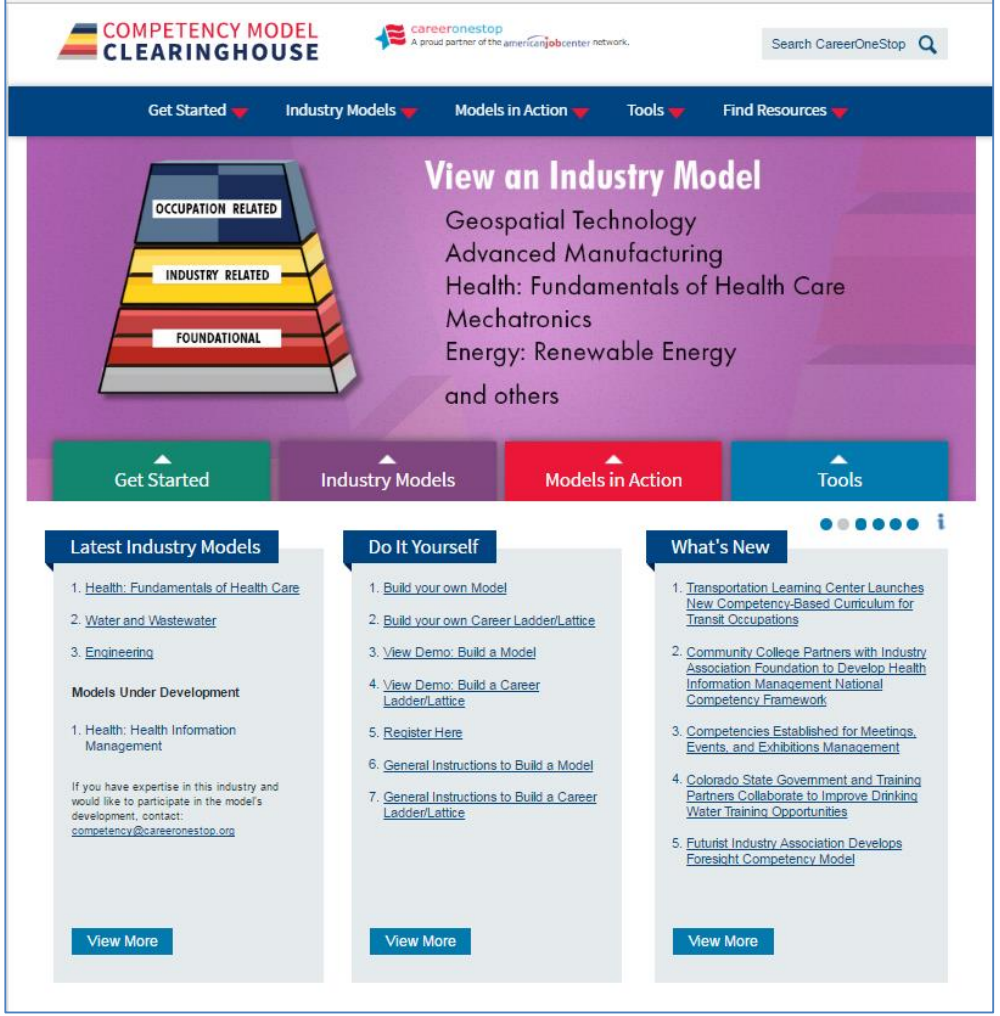

https://www.careeronestop.org/CompetencyModel/

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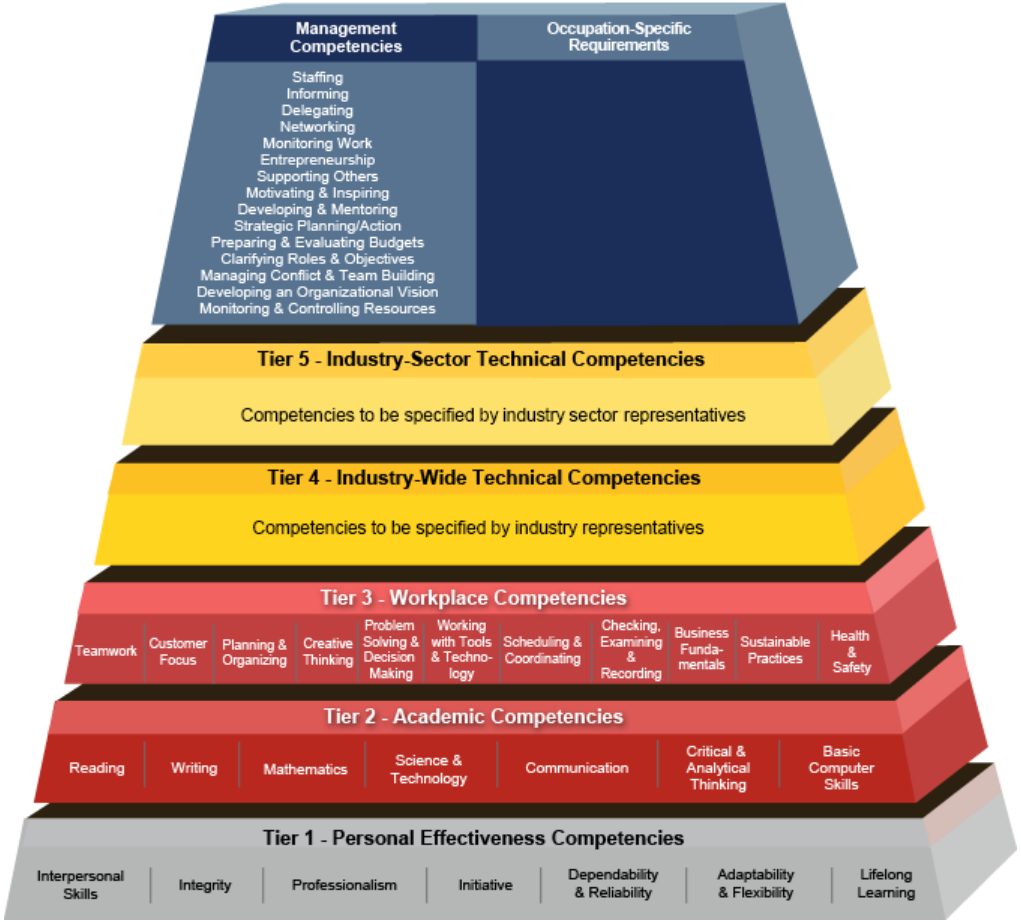
DOL Competency Model Clearinghouse: Generic Building Blocks Competency Model



https://www.careeronestop.org/CompetencyModel/competency-models/building-blocks-model.aspx

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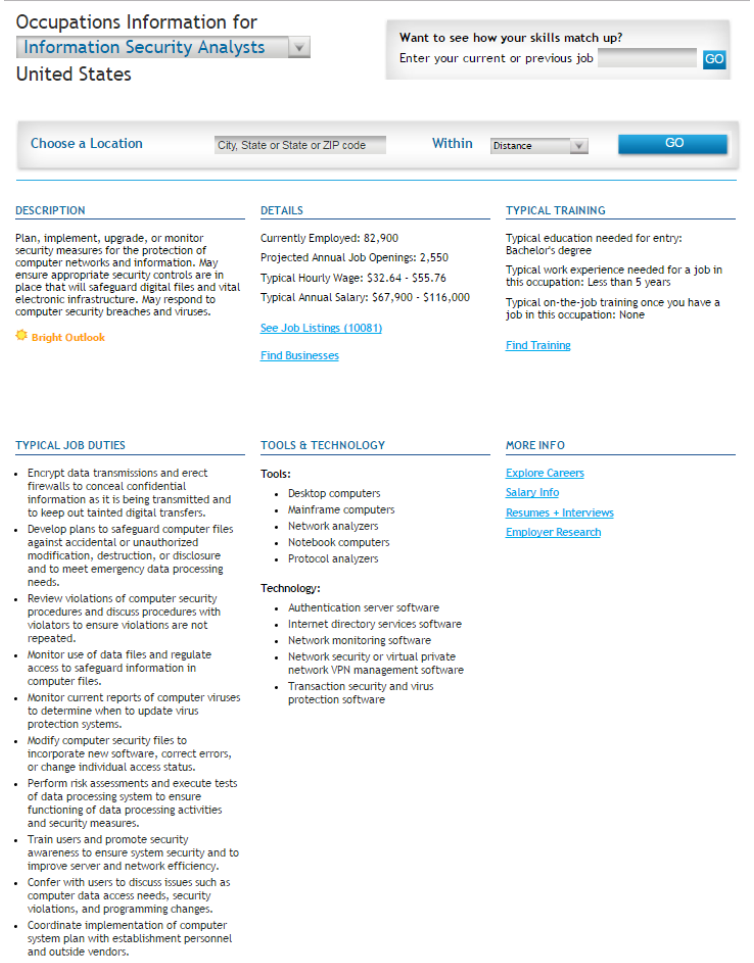

Occupations Information for

Information Security Analysts

United States

Want to see how your skills match up?

