

## 2009 Mississippi Curriculum Framework

### Postsecondary Health Information Technology

(Program CIP-51.0707-Medical Records Technology/Technician)

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Standards in this document are based on information from the following organizations:

### American Health Information Management Association (AHIMA)

HIM Associate Degree Entry-Level Competencies  
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### Related Academic Standards

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## Preface

### Postsecondary Health Information Technology Program Research Synopsis

Articles, books, Web sites, and other materials listed at the end of each course were considered during the revision process. Specific journals, articles, and sources were especially useful in providing insight into trends and issues in the field. These references are suggested for use by instructors and students during the study of the topics outlined.

Industry advisory team members from colleges throughout the state were asked to give input related to changes to be made to the curriculum framework. Specific comments related to soft skills needed in this program included punctuality, positive attitude, initiative, good work ethic, self motivated, being professional at all times, flexibility, accuracy, communication, and honesty about limitations and weaknesses. Occupational-specific skills stated included: computer skills; privacy in health care; skills in the fields of management, coding, and performance; knowledge of anatomy and physiology, pharmacology, medical terminology, ICD-9 and CPT coding; business etiquette; customer service skills; and previous EMR and/or scanning experience. Safety practices emphasized included computer privacy and security to protect health-care data, following infection and educational guidelines, and ergonomics.

Instructors from colleges throughout the state were also asked to give input on changes to be made to the curriculum framework. Specific comments related to this program included statements from Advisory Committee members including inclusion of ICD-10 preparation and addition of more CPT coding. Changes suggested for the curriculum included deleting the following course electives: Survey of Health Information Systems, (HIT 1123); Fundamentals of Professional Practice Experience, (HIT 1513); and Medical Transcription, (HIT 2222); and adding a new course, Electronic Health Records.

### Curriculum

The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 7 and 8 Academic Standards*
- *21st Century Skills*
- *American Health Information Management Association (AHIMA) HIM Associate Degree Entry-Level Competencies*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the February 24, 2009, curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Depth of knowledge level was added at each competency level.
- Competencies and objectives related to the revised standards for an accredited educational program were added or changed.

- The following course electives were deleted: Survey of Health Information Systems, (HIT 1123), Fundamentals of Professional Practice Experience, (HIT 1513), and Medical Transcription, (HIT 2222).
- The new course Electronic Health Records (HIT 2142) was added.
- The courses Health Record Systems (HIT 1114) and Health Care Delivery Systems (HIT 1311) were combined into one course, HIT 1114.
- Anatomy and Physiology I (BIO 2514) was added as a prerequisite for admission to the program.
- The Recommended Tools and Equipment list was updated.

### Assessment

Students will be assessed using the *American Health Information Management Association (AHIMA) Registered Health Information Technician (RHIT) Examination*.

### Professional Learning

It is suggested that instructors participate in professional learning related to the following concepts:

- 2010 ICD-9 training
- How to use the program Blackboard site
- Differentiated instruction – To learn more about differentiated instruction, please go to [http://www.paec.org/teacher2teacher/additional\\_subjects.html](http://www.paec.org/teacher2teacher/additional_subjects.html), and click on Differentiated Instruction. Work through this online course and review the additional resources.

### Articulation

**Statewide articulations are subject to change as secondary and postsecondary curriculum revisions occur.**

**All articulations listed in this document are effective as of July 1, 2008, unless otherwise noted.**

SEC Program	PS Program	PS Courses
S Business & Computer Technology (CIP 52.0407)	PS Health Information Technology (CIP 51.0707)	CPT 1113 – Fundamentals of Microcomputer Applications  CSC 1323 – Survey of Microcomputer Applications

## Statewide Guidelines on Articulated Credit

### *Eligibility*

- To be eligible for articulated credit, a student must do the following:
  - Complete the articulated Secondary Vocational Program
  - Score 80 percent or higher on the Mississippi Career Planning and Assessment System (MS CPAS) in his or her secondary program of study
- To be awarded articulated credit, a student must do the following:
  - Complete application for articulated credit at the community or junior college
  - Enroll in the community or junior college within 18 months of graduation
  - Successfully complete 12 non-developmental career/technical or academic credit hours in the corresponding articulated postsecondary career–technical program of study

### *How MS CPAS will be documented*

- The Research and Curriculum Unit of Mississippi State University will provide the SBCJC a list of all secondary CTE students scoring at or above the 80 percentile for the articulated programs.
- The SBCJC will forward the list of students eligible for articulated credit to the colleges.

### *Transcripting of Articulated Credit*

- Students must complete 12 non-developmental career–technical or academic credit hours in the articulated postsecondary career–technical program of study before the articulated credit is transcripted.
- No grade will be given on the transcript for articulated courses; only hours granted will be transcripted (thus resulting in no change in quality points).

### *Time Limit*

- MS CPAS scores will be accepted to demonstrate competencies for up to 18 months after high school graduation.

### *Cost*

- No costs will be assessed on hours earned through articulated credit.

## Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Vocational–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact on local vocational–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. The need for these types of skills has been recognized for some time, and the 21st Century Skills is adapted in part from the 1991 report from the U.S. Secretary of Labor’s Commission on Achieving Necessary Skills (SCANS). Another important aspect of learning and working in the 21st century involves technology skills, and the International Society for Technology in Education, developers of the National Educational Technology Standards (NETS), were strategic partners in the Partnership for 21st Century Skills.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. Each vocational–technical course in this sequence has been written using a common format that includes the following components:

- Course Name – A common name that will be used by all community/junior colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community/junior colleges in reporting students
- Classification – Courses may be classified as the following:
  - Vocational-technical core – A required vocational–technical course for all students

- Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
  - Vocational–technical elective – An elective vocational–technical course
  - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area
  - Academic core – An academic course that is required as part of the requirements for an associate degree
- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester
  - Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course
  - Corequisites – A listing of courses that may be taken while enrolled in the course
  - Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and of the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75 percent of the time allocated to each course. The remaining 25 percent of each course should be developed at the local district level and may reflect the following:
  - Additional competencies and objectives within the course related to topics not found in the State framework, including activities related to specific needs of industries in the community college district
  - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
  - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework were developed/revised.
  - Activities that implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational–technical skills and coursework, school-to-work transition activities, and articulation of secondary and postsecondary vocational–technical programs
  - Individualized learning activities, including worksite learning activities, to better prepare individuals in the courses for their chosen occupational area
- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15 semester credit hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
  - 3 semester credit hours                      Math/Science Elective
  - 3 semester credit hours                      Written Communications Elective
  - 3 semester credit hours                      Oral Communications Elective
  - 3 semester credit hours                      Humanities/Fine Arts Elective
  - 3 semester credit hours                      Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program so that students complete some academic and vocational–technical courses each semester. Each community/junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- In instances where secondary programs are directly related to community and junior college programs, competencies and suggested objectives from the high school programs are listed as Baseline Competencies. These competencies and objectives reflect skills and knowledge that are directly related to the community and junior college vocational–technical program. In adopting the curriculum framework, each community and junior college is asked to give assurances that:
  - Students who can demonstrate mastery of the Baseline Competencies do not receive duplicate instruction and
  - Students who cannot demonstrate mastery of this content will be given the opportunity to do so.
- The roles of the Baseline Competencies are to do the following:
  - Assist community/junior college personnel in developing articulation agreements with high schools
  - Ensure that all community and junior college courses provide a higher level of instruction than their secondary counterparts.
- The Baseline Competencies may be taught as special “Introduction” courses for 3–6 semester hours of institutional credit that will not count toward associate degree requirements. Community and junior colleges may choose to integrate the Baseline Competencies into ongoing courses in lieu of offering the “Introduction” courses or may offer the competencies through special projects or individualized instruction methods.
- Technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by the following:

- Adding new competencies and suggested objectives
- Revising or extending the suggested objectives for individual competencies
- Integrating baseline competencies from associated high school programs



- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Resequencing courses within the suggested course sequence
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with SBCJC approval)
- Utilizing the technical elective options in many of the curricula to customize programs<sup>3</sup>

<b>SEC Program</b>	<b>PS Program</b>	<b>PS Courses</b>
S Business & Computer Technology (CIP 52.0407)	PS Health Information Technology (CIP 51.0707)	CPT 1113 – Fundamentals of Microcomputer Applications  CSC 1323 – Survey of Microcomputer Applications

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### Program Description

The Health Information Technology program is a 2-year technical program leading to an associate degree that prepares the individual to work as a technical specialist in Health Record Systems. Health Information Technology combines a profession in health care with information technology. Health Information technicians maintain, collect, and analyze data crucial to the delivery of quality patient care.

When accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in cooperation with the American Health Information Management Association’s Council on Accreditation, the Health Information Technology program prepares graduates to write the national accreditation examination for the Registered Health Information Technician.

SEC Program	PS Program	PS Courses
S Business & Computer Technology (CIP 52.0407)	PS Health Information Technology (CIP 51.0707)	CPT 1113 – Fundamentals of Microcomputer Applications  CSC 1323 – Survey of Microcomputer Applications

## Suggested Course Sequence\*

### Health Information Technology\*\*

Prerequisite to admission to the program: Anatomy and Physiology I (Bio 2514)

#### FIRST YEAR

4 sch Health Record Systems (HIT 1114) 3 sch Medical Terminology (HIT 1213) 4 sch Anatomy & Physiology II (BIO 2524) 3 sch Written Communications Elective 3 sch Fundamentals of Microcomputer Applications (CPT 1113)*** <hr style="width: 10%; margin-left: 0;"/> 17 sch	3 sch Alternate Care Systems (HIT 2123) 3 sch Health Care Law and Ethics (HIT 1323) 3 sch Pathophysiology I (HIT 1413) 3 sch Computers in Health Care (HIT 2913) 2 sch Pharmacology (HIT 2212) 3 sch Humanities/Fine Arts Elective <hr style="width: 10%; margin-left: 0;"/> 17 sch
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#### SECOND YEAR

5 sch Coding Systems I (HIT 2615) 3 sch Pathophysiology II (HIT 2423) 2 sch Electronic Health Records (HIT 2142) 3 sch Professional Practice Experience I (HIT 2513) 3 sch Health Statistics (HIT 2133) 3 sch Oral Communications Elective <hr style="width: 10%; margin-left: 0;"/> 19 sch	5 sch Coding Systems II (HIT 2625) 3 sch Health Care Supervision (HIT 2713) 2 sch Performance Improvement Techniques (HIT 2812) 3 sch Professional Practice Experience II (HIT 2523) 3 sch Reimbursement Methodologies (HIT 2633) 3 sch Social/Behavioral Science Elective <hr style="width: 10%; margin-left: 0;"/> 19 sch
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\* Students who lack entry level skills in math, English, science, and so forth will be provided related studies.

\*\* Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

\*\*\* Microcomputer Applications (CSC 1123), Business Management and Microcomputer (BAD 2533), or Survey of Microcomputer Applications (CPT 1323) may be taken instead of Fundamentals of Microcomputer Applications (CPT 1113), or an approved elective may be taken for those community colleges not requiring microcomputer applications.