Enter your current or previous job

GO

Choose a Location

City, State or State or ZIP code

Within

Distance

GO

DESCRIPTION

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.

Bright Outlook

DETAILS

Currently Employed: 82,900

Projected Annual Job Openings: 2,550

Typical Hourly Wage: $32.64 - $55.76

Typical Annual Salary: $67,900 - $116,000

See Job Listings (10081)

Find Businesses

TYPICAL TRAINING

Typical education needed for entry: Bachelor's degree

Typical work experience needed for a job in this occupation: Less than 5 years

Typical on-the-job training once you have a job in this occupation: None

Find Training

TYPICAL JOB DUTIES

- Encrypt data transmissions and erect firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers.
- Develop plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs.
- Review violations of computer security procedures and discuss procedures with violators to ensure violations are not repeated.
- Monitor use of data files and regulate access to safeguard information in computer files.
- Monitor current reports of computer viruses to determine when to update virus protection systems.
- Modify computer security files to incorporate new software, correct errors, or change individual access status.
- Perform risk assessments and execute tests of data processing system to ensure functioning of data processing activities and security measures.
- Train users and promote security awareness to ensure system security and to improve server and network efficiency.
- Confer with users to discuss issues such as computer data access needs, security violations, and programming changes.
- Coordinate implementation of computer system plan with establishment personnel and outside vendors.

TOOLS & TECHNOLOGY

Tools:

- Desktop computers
- Mainframe computers
- Network analyzers
- Notebook computers
- Protocol analyzers

Technology:

- Authentication server software
- Internet directory services software
- Network monitoring software
- Network security or virtual private network VPN management software
- Transaction security and virus protection software

MORE INFO

Explore Careers

Salary Info

Resumes + Interviews

Employer Research

DOL Occupation Data for Cyber Security

https://www.myskillsmyfuture.org/

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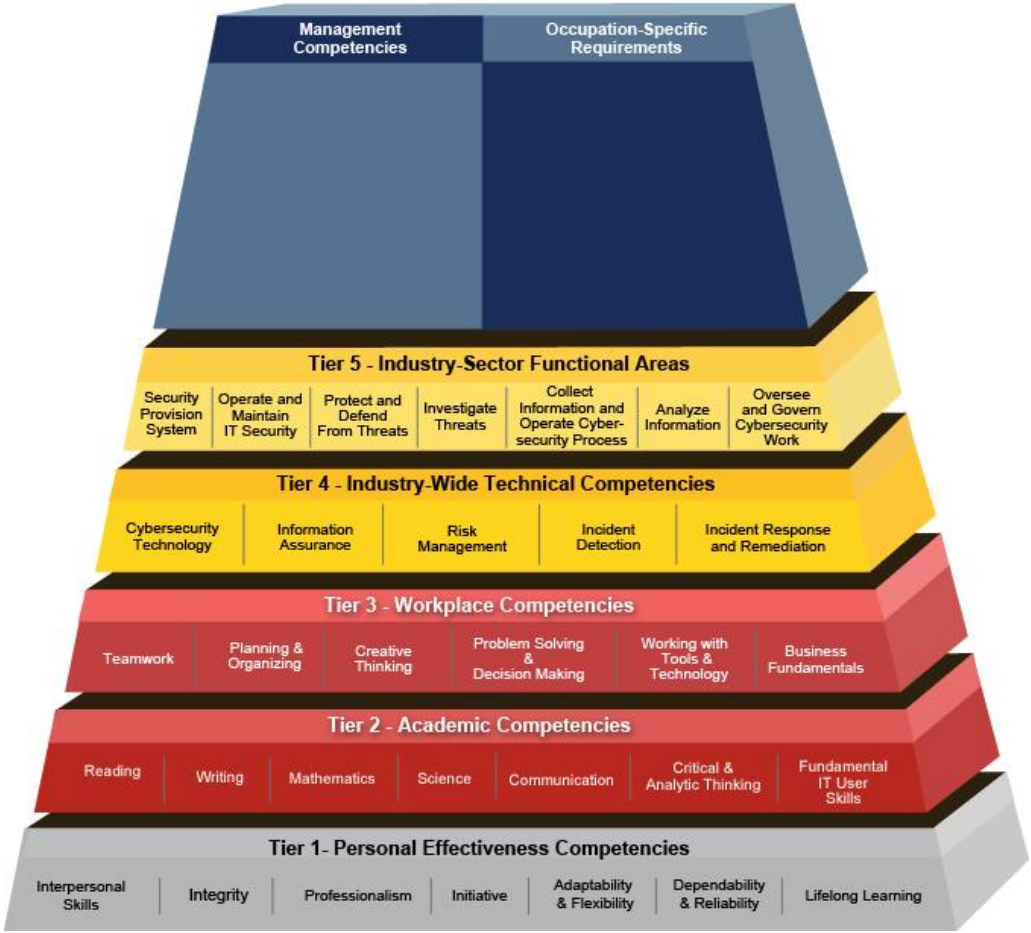
Cyber Security



https://www.careeronestop.org/CompetencyModel/competency-models/cybersecurity.aspx

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DETERMINING THE RIGHT APPRENTICESHIP MODEL AND PROGRAM DESIGN

Apprenticeship programs can be customized to meet both the needs of the business and the apprentices. Flexibility in the apprenticeship model is a key component to its success.

Your state apprenticeship representative can provide assistance in determining the right apprenticeship model, and how to customize apprenticeship programs to fit for each industry and employer. While the information in this section is provided to further the understanding of the apprenticeship model, contact the apprenticeship representative in your state for assistance (http://www.doleta.gov/oa/contactlist.cfm).

The following are the three types of program design for apprenticeships:

- ***Time-based Programs.*** Apprentices complete a required number of hours in on-the-job training and related instruction.
- ***Competency-based Programs.*** Apprentices progress at their own pace. They demonstrate competency in skills and knowledge through proficiency tests, but are not required to complete a specific number of hours.
- ***Hybrid Approach.*** Through a hybrid of time-based and competency-based models, apprentices have a minimum and maximum range of hours based on the successful demonstration of identified and measured competencies.

https://www.dol.gov/apprenticeship/docs/RA-Planning-Tool.pdf

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Hospital Coder/Coding Professional

The HIM (Health Information Management) Hospital Coder will use coding conventions and guidelines to abstract, analyze, and accurately assign ICD (International Classification of Diseases) and CPT (Current Procedural Terminology) principle and secondary diagnostic and procedural codes to inpatient, ambulatory, and hospital outpatient medical records. The HIM Hospital Coder will query physicians when diagnosis is unclear, audit records, and perform peer reviews. This position must utilize encoder, grouper, and other Health Information Management software often including Electronic Health Records. Job requirements include a current credential such as RHIA (Registered Health Information Administrator), RHIT (Registered Health Information Technician), CCA (Certified Coding Associate) or other designated credential from a nationally recognized organization. Preferred candidates will hold an associate's degree or higher in Health Information Management; although those with a certificate in coding from an approved coding program will be considered.

Hide Competencies for Hospital Coder/Coding Professional

Health Data Management

- Ensure accuracy of diagnostic/procedural groupings such as DRG, APC, and so on. (14)
- Compile patient data and perform data quality reviews to validate code assignment and compliance with reporting requirements, such as outpatient prospective payment systems. (18)
- Use established guidelines to comply with reimbursement and reporting requirements such as the National Correct Coding Initiative. (13)
- Support accurate billing through coding, chargemaster, claims management, and bill reconciliation processes. (29)
- Apply policies and procedures to comply with the changing regulations among various payment systems for healthcare services such as Medicare, Medicaid, managed care, and so forth. (17)
- Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment systems (PPS) in healthcare delivery. (13)
- Resolve discrepancies between coded data and supporting documentation. (16)
- Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT). (14)
- Adhere to current regulations and established guidelines in code assignment. (39)
- Validate coding accuracy using clinical information found in the health record. (20)
- Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on. (18)
- Apply diagnosis/procedure codes according to current nomenclature. (39)
- Use and maintain electronic applications and work processes to support clinical classification and coding. (33)

Hospital Coder on the Job Competencies

- Participate in compliance (fraud and abuse), HIPAA (Health Insurance Portability and Accountability Act of 1996), and other organization specific training (0)
- Communicate with physicians and other care providers to ensure appropriate documentation (2)

https://www.highered.org/ahima-apprenticeship-programs.php

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NIMS

Certifying a skilled workforce for the global economy

ABOUT | CREDENTIALS | INDUSTRY STANDARDS | TOOLS | RIGHT SKILLS NOW | WORKSHOPS

EMPLOYERS TAKE ACTION | USE NIMS CREDENTIALS | HOW NIMS WORKS | THE NEW APPRENTICESHIP

The New Apprenticeship

NIMS Competency-Based Apprenticeship System

What:
The NIMS Competency-Based Apprenticeship System enables companies to source and hire individuals with nationally-recognized skills and train them to company-specific needs. The blend of classroom and workplace learning provides individuals with the highest quality training while they gain real-world experiences and skills by working and

Download the Competency Based Apprenticeship Brochure

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NATIONAL NETWORK OF BUSINESS AND INDUSTRY ASSOCIATIONS

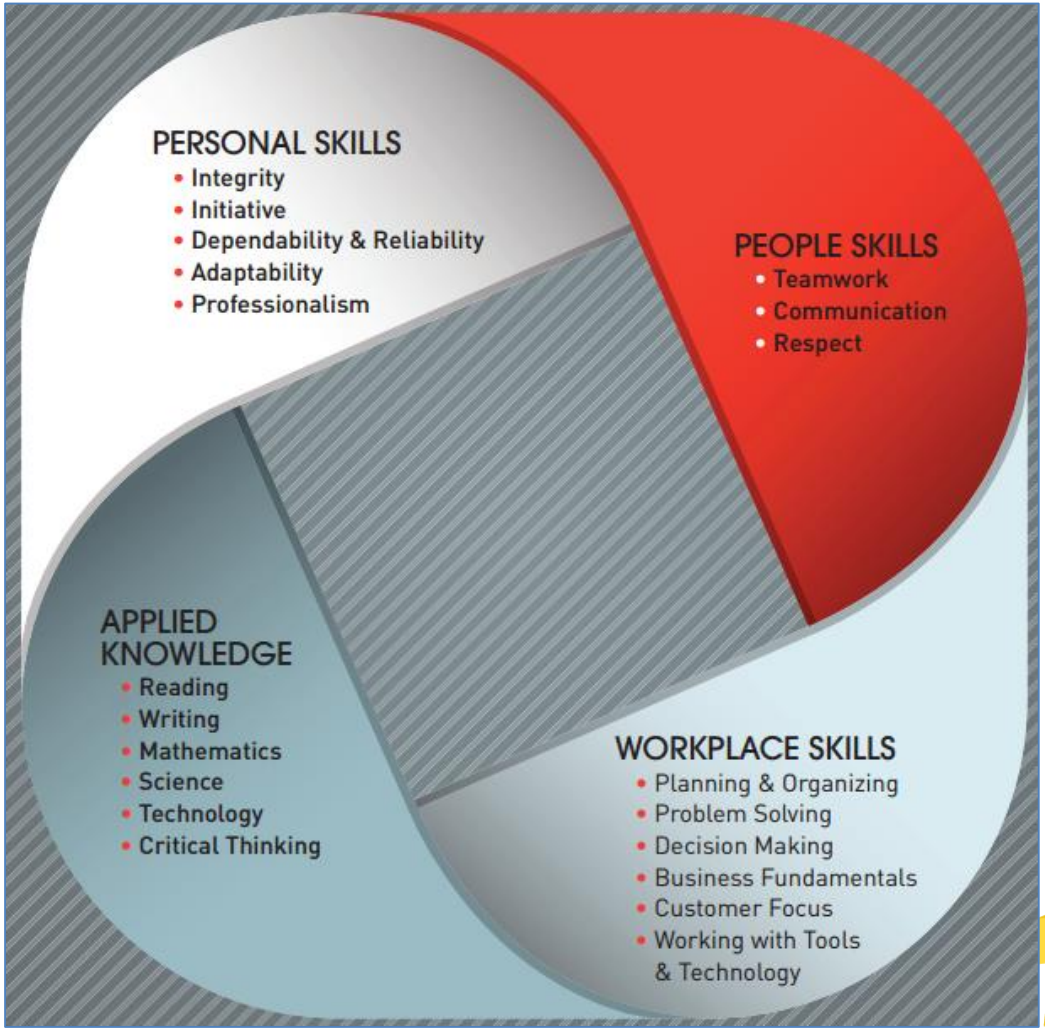
COMMON EMPLOYABILITY SKILLS

A Foundation for Success in the Workplace:

The Skills All Employees Need, No Matter Where They Work

PERSONAL SKILLS
PEOPLE SKILLS
APPLIED KNOWLEDGE
WORKPLACE SKILLS

NATIONAL NETWORK OF BUSINESS AND INDUSTRY ASSOCIATIONS



How do you find competencies to use?

- Review research on nature, breadth & depth of UG education
- Review research on CBE implementation
- Disciplinary accreditation bodies
- Industry models
- Employer-specific models
- Career pathways
- Funding streams (foundations, DOL apprenticeships & TAACCCT, ED)
- Search course engines w/ SLOs framed as competencies
- See what other CBE programs are being offered (C-BEN, CBEINFO, HigherEd.org/CBE, TAACCCT)
- Review existing program & course-based SLOs

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What does it mean to use competencies? Or

The Continuum of Framework Adoption

- Review & adopt a framework in its entirety
- Strongly align w/ frameworks & standards
- Informed by a framework
- Build from scratch using program & course SLOs
- Overlap w/role-based, undergraduate education, or general employability competencies
- Hybrids

Constraints in identifying competencies

- Accreditation & Title IV requirements for sub change
- Employer expectations
- Level of interest in improving teaching & learning
- Embedded w/in content & credential providers
- Governance & faculty buy-in/ownership
  "Faculty will develop antibodies…" – Dennis Jones
- Recognition of academic integrity & quality
- Public institution system policies & technology
- Technology for competency tracking/transcripts

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Problems in understanding frameworks

1. Number of competencies & level of aggregation
2. Need to map to course credit equivalents for Title IV & accreditation
3. Bloom's taxonomy
4. Educational level
5. Alignment w/general education requirements
6. Other standards alignment (Common Core, CEDS, IEEE, IMS, W3C)
7. Proprietary nature/organizational ownership
8. Changing standards, versioning & implementation schedules
9. Mapping to other crosswalks (NAICS, CIP, & SOC)
10. Granularity of available content & assessments
11. Standardization of rubrics for scoring artifacts
12. Quality, authenticity, performance-based, data integrity

DQP & Tuning

- Support for Expanded Use of DQP & Tuning to Build a Learning-based Credentials System
- *"Tuning is a faculty-driven process to articulate what a student knows and is able to do in a given discipline at the point of degree. Participants from four-year and two-year colleges and universities identify the essential learning in the discipline. Tuning invites stakeholders (faculty, students, recent graduates, and employers) to have input into the process and yields a framework that establishes clear learning expectations for students."*
- http://degreeprofile.org/press_four/wp-content/uploads/2014/12/What-is-Tuning.pdf

Components of Tuning

- Identifying essential learning
- Mapping career pathways
- Consulting stakeholders
- Honing core competencies & learning outcomes
- Implementing locally

The initial results of this process is a body of explicit statements that make clear to students beginning or in the midst of their studies exactly what they are expected to learn and that articulate for graduates what their degrees have given them in terms of knowledge and skills, as well as career pathways opened to them by the degree.