## Health Information Technology Courses

**Course Name:** Health Record Systems

**Course Abbreviation:** HIT 1114

**Classification:** Vocational–Technical Core

**Description:** This course is an introduction to health record systems including an overview of health data structure, content and standards, health-care information requirements and standards, and health-care delivery systems. (4 sch: 3-hr lecture, 2-hr lab)

**Prerequisite:** Admission to the HIT Program

<b>Competencies and Suggested Objectives</b>
<p>1. Manage health data structure, content, and standards.</p> <ul style="list-style-type: none"> <li>a. Collect and maintain health data (such as data elements, data sets, and databases).</li> <li>b. Conduct analysis to ensure documentation in the health record supports the diagnosis and reflects the patient’s progress, clinical findings, and discharge status.</li> <li>c. Apply policies and procedures to ensure the accuracy of health data.</li> <li>d. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases.</li> <li>e. Abstract and maintain data for clinical indices/databases/registries.</li> </ul>
<p>2. Maintain health-care information requirements and standards.</p> <ul style="list-style-type: none"> <li>a. Monitor and apply organization-wide health record documentation guidelines.</li> <li>b. Apply policies and procedures to ensure organizational compliance with regulations and standards.</li> <li>c. Report compliance findings according to organizational policy.</li> <li>d. Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards.</li> <li>e. Assist in preparing the organization for accreditation, licensing, and/or certification surveys.</li> </ul>
<p>3. Identify components of health-care delivery systems.</p> <ul style="list-style-type: none"> <li>a. Apply information system policies and procedures required by national health information initiatives on the health-care delivery system.</li> <li>b. Apply current laws, accreditation, licensure, and certification standards related to health information initiatives from the national, state, local, and facility levels.</li> <li>c. Apply policies and procedures to comply with the changing regulations among various payment systems for health-care services such as Medicare, Medicaid, managed care, and so forth.</li> <li>d. Differentiate the roles of various providers and disciplines throughout the continuum of health care, and respond to their information needs.</li> </ul>
<p>4. Maintain data storage and retrieval systems.</p> <ul style="list-style-type: none"> <li>a. Use appropriate electronic or imaging technology for data/record storage.</li> <li>b. Query and generate reports to facilitate information retrieval.</li> <li>c. Design and generate reports using appropriate software.</li> </ul>

- d. Maintain archival and retrieval systems for patient information stored in multiple formats.
- e. Coordinate, use, and maintain systems for document imaging and storage.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

AHIM 1	Health Data Management
AHIM 2	Health Statistics, Biomedical Research, and Quality Management
AHIM 3	Health Services Organization and Delivery
AHIM 4	Information Technology and Systems

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)

- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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**Course Name:** Medical Terminology

**Course Abbreviation:** HIT 1213

**Classification:** Vocational–Technical Core

**Description:** This course is a study of medical language relating to the various body systems including diseases, procedures, clinical specialties, and abbreviations. In addition to term definitions, emphasis is placed on correct spelling and pronunciation. (3 sch: 3-hr lecture)

**Prerequisite:** None

Competencies and Suggested Objectives
<ol style="list-style-type: none"> <li>1. Recognize and discuss word components, terms, procedures, and abbreviations related to the various body systems.               <ol style="list-style-type: none"> <li>a. Identify combining forms, suffixes, and prefixes related to the various body systems.</li> <li>b. Identify and discuss disease terms related to the various body systems.</li> <li>c. Identify diagnostic imaging, clinical, surgical, and laboratory procedures related to the various body systems.</li> <li>d. Identify abbreviations related to the various body systems.</li> <li>e. Define, spell, pronounce, and use terms related to the various body systems.</li> </ol> </li> </ol>



## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 1      Health Data Management

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)



- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
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- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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**Course Name:** Health Care Law and Ethics

**Course Abbreviation:** HIT 1323

**Classification:** Vocational–Technical Core

**Description:** This course is a study of the principles of law as applied to health information systems with emphasis on health records, release of information, confidentiality, consents, and authorizations. (3 sch: 3-hr lecture)

**Prerequisite:** Health Record Systems (HIT 1114)

### Competencies and Suggested Objectives

1. Identify health-care privacy, confidentiality, legal, and ethical issues.
  - a. Participate in the implementation of legal and regulatory requirements related to the health information infrastructure.
  - b. Apply policies and procedures for access and disclosure of personal health information.
  - c. Release patient-specific data to authorized users.
  - d. Maintain user access logs/systems to track access to and disclosure of identifiable patient data.
  - e. Conduct privacy and confidentiality training programs.
  - f. Investigate and recommend solutions to privacy issues/problems.
  - g. Apply and promote ethical standards of practice.
  - h. Apply confidentiality and security measures to protect electronic health information.
  - i. Continue to monitor and apply organization-wide health record documentation guidelines.
  - j. Continue to apply policies and procedures to ensure organizational compliance with regulations and standards.
  - k. Continue to maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards. (DOK 1)
  - l. Continue to apply current laws, accreditation, licensure, and certification standards related to health information initiatives from the national, state, local, and facility levels.