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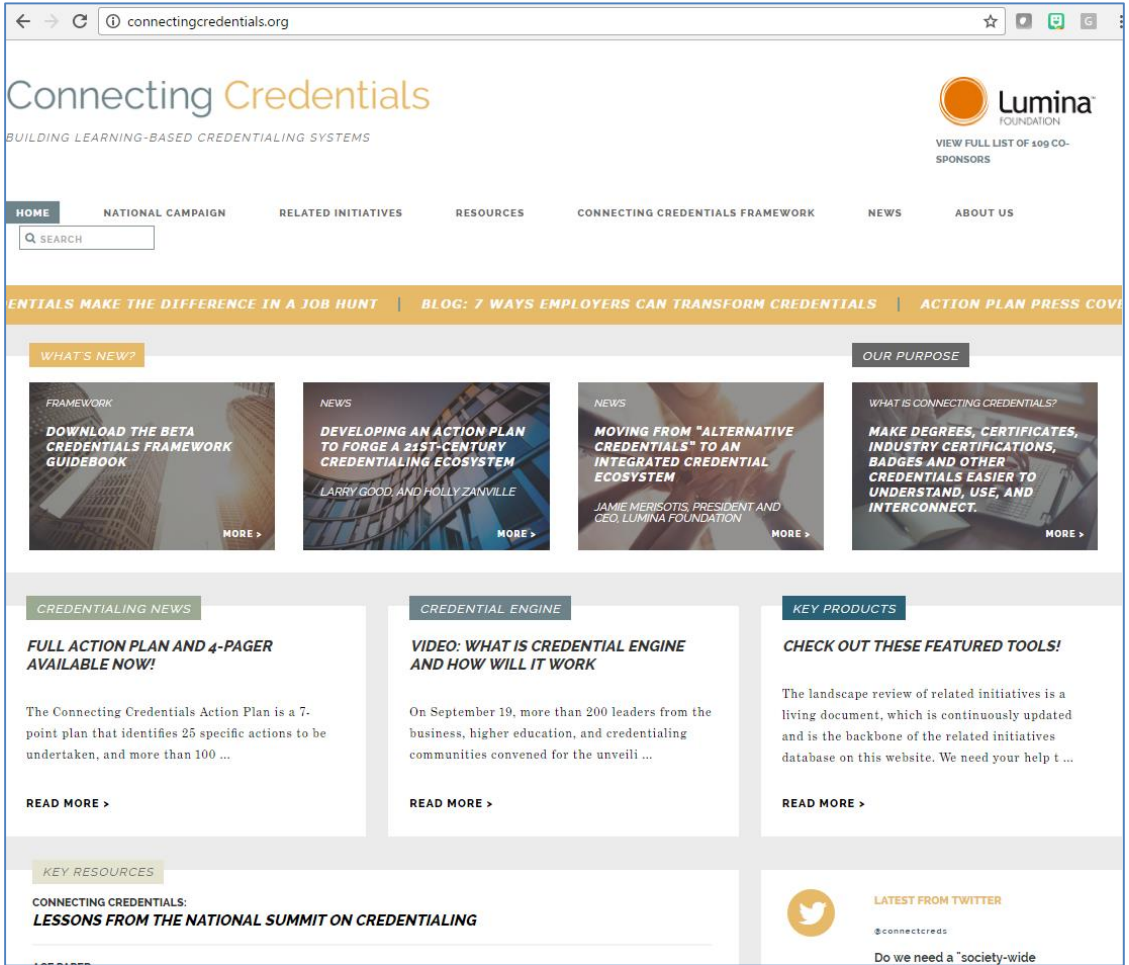
Connecting Credentials



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Credentials Framework Matrix

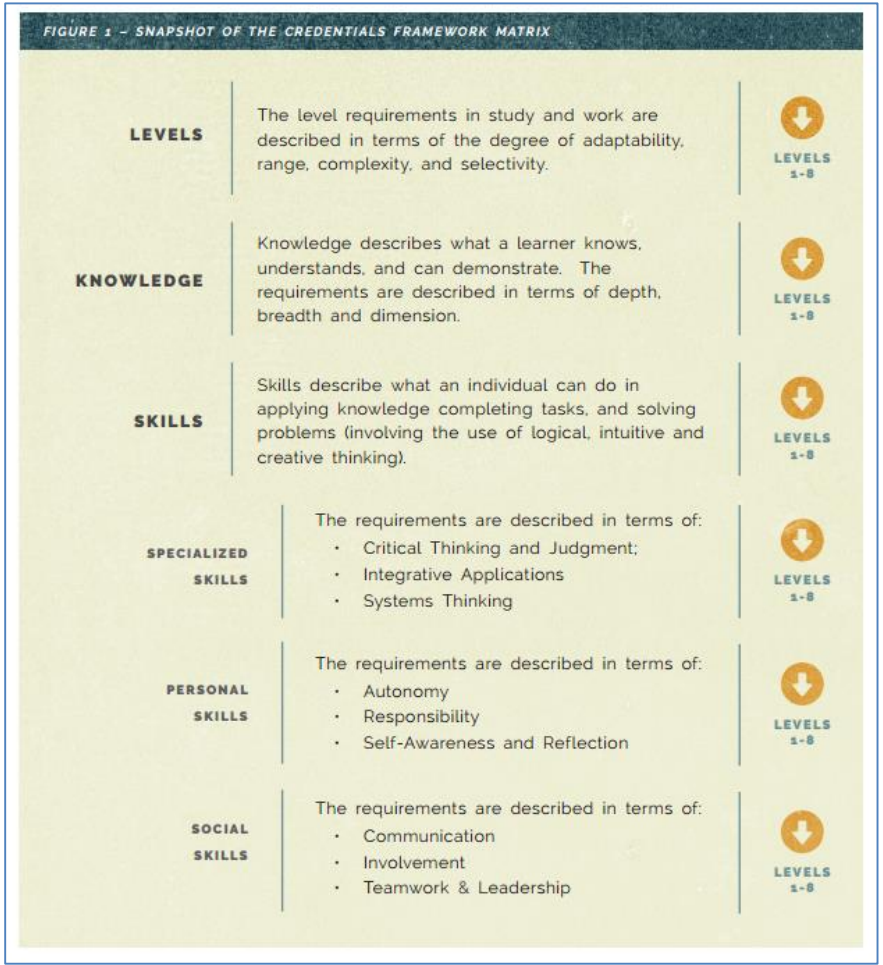

FIGURE 1 – SNAPSHOT OF THE CREDENTIALS FRAMEWORK MATRIX

LEVELS	The level requirements in study and work are described in terms of the degree of adaptability, range, complexity, and selectivity.	LEVELS 1-8
KNOWLEDGE	Knowledge describes what a learner knows, understands, and can demonstrate. The requirements are described in terms of depth, breadth and dimension.	LEVELS 1-8
SKILLS	Skills describe what an individual can do in applying knowledge completing tasks, and solving problems (involving the use of logical, intuitive and creative thinking).	LEVELS 1-8
SPECIALIZED SKILLS	The requirements are described in terms of: • Critical Thinking and Judgment; • Integrative Applications • Systems Thinking	LEVELS 1-8
PERSONAL SKILLS	The requirements are described in terms of: • Autonomy • Responsibility • Self-Awareness and Reflection	LEVELS 1-8
SOCIAL SKILLS	The requirements are described in terms of: • Communication • Involvement • Teamwork & Leadership	LEVELS 1-8

LIST CREDENTIAL COMPETENCIES OR LEARNING OUTCOMES	KNOWLEDGE	SPECIALIZED SKILLS	PERSONAL SKILLS	SOCIAL SKILLS	CAPTURE RATIONALE OR JUDGMENT
Example: xxxxxx					

http://connectingcredentials.org/

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IAAP Certified Administrative Professional (CAP) Exam 2016 Body of Knowledge

DOMAIN ONE: ORGANIZATIONAL COMMUNICATION

Recommended Readings for Organizational Communication:

Bovee, C. L. & Thill, J. V. (2015). *Business Communication Today.* Pearson Prentice-Hall.