## STANDARDS

*Standards Based on the American Health Information Management Association*

- 1 Health Data Management
- 2 Health Statistics, Biomedical Research, and Quality Management
- 3 Health Services Organization and Delivery
- 4 Information Technology and Systems

*Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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- Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Pathophysiology I

**Course Abbreviation:** HIT 1413

**Classification:** Vocational–Technical Core

**Description:** This course covers structural and functional changes caused by disease in tissues and organs, clinical manifestations, and principles of treatment with emphasis on general concepts and diseases affecting the body as a whole. (3 sch: 3-hr lecture)

**Prerequisite:** Medical Terminology (HIT 1213) and Anatomy and Physiology II (BIO 2524)

<b>Competencies and Suggested Objectives</b>
<p>1. Discuss general concepts of disease and principles of diagnosis.</p> <ul style="list-style-type: none"> <li>a. Recognize characteristics of disease processes.</li> <li>b. List classifications of disease.</li> <li>c. Identify basic principles of diagnosis.</li> <li>d. Explain the use of diagnostic tests and procedures.</li> <li>e. Identify common medications used to treat major disease processes in each body system.</li> </ul>
<p>2. Classify the structure and function of cells and tissues in health and disease.</p> <ul style="list-style-type: none"> <li>a. Identify how cells form the four basic types of tissues.</li> <li>b. Discuss the organization of tissues into organ systems.</li> <li>c. List processes by which cells adapt to changing conditions.</li> <li>d. Describe the ways in which an aging cell becomes increasingly vulnerable to injury.</li> </ul>
<p>3. Identify the inflammation process and its role in disease and injury.</p> <ul style="list-style-type: none"> <li>a. List characteristics and clinical manifestations of an acute inflammation.</li> <li>b. Describe the possible outcomes of an inflammatory reaction.</li> <li>c. Compare inflammation and infection, naming some terms used to describe infections.</li> </ul>
<p>4. Discuss cell-mediated and humoral immunity.</p> <ul style="list-style-type: none"> <li>a. Explain the role of lymphocytes in the immune response.</li> <li>b. Compare immunity and hypersensitivity.</li> <li>c. List the classes of antibodies, and explain how they differ from one another.</li> <li>d. Describe allergic manifestations and methods of treatment.</li> </ul>
<p>5. Discuss the role of pathogenic microorganisms and animal parasites in disease.</p> <ul style="list-style-type: none"> <li>a. List and describe the major groups of pathogenic bacteria.</li> <li>b. Describe the mechanism by which antibiotics inhibit the growth of bacteria.</li> <li>c. Explain the mode of action of virus infections, and describe how the body's response to viral infection leads to recovery.</li> <li>d. List common infections caused by chlamydia, mycoplasmas, and rickettsiae.</li> <li>e. Identify the spectrum of infections caused by fungi.</li> <li>f. List common parasitic infestations that affect humans and how they are acquired.</li> <li>g. Describe clinical manifestations of parasitic infestations, and explain their clinical significance.</li> </ul>
<p>6. Recognize communicable diseases' transmission and control.</p>

<ul style="list-style-type: none"> <li>a. Describe how communicable diseases are transmitted and controlled.</li> <li>b. List the common sexually transmitted diseases, and describe their major clinical manifestations, complications, and methods of treatment.</li> <li>c. Describe symptoms of herpes infection in men and women, and explain the effects on sexual partners or to the fetus/newborn of an infected mother.</li> <li>d. Identify the pathogenesis of human immunodeficiency virus infections, groups affected, and the effects of the virus on the immune system.</li> <li>e. List the major clinical manifestations of HIV infection, the significance of positive test for antibody to the virus, and the methods of preventing spread of the infection.</li> </ul>
<p>7. Identify congenital and hereditary diseases' causes and manifestations.</p> <ul style="list-style-type: none"> <li>a. List common causes of congenital malformations.</li> <li>b. List abnormalities of sex chromosomes and their clinical manifestations.</li> <li>c. Describe some common genetic abnormalities, and explain methods of transmission.</li> <li>d. Identify multifactorial inheritance, give an example of a multifactorial defect, and describe the relevant factors.</li> <li>e. List the causes of Down syndrome, and describe its clinical manifestations.</li> </ul>
<p>8. Discuss the types and characteristics of neoplasms, principal modalities of treatment, and incidence and survival rates for various types of malignant tumors.</p> <ul style="list-style-type: none"> <li>a. Compare general characteristics of benign and malignant tumors.</li> <li>b. Summarize general features of principal types of lymphoma.</li> <li>c. Differentiate between infiltrating and in situ carcinoma.</li> <li>d. Explain the mechanisms of the body's immunologic defenses against a tumor.</li> <li>e. Summarize the principal modalities of tumor treatment, including advantages, disadvantages, and common side effects of each technique.</li> <li>f. Compare the incidence and survival rates for various types of malignant tumors.</li> </ul>
<p>9. Identify abnormalities of blood coagulation and circulatory disturbances.</p> <ul style="list-style-type: none"> <li>a. List the most common clinically significant disturbances of hemostasis, and describe their clinical manifestations.</li> <li>b. Describe the causes and effects of venous thrombosis.</li> <li>c. Describe the causes and effects of arterial thrombosis.</li> <li>d. List factors regulating the circulation of fluid between capillaries and interstitial tissue, and explain the major clinical disturbances leading to edema.</li> </ul>

## STANDARDS

### *Standards Based on the American Health Information Management Association*

#### 1 Health Data Management

##### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)

- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

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**Course Name:** Alternate Care Systems

**Course Abbreviation:** HIT 2123

**Classification:** Vocational–Technical Core

**Description:** This course is a study of health record systems in alternative settings; cancer program records; medical staff organization; and regulatory, accreditation, and licensure standards. (3 sch: 2-hr lecture, 2-hr lab)

**Prerequisite:** Health Record Systems (HIT 1114), Medical Terminology (HIT 1213)

### Competencies and Suggested Objectives

1. Maintain health-care information requirements and standards for alternate care systems.
  - a. Monitor and apply organization-wide health record documentation guidelines for alternate care systems.
  - b. Apply policies and procedures to ensure organizational compliance with regulations and standards for alternate care systems.
  - c. Report compliance findings according to organizational policy for alternate care systems.
  - d. Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards for alternate care systems.
  - e. Assist in preparing the organization for accreditation, licensing, and/or certification surveys for alternate care systems.
  - f. Abstract and maintain data for clinical indices/databases/registries for alternate care systems.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