Guffey, M. E. & Loewy, D. (2015). *Essentials of Business Communication.* South-Western Publishing Co.

Robbins, S. P. & Coulter, M. (2015). *Management.* Pearson Prentice-Hall.

Shockley-Zalabak, Pamela. (2015). *Fundamentals of Organizational Communication.* Pearson.

Smith, L. R. (2013). *English for Careers.* Pearson Prentice-Hall.

Applicable college courses:

Introduction to Business Communication

Introduction to Business Writing

Business English

Introductory Oral Communication

Introduction to Organizational Leadership

Principles of Business Management

PO 1: Understand and accurately use the basic terminology associated with communication and management/leadership theories within organizations.

- Understand the various types of communication (written, verbal, nonverbal, interpersonal, group, public) and which is the most effective for different business situations.
- Describe management/leadership theories and how they relate to effective organizational communication.
- Understand basic communication theories and their usage in the workplace.

PO 2: Identify and describe basic interactive steps involved when dealing with customers of an organization (telephone, in-person, conflict resolution, etc.).

- Demonstrate a basic knowledge and proficiency in managing and resolving conflict within an organization.

PO 3: Explain the importance of professional networking and what can be accomplished through social networks.

- Describe how networking (both in-person and virtual) has changed the way people find jobs and companies recruit new employees.

PO 4: Demonstrate an understanding of team dynamics within organizations.

- Identify and describe different types of teams and their purpose.
- Describe the specific kinds of dynamics within teams and how they can be managed.
- Identify and describe both the personal and professional aspects of team management.
- Understand and display the ability to identify and evaluate the skills and competencies of team members.
- Demonstrate knowledge and proficiency in effective decision-making, communication, and team building.

PO 5: Describe the positive and negative forms of interpersonal interactions existing within an organization and the ways to manage.

- Explain how human motivation affects organizational dynamics.
- Demonstrate basic knowledge of the differences between managing and leading.
- Understand the dynamics of mentorship and coaching, including the effect on performance.
- Describe power and how it can be used in organizations and interpersonal interactions.

https://c.ymcdn.com/sites/iaap.site-ym.com/resource/resmgr/Docs/PDF/CAP-body-of-knowledge.pdf

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Administrative Support Technology
Office Systems Assistant One Year Certificate & CSC Information Processing Technician
Curriculum Map

Entry Level Competency Student Learning Outcomes	Course Equivalent	Curricular Considerations	Assessments (demonstrate competency)	Student Intraction Weekly (email, phone, Facetime. F2F. etc.)
Domain I. Technical Skills				
*DEFINITION: D*emonstrate high-level technical skills and knowledge required for successful employment in office administration.				
Subdomain I.A Keyboarding Skill and Computer Operation				
1. Demonstrate competency in basic keyboarding technique	AST 101	• Home row keys, using touch-typing • Correct fingering for home row, space bar, Enter key, Tab key, backspace key • Importance of ergonomic principles to work station: posture and body position • Correct posture and technique when keying • Uppercase letters and symbols • Number row and upper case symbols • Use Microsoft Word (latest version) features and commands to prepare documents	• Correct Technique (review online guides) ○ http://wasatch.slcschools.org/KeyboardingTechniques.htm ○ https://www.youtube.com/watch?v=BqKm9piu0Ro ○ http://www.rapidtyping.com/typing-instructions.html ○ https://www.youtube.com/watch?v=eM0DXw2-GZE • Technique Observation (Checklist) ○ Video or in person Review for Retake of Direct Assessment: • AST 117 or AST 101 • www.typingweb.com/tutor • Keyboarding Pro 4	• Initial contact with student for base rate verification of keyboarding skill and technique. (minimum 45 wpm with 80%+ accuracy). • Continued contact as needed with any review and retake assessments. • Extensive and substantive interaction through email, phone, and BlackBoard Discussion – weekly

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CAHIIM Framework

CAHIIM Curriculum Requirements – *AHIMA 2011 Curriculum Competencies and Knowledge Clusters for Health Information Management (HIM) Education at the Associate Degree Level*

Program/Institution Name/City/State:

To use this template for CAHIIM accreditation purposes, each knowledge cluster contains the content and number corresponding to the *New Version of Bloom's Taxonomy*. Where a knowledge cluster is specified at a higher taxonomy level, it is expected that the content will be introduced and reinforced in the curriculum, which in some cases may occur in more than one course in the program. This document will serve as an index to your curriculum content.

***When a single activity or assignment incorporates more than one bulleted knowledge cluster repeat the information next to that cluster. Each assignment or activity must have a descriptive name or title and be listed within the corresponding course syllabus class schedule to be easily identified. See the Revised Bloom's Taxonomy on the last page of this document for descriptions of the levels.**

Column 1 - HIM Associate Degree Entry-Level Competencies (Student Learning Outcomes)	Column 2 - Knowledge Clusters (KC) (Curricular Components)	Column 3 – For each Knowledge Cluster (curriculum component) state the course # and the name/title of the assignment or activity (project, paper, lab, etc.) within that course that demonstrates compliance at the highest required Bloom's taxonomic level. * *Example*: Domain III. A. (External Standards) - Assignment: HIT 240, Joint Commission mock survey project (4)	Column 4 – List the learning evaluation method(s) used to assess student achievement such as projects or assignments, papers, case studies, quizzes or exams
I. Domain: Health Data Management I.A. Subdomain: Health Data Structure, Content, and Standards 1. Collect and maintain health data (such as data elements, data sets, and databases). 2. Conduct analysis to ensure that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status. 3. Apply policies and procedures to ensure the accuracy of health data. 4. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases.	Health Data Structure, Content, and Standards • Data versus information (Analyzing, 4) • Health information media (such as paper, computer, web-based) (Analyzing, 4) • Structure and use of health information (individual, comparative, aggregate) (Analyzing, 4) • Health record data collection tools (forms, screens, etc.) (Analyzing, 4) • Data sources (primary/secondary) (Analyzing, 4) • Data storage and retrieval (Analyzing, 4) • Healthcare data sets (such as OASIS, HEDIS, DEEDS, UHDDS) (Understanding, 2)		
I.B. Subdomain: Healthcare Information Requirements and Standards	Healthcare Information Requirements and Standards • Type and content of health record (paper,		

1 Copyright 2014 CAHIIM

http://cahiim.rwkdesign.com/cahiim/documents/CAHIIM%20HIM%20AS%20Curriculum%20Requirements_Revised_2013.pdf