- AHIM 1      Health Data Management  
 AHIM 2      Health Statistics, Biomedical Research, and Quality Management

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)  
 R2 Words in Context (same and opposite meaning)  
 R3 Recall Information (details, sequence)  
 R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)  
 R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)  
 M1 Addition of Whole Numbers (no regrouping, regrouping)  
 M2 Subtraction of Whole Numbers (no regrouping, regrouping)  
 M3 Multiplication of Whole Numbers (no regrouping, regrouping)  
 M4 Division of Whole Numbers (no remainder, remainder)

- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

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**Course Name:** Health Statistics

**Course Abbreviation:** HIT 2133

**Classification:** Vocational–Technical Core

**Description:** This course includes sources and use of health data, definitions of statistical terms, and computation of commonly used rates and percentages used by health-care facilities. (3 sch: 3-hr lecture)

**Prerequisite:** Alternate Care Systems (HIT 2123)

<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"> <li>1. Compile health-care statistics and research.               <ol style="list-style-type: none"> <li>a. Abstract and maintain data for clinical indices/databases/registries.</li> <li>b. Collect, organize, and present data for quality management, utilization management, risk management, and other related studies.</li> <li>c. Compute and interpret health-care statistics.</li> <li>d. Apply Institutional Review Board (IRB) processes and policies.</li> <li>e. Use specialized databases to meet specific organization needs such as medical research and disease registries.</li> </ol> </li> </ol>



## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 2 Health Statistics, Biomedical Research, and Quality Management

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)

- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

Horton, L. A. (2007). *Calculating and reporting healthcare statistics* (2nd ed.). Chicago, IL: American Health Information Management Association.

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Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Pharmacology

**Course Abbreviation:** HIT 2212

**Classification:** Vocational–Technical Core

**Description:** This course is designed to develop understanding of pharmacy therapy available for clinical management of patient care. (2 sch: 2-hr lecture)

**Prerequisite:** Medical Terminology (HIT 1213)

Competencies and Suggested Objectives
<ol style="list-style-type: none"> <li>1. Indicate common medications used to treat major disease processes in each body system.               <ol style="list-style-type: none"> <li>a. Given a condition, indicate the specific medications used in treatment of the condition.</li> <li>b. Given a medication, indicate the conditions it is used to treat.</li> </ol> </li> </ol>



## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 1      Health Data Management

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)



- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Journal of the American Health Information Management Association*. (n.d.). Retrieved March 23, 2009, from <http://journal.ahima.org/>
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- Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Pathophysiology II

**Course Abbreviation:** HIT 2423

**Classification:** Vocational–Technical Core

**Description:** This course is a continuation of Pathophysiology I with emphasis on conditions relating to specific body systems, manifestations, and principles of treatment. (3 sch: 3-hr lecture)

**Prerequisite:** Pathophysiology I (HIT 1413) and Anatomy and Physiology II (BIO 2524)

<b>Competencies and Suggested Objectives</b>
<p>1. Identify major disease conditions relating to specific body systems, and identify drugs most commonly used in treatment.</p> <ol style="list-style-type: none"> <li>List and describe common disease conditions and drugs affecting the cardiovascular and circulatory systems.</li> <li>List and describe common disease conditions and drugs affecting the respiratory system.</li> <li>List and describe common disease conditions and drugs affecting the breast and female reproductive system, including those occurring during the prenatal period and pregnancy.</li> <li>List and describe common disease conditions and drugs affecting the urinary system.</li> <li>List and describe common disease conditions and drugs affecting the male reproductive system.</li> <li>List and describe common disease conditions and drugs affecting the pancreas, liver, and biliary system.</li> <li>List and describe common disease conditions and drugs affecting the gastrointestinal tract.</li> <li>List and describe common disease conditions and drugs affecting the endocrine system.</li> <li>List and describe common disease conditions and drugs affecting the nervous system.</li> <li>List and describe common disease conditions and drugs affecting the musculoskeletal system.</li> </ol>
<p>2. Discuss the major types of neoplasms and their manifestations, along with methods of treatment for the various body systems.</p> <ol style="list-style-type: none"> <li>List the major types of lung carcinoma.</li> <li>Describe the clinical manifestations of lung carcinoma.</li> <li>Explain the principles of treatment.</li> <li>Describe the clinical manifestations of breast carcinoma, and explain methods of diagnosis and treatment.</li> <li>List the common tumors and cysts of the ovary.</li> <li>Name the more common kinds of tumors affecting the urinary tract.</li> <li>Differentiate between benign prostatic hypertrophy and prostatic carcinoma, describing clinical manifestations and methods of treatment.</li> <li>List the three most common types of testicular cancer, describe their manifestations, and explain the methods of treatment.</li> </ol>

- i. Discuss the causes, manifestations, and treatments of carcinoma of the colon.
- j. Name the types of tumors that affect the central nervous system, and explain their origin, pathogenesis, clinical manifestations, and treatment.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

AHIM 1      Health Data Management

#### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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*21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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**Course Name:** Professional Practice Experience I

**Course Abbreviation:** HIT 2513

**Classification:** Vocational–Technical Core

**Description:** In this course, students rotate through health information management areas in hospitals and other health facilities for application of principles and procedural practice to attain competency. Specific content is dependent on placement in curriculum and site availability. (3 sch: 9-hr clinical)