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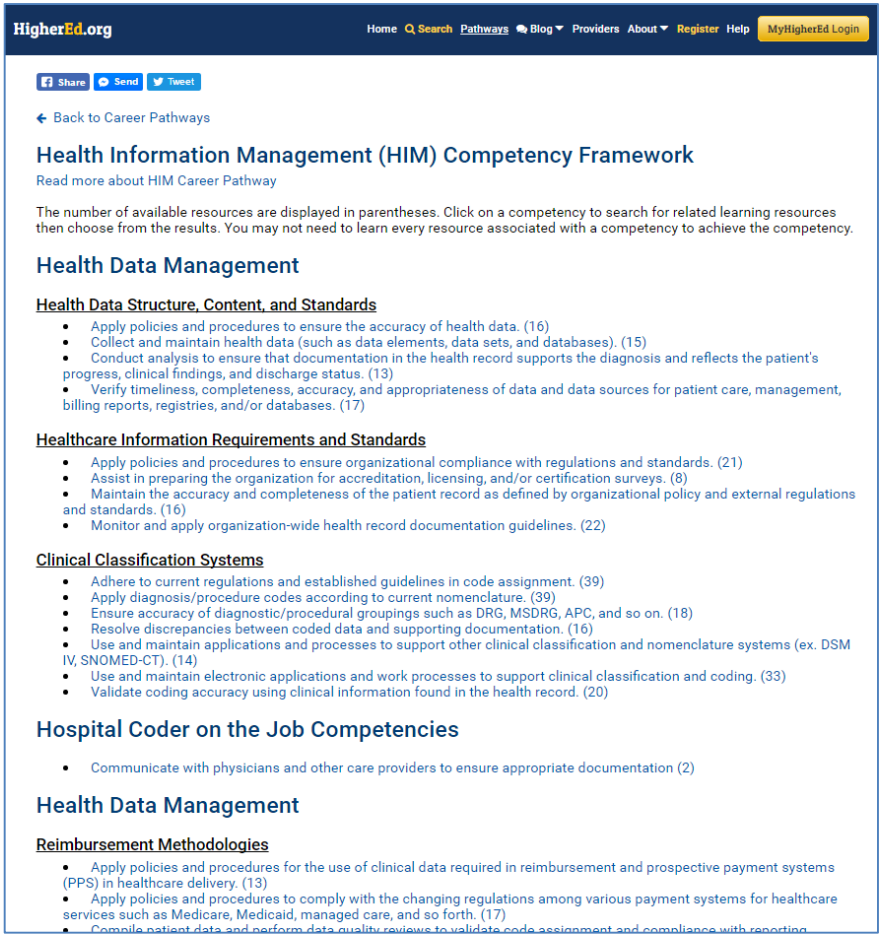
Health Information Management Degree Domains	Knowledge Clusters	Assessed in Courses
Domain: Health Data Management		
I.A. Subdomain: Health Data Structure, Content, and Standards 1. Collect and maintain health data (such as data elements, data sets, and databases). 2. Conduct analysis to ensure that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status. 3. Apply policies and procedures to ensure the accuracy of health data. 4. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases.	**Health Data Structure, Content, and Standards*** • Data versus information (Analyzing, 4) • Health information media (such as paper, computer, web-based) (Analyzing, 4) • Structure and use of health information (individual, comparative, aggregate) (Analyzing, 4) • Health record data collection tools (forms, screens, etc.) (Analyzing, 4) • Data sources (primary/secondary) (Analyzing, 4) • Data storage and retrieval (Analyzing, 4) • Healthcare data sets (such as OASIS, HEDIS, DEEDS, UHDDS) (Understanding, 2)	HIM141 Fundamentals of Health Information Management HIM130 Healthcare Information Systems HIM250 Health Data Classification Systems I (ICD Coding)
I.B. Subdomain: Healthcare Information Requirements and Standards 1. Monitor and apply organization-wide health record documentation guidelines. 2. Apply policies and procedures to ensure organizational compliance with regulations and standards. 3. Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards. 4. Assist in preparing the organization for accreditation, licensing, and/or certification surveys.	Healthcare Information Requirements and Standards • Type and content of health record (paper, electronic, computer-based, e-health-personal, web-based) (Evaluating, 5) • Health record documentation requirements (such as accreditation, certification, licensure) (Evaluating, 5) • Data quality and integrity (Analyzing, 4)	HIM141 Fundamentals of Health Information Management HIM130 Healthcare Information Systems HIM231 Health Records Applications I



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Back to Career Pathways

Health Information Management (HIM) Competency Framework

Read more about HIM Career Pathway

The number of available resources are displayed in parentheses. Click on a competency to search for related learning resources then choose from the results. You may not need to learn every resource associated with a competency to achieve the competency.

Health Data Management

Health Data Structure, Content, and Standards

- Apply policies and procedures to ensure the accuracy of health data. (16)
- Collect and maintain health data (such as data elements, data sets, and databases). (15)
- Conduct analysis to ensure that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status. (13)
- Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases. (17)

Healthcare Information Requirements and Standards

- Apply policies and procedures to ensure organizational compliance with regulations and standards. (21)
- Assist in preparing the organization for accreditation, licensing, and/or certification surveys. (8)
- Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards. (16)
- Monitor and apply organization-wide health record documentation guidelines. (22)

Clinical Classification Systems

- Adhere to current regulations and established guidelines in code assignment. (39)
- Apply diagnosis/procedure codes according to current nomenclature. (39)
- Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on. (18)
- Resolve discrepancies between coded data and supporting documentation. (16)
- Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT). (14)
- Use and maintain electronic applications and work processes to support clinical classification and coding. (33)
- Validate coding accuracy using clinical information found in the health record. (20)

Hospital Coder on the Job Competencies

- Communicate with physicians and other care providers to ensure appropriate documentation (2)

Health Data Management

Reimbursement Methodologies

- Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment systems (PPS) in healthcare delivery. (13)
- Apply policies and procedures to comply with the changing regulations among various payment systems for healthcare services such as Medicare, Medicaid, managed care, and so forth. (17)
- Compile patient data and perform data quality reviews to validate code assignment and compliance with reporting

https://www.highered.org/him-competency-framework.php

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

October 14, 2014

The Association for Computing Machinery Committee
for **Computing Education in Community Colleges**
(ACM CCECC)

ACM IT Framework

Table 2: ACM Core IT Learning Outcomes with Three-tiered Assessment

An ability to demonstrate core IT competency in client computing and user support				
	Learning Outcome	**Emerging**	**Developed**	**Highly Developed**
1	Carry out trouble-shooting strategies for resolving an identified end-user IT problem.	Lists appropriate methods or techniques to identify and resolve end-user IT problems.	Investigates a given problem using appropriate methods or techniques, including communication and technical strategies.	Analyzes an end-user IT problem to successful resolution.
2	Differentiate among various operating systems.	Describes a few commonly used operating systems.	Summarizes several operating systems and differentiates among those systems.	Compares several operating systems on the basis of computing platforms and usability.
3	Explain the process of authentication and authorization between end-user devices and computing network resources.	Identifies the processes of authentication and authorization across network resources.	Summarizes the processes of user authentication and authorization across networks resources.	Compares several implementations of user authentication and authorization across network resources.

http://ccecc.acm.org/files/publications/ACMITCompetencyModel14October201420150114T180322.pdf

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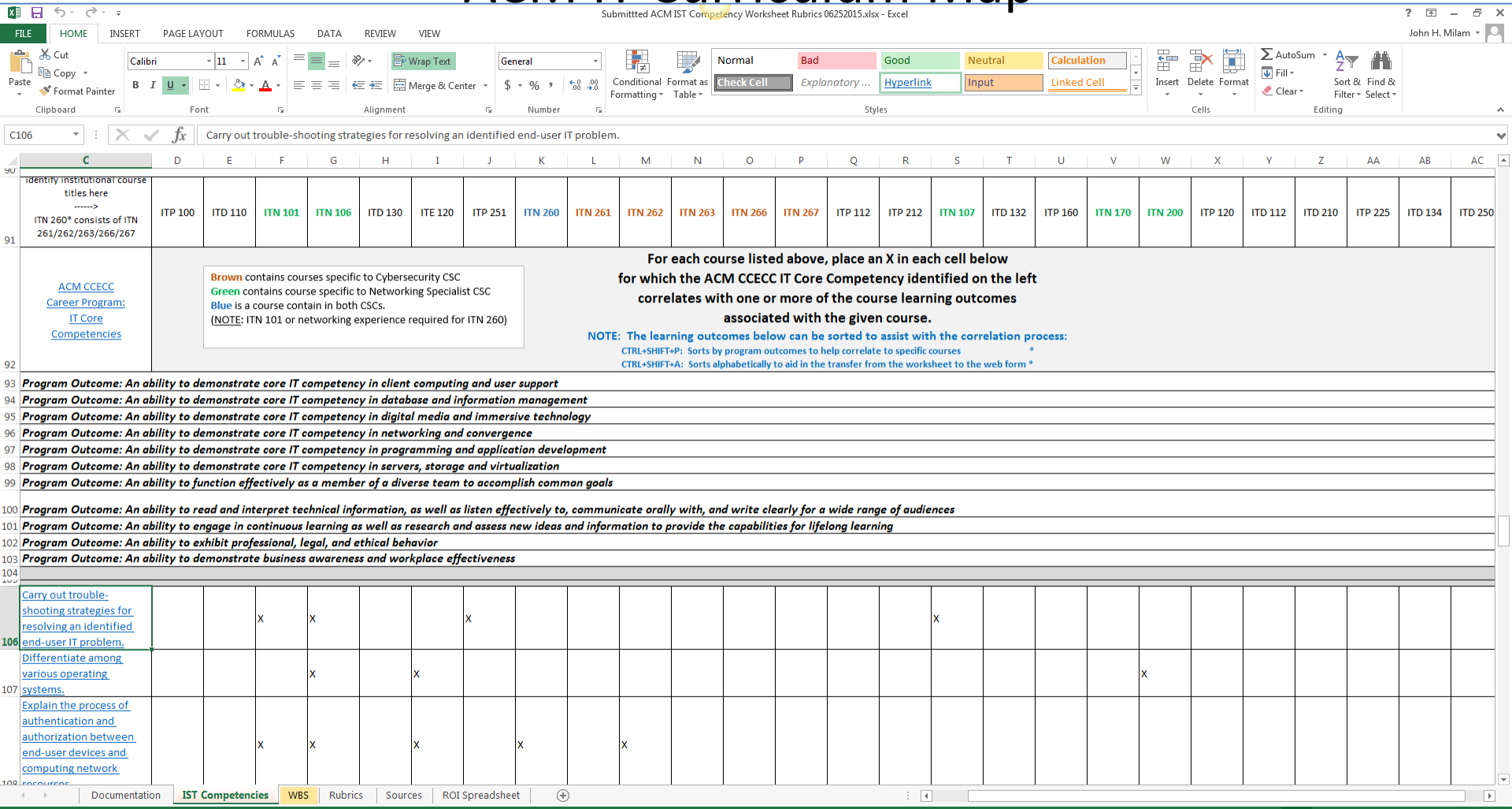
ACM IT Curriculum Map