**Prerequisite:** Alternate Care Systems (HIT 2123) and Medical Terminology (HIT 1213)

### Competencies and Suggested Objectives

1. Perform health information procedures in the health information setting.
  - a. Collect and maintain health data (such as data elements, data sets, and databases).
  - b. Conduct analysis to ensure documentation in the health record supports the diagnosis and reflects the patient’s progress, clinical findings, and discharge status.
  - c. Apply policies and procedures to ensure the accuracy of health data.
  - d. Contribute to the definitions for and apply clinical vocabularies and terminologies used in the organization’s health information systems.
  - e. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases.
  - f. Monitor and apply organization-wide health record documentation guidelines.
  - g. Apply policies and procedures to ensure organizational compliance with regulations and standards.
  - h. Report compliance findings according to organizational policy.
  - i. Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards.
  - j. Assist in preparing the organization for accreditation, licensing, and/or certification surveys.
  - k. Use and maintain electronic applications and work processes to support clinical classification and coding.
  - l. Apply diagnosis/procedure codes using ICD-9-CM or most current version.
  - m. Apply procedure codes using CPT/HCPCS.
  - n. Ensure accuracy of diagnostic/procedural groupings such as DRG, APC, and so on.
  - o. Adhere to current regulations and established guidelines in code assignment.
  - p. Validate coding accuracy using clinical information found in the health record.
  - q. Use and maintain applications and processes to support other clinical classification and nomenclature systems (such as ICD-10-CM, SNOMED, and so on).
  - r. Resolve discrepancies between coded data and supporting documentation.
  - s. Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment systems (PPS) in health-care delivery.
  - t. Support accurate billing through coding, chargemaster, claims management, and bill reconciliation processes.
  - u. Use established guidelines to comply with reimbursement and reporting requirements

- such as the National Correct Coding Initiative.
- v. Compile patient data, and perform data quality reviews to validate code assignment and compliance with reporting requirements such as outpatient prospective payment systems.
  - w. Abstract and maintain data for clinical indices/databases/registries.
  - x. Collect, organize, and present data for quality management, utilization management, risk management, and other related studies.
  - y. Compute and interpret health-care statistics.
  - z. Apply Institutional Review Board (IRB) processes and policies.
  - aa. Use specialized databases to meet specific organization needs such as medical research and disease registries.
  - bb. Abstract and report data for facility-wide quality management and performance improvement programs.
  - cc. Analyze clinical data to identify trends that demonstrate quality, safety, and effectiveness of health care.
  - dd. Apply information system policies and procedures required by national health information initiatives on the health-care delivery system.
  - ee. Apply current laws, accreditation, licensure, and certification standards related to health information initiatives from the national, state, local, and facility levels.
  - ff. Apply policies and procedures to comply with the changing regulations among various payment systems for health-care services such as Medicare, Medicaid, managed care, and so forth.
  - gg. Differentiate the roles of various providers and disciplines throughout the continuum of health care, and respond to their information needs.
  - hh. Participate in the implementation of legal and regulatory requirements related to the health information infrastructure.
  - ii. Apply policies and procedures for access and disclosure of personal health information.
  - jj. Release patient-specific data to authorized users.
  - kk. Maintain user access logs/systems to track access to and disclosure of identifiable patient data.
  - ll. Apply and promote ethical standards of practice.
  - mm. Use technology, including hardware and software, to ensure data collection, storage, analysis, and reporting of information.
  - nn. Use common software applications such as spreadsheets, databases, word processing, graphics, presentation, e-mail, and so on in the execution of work processes.
  - oo. Use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, quality improvement, and imaging.
  - pp. Apply policies and procedures to the use of networks, including intranet and Internet applications to facilitate the electronic health record (EHR), personal health record (PHR), public health, and other administrative applications.
  - qq. Use appropriate electronic or imaging technology for data/record storage.
  - rr. Apply confidentiality and security measures to protect electronic health information.

## STANDARDS

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*Standards Based on the American Health Information Management Association*

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- 1 Health Data Management
- 2 Health Statistics, Biomedical Research, and Quality Management
- 3 Health Services Organization and Delivery
- 4 Information Technology and Systems
- 5 Organizational Resources

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*Related Academic Standards*

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- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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*21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

## SUGGESTED REFERENCES

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**Course Name:** Professional Practice Experience II

**Course Abbreviation:** HIT 2523

**Classification:** Vocational–Technical Core

**Description:** In this course, students rotate through health information management areas in hospitals and other health facilities for application of principles and procedural practice to attain competency. Specific content is dependent on placement in curriculum and site availability. (3 sch: 9-hr clinical)