Submittted ACM IST Competency Worksheet Rubrics 06252015.xlsx - Excel

John H. Milam

C106: Carry out trouble-shooting strategies for resolving an identified end-user IT problem.

Identify institutional course titles here ------> ITN 260* consists of ITN 261/262/263/266/267	ITP 100	ITD 110	ITN 101	ITN 106	ITD 130	ITE 120	ITP 251	ITN 260	ITN 261	ITN 262	ITN 263	ITN 266	ITN 267	ITP 112	ITP 212	ITN 107	ITD 132	ITP 160	ITN 170	ITN 200	ITP 120	ITD 112	ITD 210	ITP 225	ITD 134	ITD 250
ACM CCECC Career Program: IT Core Competencies																										
Program Outcome: An ability to demonstrate core IT competency in client computing and user support																										
Program Outcome: An ability to demonstrate core IT competency in database and information management																										
Program Outcome: An ability to demonstrate core IT competency in digital media and immersive technology																										
Program Outcome: An ability to demonstrate core IT competency in networking and convergence																										
Program Outcome: An ability to demonstrate core IT competency in programming and application development																										
Program Outcome: An ability to demonstrate core IT competency in servers, storage and virtualization																										
Program Outcome: An ability to function effectively as a member of a diverse team to accomplish common goals																										
Program Outcome: An ability to read and interpret technical information, as well as listen effectively to, communicate orally with, and write clearly for a wide range of audiences																										
Program Outcome: An ability to engage in continuous learning as well as research and assess new ideas and information to provide the capabilities for lifelong learning																										
Program Outcome: An ability to exhibit professional, legal, and ethical behavior																										
Program Outcome: An ability to demonstrate business awareness and workplace effectiveness																										
Carry out trouble-shooting strategies for resolving an identified end-user IT problem.			X	X			X									X										
Differentiate among various operating systems.				X		X														X						
Explain the process of authentication and authorization between end-user devices and computing network resources			X	X		X		X		X																

Brown contains courses specific to Cybersecurity CSC
Green contains courses specific to Networking Specialist CSC
Blue is a course contain in both CSCs.
(NOTE: ITN 101 or networking experience required for ITN 260)

For each course listed above, place an X in each cell below for which the ACM CCECC IT Core Competency identified on the left correlates with one or more of the course learning outcomes associated with the given course.

NOTE: The learning outcomes below can be sorted to assist with the correlation process:
CTRL+SHIFT+P: Sorts by program outcomes to help correlate to specific courses *
CTRL+SHIFT+A: Sorts alphabetically to aid in the transfer from the worksheet to the web form *

Documentation | IST Competencies | WBS | Rubrics | Sources | ROI Spreadsheet

Program Mapping of Competencies to Course Equivalents

ProgName	CompetencyDomain	CompetencySubDomain	CompetencyId	CompetencyName	Course	CourseDesc	TotalCourseCred	TotalCompetenciesInCourse	CompetencyCreditEquivalents
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090301	Adhere to current regulations and established guidelines in code assignment.	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090301	Adhere to current regulations and established guidelines in code assignment.	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090301	Adhere to current regulations and established guidelines in code assignment.	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090301	Adhere to current regulations and established guidelines in code assignment.	HIM 255	Health Data Classification Systems II (CPT Coding)	2	7	0.29
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090302	Apply diagnosis/procedure codes according to current nomenclature.	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090302	Apply diagnosis/procedure codes according to current nomenclature.	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090302	Apply diagnosis/procedure codes according to current nomenclature.	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090302	Apply diagnosis/procedure codes according to current nomenclature.	HIM 255	Health Data Classification Systems II (CPT Coding)	2	7	0.29
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090303	Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on.	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090303	Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on.	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090303	Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on.	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090303	Ensure accuracy of diagnostic/procedural groupings such as DRG, MSDRG, APC, and so on.	HIM 255	Health Data Classification Systems II (CPT Coding)	2	7	0.29
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090304	Resolve discrepancies between coded data and supporting documentation.	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090304	Resolve discrepancies between coded data and supporting documentation.	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090304	Resolve discrepancies between coded data and supporting documentation.	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090304	Resolve discrepancies between coded data and supporting documentation.	HIM 255	Health Data Classification Systems II (CPT Coding)	2	7	0.29
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090305	Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT).	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090305	Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT).	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090305	Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT).	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090305	Use and maintain applications and processes to support other clinical classification and nomenclature systems (ex. DSM IV, SNOMED-CT).	HIM 255	Health Data Classification Systems II (CPT Coding)	2	7	0.29
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090306	Use and maintain electronic applications and work processes to support clinical classification and coding.	HIM 231	Health Records Applications I	3	29	0.10
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090306	Use and maintain electronic applications and work processes to support clinical classification and coding.	HIM 232	Health Records Applications II	3	18	0.17
AAS Health Information Management	Health Data Management	Clinical Classification Systems	1090306	Use and maintain electronic applications and work processes to support clinical classification and coding.	HIM 250	Health Data Classification Systems I (ICD Coding)	4	11	0.36

LFCC's CBE Extended Transcript

Lord Fairfax Community College
173 Skirmisher Lane
Middletown, VA 22645-1745
United States

Competency Based Education Extended Transcript

Date Issued: 04/06/2016 4:41 PM
Name: Student, Test
Student ID: 1234567

Programs

Catalog	Program Code	Program Name
15-16	OSA.CERT	Certificate in Office Systems Assistant

Certificate in Office Systems Assistant

Fall 2015 (2154)

New Educational Activity Completed

Competency Domain	Competency SubDomain	Competency Name	Mark
Technical Skills	Document Production	Format documents using generally accepted business practices	Pass
Technical Skills	Database and Records Management	Research and discuss records management need for maintaining records and recorded information	Pass
Technical Skills	Database and Records Management	Develop skills in using the systems and procedures required in the information cycle	Pass
Technical Skills	Database and Records Management	Apply the principles of filing as they apply to records management systems	Pass
Technical Skills	Database and Records Management	Apply problem solving skills to select appropriate technology involved in records management specialized functions	Pass
Interpersonal Skills	Develop the knowledge, skills, and understanding to make informed academic, social, personal, career, and interpersonal decision	Maintain high standards for quality work and responsiveness in providing office administrative services	Pass
Interpersonal Skills	Select career goals with thought and care, value work and the benefits it brings, and adjust to the inevitable changes in the working world.	Apply new technical and business information/knowledge to practical use on the job	Pass

Prior Competency Verified

Competency Domain	Competency SubDomain	Competency Name	Mark
Technical Skills	Proofreading and Editing Skills	Demonstrate proficiency in proofreading and editing skills, including grammar, spelling, sentence structure, and punctuation	Pass
Technical Skills	Proofreading and Editing Skills	Compose clearly written business correspondence using correct grammar, punctuation, and sentence construction	Pass
Technical Skills	Proofreading and Editing Skills	Write business letters, reports, and memorandums following correct format and creating a good impression on the reader	Pass

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LFCC's CBE Extended Transcript (eT) – course credit equivalencies