**Prerequisite:** Professional Practice Experience I (HIT 2513) and Coding Systems I (HIT 2614)

<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"> <li>1. Perform health information procedures in the alternate care setting and other facilities.               <ol style="list-style-type: none"> <li>a. Collect and maintain health data (such as data elements, data sets, and databases).</li> <li>b. Conduct analysis to ensure documentation in the health record supports the diagnosis and reflects the patient’s progress, clinical findings, and discharge status.</li> <li>c. Apply policies and procedures to ensure the accuracy of health data.</li> <li>d. Contribute to the definitions for and apply clinical vocabularies and terminologies used in the organization’s health information systems.</li> <li>e. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources for patient care, management, billing reports, registries, and/or databases.</li> <li>f. Monitor and apply organization-wide health record documentation guidelines.</li> <li>g. Apply policies and procedures to ensure organizational compliance with regulations and standards.</li> <li>h. Report compliance findings according to organizational policy.</li> <li>i. Maintain the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards.</li> <li>j. Assist in preparing the organization for accreditation, licensing, and/or certification surveys.</li> <li>k. Use and maintain electronic applications and work processes to support clinical classification and coding.                   <ol style="list-style-type: none"> <li>l. Apply diagnosis/procedure codes using ICD-9-CM or most current version.</li> <li>m. Apply procedure codes using CPT/HCPCS.</li> <li>n. Ensure accuracy of diagnostic/procedural groupings such as DRG, APC, and so on.</li> <li>o. Adhere to current regulations and established guidelines in code assignment.</li> <li>p. Validate coding accuracy using clinical information found in the health record.</li> </ol> </li> <li>q. Use and maintain applications and processes to support other clinical classification and nomenclature systems (such as ICD-10-CM, SNOMED, and so on).</li> <li>r. Resolve discrepancies between coded data and supporting documentation.</li> <li>s. Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment systems (PPS) in health-care delivery.</li> <li>t. Support accurate billing through coding, chargemaster, claims management, and bill reconciliation processes.</li> <li>u. Use established guidelines to comply with reimbursement and reporting requirements</li> </ol> </li> </ol>

- such as the National Correct Coding Initiative.
- v. Compile patient data, and perform data quality reviews to validate code assignment and compliance with reporting requirements such as outpatient prospective payment systems.
  - w. Abstract and maintain data for clinical indices/databases/registries.
  - x. Collect, organize, and present data for quality management, utilization management, risk management, and other related studies.
  - y. Compute and interpret health-care statistics.
  - z. Apply Institutional Review Board (IRB) processes and policies.
  - aa. Use specialized databases to meet specific organization needs such as medical research and disease registries.
  - bb. Abstract and report data for facility-wide quality management and performance improvement programs.
  - cc. Analyze clinical data to identify trends that demonstrate quality, safety, and effectiveness of health care.
  - dd. Apply information system policies and procedures required by national health information initiatives on the health-care delivery system.
  - ee. Apply current laws, accreditation, licensure, and certification standards related to health information initiatives from the national, state, local, and facility levels.
  - ff. Apply policies and procedures to comply with the changing regulations among various payment systems for health-care services such as Medicare, Medicaid, managed care, and so forth.
  - gg. Differentiate the roles of various providers and disciplines throughout the continuum of healthcare and respond to their information needs.
  - hh. Participate in the implementation of legal and regulatory requirements related to the health information infrastructure.
  - ii. Apply policies and procedures for access and disclosure of personal health information.
  - jj. Release patient-specific data to authorized users.
  - kk. Maintain user access logs/systems to track access to and disclosure of identifiable patient data.
  - ll. Apply and promote ethical standards of practice.
  - mm. Use technology, including hardware and software, to ensure data collection, storage, analysis, and reporting of information.
  - nn. Use common software applications such as spreadsheets, databases, word processing, graphics, presentation, e-mail, and so on in the execution of work processes.
  - oo. Use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, quality improvement, and imaging.
  - pp. Apply policies and procedures to the use of networks, including intranet and Internet applications to facilitate the electronic health record (EHR), personal health record (PHR), public health, and other administrative applications.
  - qq. Use appropriate electronic or imaging technology for data/record storage.
  - rr. Apply confidentiality and security measures to protect electronic health information.

## STANDARDS

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*Standards Based on the American Health Information Management Association*


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AHIM 1	Health Data Management
AHIM 2	Health Statistics, Biomedical Research, and Quality Management
AHIM 3	Health Services Organization and Delivery
AHIM 4	Information Technology and Systems
AHIM 5	Organizational Resources

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*Related Academic Standards*


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- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
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- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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*21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

## SUGGESTED REFERENCES

- Journal of the American Health Information Management Association*. (n.d.). Retrieved March 23, 2009, from <http://journal.ahima.org/>
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**Course Name:** Coding Systems I

**Course Abbreviation:** HIT 2615

**Classification:** Vocational–Technical Core

**Description:** This course includes principles of coding and classification systems with emphasis on ICD-9-CM including lab applications and practice. (5 sch: 3-hr lecture, 4-hr lab)

**Prerequisite:** Medical Terminology (HIT 1213), Health Record Systems (HIT 1114), Anatomy and Physiology II (BIO 2524), and Pathophysiology I (HIT 1413)

### Competencies and Suggested Objectives

1. Apply clinical classification systems.
  - a. Use and maintain electronic applications and work processes to support clinical classification and coding.
  - b. Apply diagnosis/procedure codes using ICD-9-CM or most current version.
  - c. Ensure accuracy of diagnostic/procedural groupings such as DRG, APC, and so on.
  - d. Adhere to current regulations and established guidelines in code assignment.
  - e. Validate coding accuracy using clinical information found in the health record.
  - f. Use and maintain applications and processes to support other clinical classification and nomenclature systems (such as ICD-10-CM, SNOMED, and so on).
  - g. Resolve discrepancies between coded data and supporting documentation.
  - h. Use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, quality improvement, and imaging.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

AHIM 1 Health Data Management  
 AHIM 4 Information Technology and Systems

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)  
 R2 Words in Context (same and opposite meaning)  
 R3 Recall Information (details, sequence)  
 R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)  
 R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)  
 M1 Addition of Whole Numbers (no regrouping, regrouping)  
 M2 Subtraction of Whole Numbers (no regrouping, regrouping)  
 M3 Multiplication of Whole Numbers (no regrouping, regrouping)  
 M4 Division of Whole Numbers (no remainder, remainder)

- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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- Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2007). *Health information: Management of a strategic resource* (3rd ed.). St. Louis, MO: Saunders Elsevier.
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**Course Name:** Coding Systems II