Technical Skills	Proofreading and Editing Skills	Edit business manuscripts using the revision symbols used by professional editors	Pass
Interpersonal Skills	Develop the knowledge, skills, and understanding to make informed academic, social, personal, career, and interpersonal decision	Display high standards of ethical conduct and behaviors	Pass
Interpersonal Skills	Develop the knowledge, skills, and understanding to make informed academic, social, personal, career, and interpersonal decision	Pursue appropriate learning activities contributing to lifelong professional growth	Pass
Office Administration Procedures & Theory/Business	Constantly Changing Workplace/Business	Describe the environment of business in the United States	Pass
Office Administration Procedures & Theory/Business	Constantly Changing Workplace/Business	Identify the role of organization in the achievement of business goals	Pass
Office Administration Procedures & Theory/Business	Constantly Changing Workplace/Business	Determine the role of automation in achieving a firm's objectives	Pass
Office Administration Procedures & Theory/Business	Constantly Changing Workplace/Business	Explore the fundamentals of small business	Pass
Office Administration Procedures & Theory/Business	Constantly Changing Workplace/Business	Explore the realm of international business	Pass
Other Program Requirements		College Composition I (ENG 111) Competencies	Pass
Other Program Requirements		Approved Social/Behavioral Science Elective Competencies	Pass
Other Program Requirements		Introduction to Business (BUS 100) Competencies	Pass
Other Program Requirements		Orientation to Virtual Assistance (SDV 101) Competencies	Pass
Other Program Requirements		Introduction to Mathematics (MTH 120) Competencies	Pass

New Educational Activity Verified Course Credit Equivalence

Course	Course Description	Total Competencies	Verified	% Verified	Course Credit	Credit Equivalency
AST 234	Records and Database Management	4	4	100.0%	3	3.0
AST 206	Professional Development	24	2	8.3%	3	0.2
AST 102	Keyboarding II	1	1	100.0%	3	3.0

Prior Competency Verified Course Credit Equivalence

Course	Course Description	Total Competencies	Verified	% Verified	Course Credit	Credit Equivalency
SDV 101	College Success Skills	11	1	9.1%	1	0.0
PSY 120	Human Relations	1	1	100.0%	3	3.0
MTH 120	Introduction to Mathematics	1	1	100.0%	3	3.0
ENG 111	College Composition I	2	2	100.0%	3	3.0
BUS 100	Introduction to Business	7	7	100.0%	3	3.0
AST 206	Professional Development	24	2	8.3%	3	0.2
AST 107	Editing and Proofreading Skills	4	4	100.0%	3	3.0

Spring 2016 (2162)

New Educational Activity Completed

- Nothing to Report -

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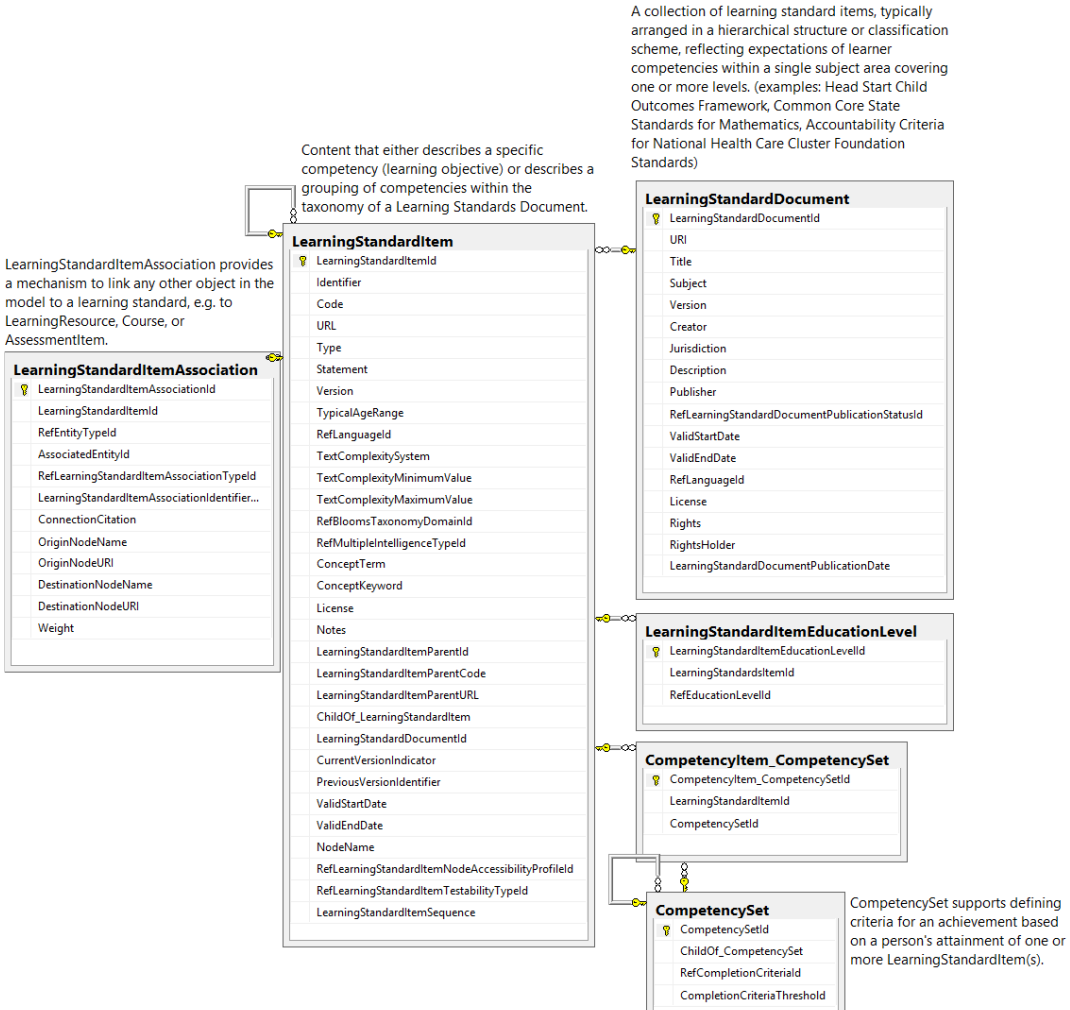
CEDS Learning Standards (Competency and Competency Framework Definitions) ERD



CEDS ERD for CBE Data Elements Related to Competencies, Rubrics, and Assessments

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Experience from creating new framework

1. TAACCCT activity to create new national framework for IT in HIM
2. Built relationships w/national industry organization & w/accreditor
3. Managing expectations for cost, timeline, effort, marketing, diffusion
4. Sub-contractor conducted job analyses, w/national surveys, SME meetings, & psychometric development of job requirements
5. Item bank, exams, & new credential & framework are political relative to positioning of existing credentials & to those who hold them
6. Curriculum development w/new competency framework
7. Managing internal readiness to participate & implement results
8. Internal governance & regulatory acceptance of new program based on the competency framework
9. Need for sustainability after any special funding

Takeaways from working w/ frameworks

1. Create faculty-driven CBE or direct assessment committee first
2. Pick growth programs that don't compete internally & are viable
3. Pick faculty w/ shared vision who are not over-extended
4. Utilize industry advisory committees & leadership
5. Utilize consultant for external viewpoint, particularly what's measurable
6. Pilot steps to review framework, map to courses, identify assessments, & evaluate rubrics for scoring artifacts
7. Tie to program review & program SLO grids
8. Ensure things are measurable & interesting

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Takeaways from working w/ frameworks

9. Overcome mindset of compliance relative to authentic assessment
10. Be aware of changing disciplinary typologies/frameworks
11. Have a reasonable implementation schedule
12. Anticipate many more issues w/ direct assessment than course-based
13. Understand implications for faculty workload & unbundling roles, along w/ incentives
14. Need for technology to map competencies & assessments/rubrics, understand how framework will integrate w/ SIS & LMS

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knowledge 2work

LFCC
Lord Fairfax Community College

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Knowledge to Work (K2W):

A Portal for Competencies and Individualized Learning

Lord Fairfax Community College (LFCC)

173 Skirmisher Lane

Middletown, VA 22645-1745

KnowledgeToWork.com

HigherEd.org

LFCC.edu

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