**Course Abbreviation:** HIT 2625

**Classification:** Vocational–Technical Core

**Description:** This course is a continuation of the study of principles of ICD-9-CM coding; introduction to coding with the Health Care Financing Administration’s Common Procedural Coding System (HCPCS) with emphasis on Current Procedural Coding (CPT); and review of current reimbursement mechanisms. (5 sch: 3-hr lecture, 4-hr lab)

**Prerequisite:** Pathophysiology II (HIT 2423), Coding Systems I (HIT 2615), and Pharmacology (HIT 2212)

### Competencies and Suggested Objectives

1. Continue to apply clinical classification systems.
  - a. Use and maintain electronic applications and work processes to support clinical classification and coding.
  - b. Apply diagnosis/procedure codes using ICD-9-CM or most current version.
  - c. Apply procedure codes using CPT/HCPCS.
  - d. Ensure accuracy of diagnostic/procedural groupings such as DRG, APC, and so on.
  - e. Adhere to current regulations and established guidelines in code assignment.
  - f. Validate coding accuracy using clinical information found in the health record.
  - g. Use and maintain applications and processes to support other clinical classification and nomenclature systems (such as ICD-10-CM, SNOMED, and so on).
  - h. Resolve discrepancies between coded data and supporting documentation.
  - i. Use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, quality improvement, and imaging.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

- AHIM 1      Health Data Management  
 AHIM 4      Information Technology and Systems

### *Related Academic Standards*

- R1    Interpret Graphic Information (forms, maps, reference sources)  
 R2    Words in Context (same and opposite meaning)  
 R3    Recall Information (details, sequence)  
 R4    Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)  
 R5    Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)  
 M1    Addition of Whole Numbers (no regrouping, regrouping)



- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

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- Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Reimbursement Methodologies

**Course Abbreviation:** HIT 2633

**Classification:** Vocational–Technical Core

**Description:** This course is designed to identify the uses of coded data and health information in reimbursement and payment systems appropriate to all health-care settings and managed care. (3 sch: 3-hr. lecture)

**Prerequisite:** Pathophysiology II (HIT 2423), Pharmacology (HIT 2212), and Coding Systems I (HIT 2615)

Competencies and Suggested Objectives
<ol style="list-style-type: none"> <li>1. Apply and select appropriate reimbursement methodologies.               <ol style="list-style-type: none"> <li>a. Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment systems (PPS) in health-care delivery.</li> <li>b. Support accurate billing through coding, chargemaster, claims management, and bill reconciliation processes.</li> <li>c. Use established guidelines to comply with reimbursement and reporting requirements such as the National Correct Coding Initiative.</li> <li>d. Compile patient data, and perform data quality reviews to validate code assignment and compliance with reporting requirements such as outpatient prospective payment systems.</li> </ol> </li> </ol>



## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 1      Health Data Management

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)

- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Casto, A. B., & Layman, E. (2009). *Principles of healthcare reimbursement* (2nd ed.). Chicago, IL: American Health Information Management Association.
- Green, M. A., & Rowell, J. C. (2008). *Understanding health insurance: A guide to billing and reimbursement*. Independence, KY: Cengage Learning.
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Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Health Care Supervision

**Course Abbreviation:** HIT 2713

**Classification:** Vocational–Technical Core

**Description:** This course includes basic principles of management and supervision with emphasis on the health information setting. (3 sch: 3-hr lecture)

**Prerequisite:** Alternate Care Systems (HIT 2123) and Health Statistics (HIT 2133)

### Competencies and Suggested Objectives

1. Manage organizational resources to include human, financial, and physical resources.
  - a. Apply the fundamentals of team leadership.
  - b. Organize and contribute to work teams and committees.
  - c. Conduct new staff orientation and training programs.
  - d. Conduct continuing education programs.
  - e. Monitor staffing levels and productivity standards for health information functions, and provide feedback to management and staff regarding performance.
  - f. Communicate benchmark staff performance data.
  - g. Prioritize job functions and activities.
  - h. Use quality improvement tools and techniques to monitor, report, and improve processes.
  - i. Make recommendations for items to include in budgets and contracts.
  - j. Monitor and order supplies needed for work processes.
  - k. Monitor coding and revenue cycle processes.
  - j. Recommend cost-saving and efficient means of achieving work processes and goals.
  - l. Contribute to work plans, policies, procedures, and resource requisitions in relation to job functions.
  - m. Use the principles of ergonomics and human factors in work process design.

## STANDARDS

### *Standards Based on the American Health Information Management Association*

AHIM 4      Information Technology and Systems  
 AHIM 5      Organizational Resources

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)  
 R2 Words in Context (same and opposite meaning)  
 R3 Recall Information (details, sequence)  
 R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)  
 R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2007). *Health information: Management of a strategic resource* (3rd ed.). St. Louis, MO: Saunders Elsevier.
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**Course Name:** Performance Improvement Techniques

**Course Abbreviation:** HIT 2812

**Classification:** Vocational–Technical Core

**Description:** This course covers principles of performance improvement techniques in health-care facilities; trends in utilization and risk management; and the use of quality monitors in the health information department. (2 sch: 1-hr lecture, 2-hr lab)

**Prerequisite:** Alternate Care Systems (HIT 2123) and Health Statistics (HIT 2133)

Competencies and Suggested Objectives
<ol style="list-style-type: none"> <li>1. Validate quality management and performance improvement techniques.               <ol style="list-style-type: none"> <li>a. Abstract and report data for facility-wide quality management and performance improvement programs.</li> <li>b. Analyze clinical data to identify trends that demonstrate quality, safety, and effectiveness of health care.</li> <li>c. Collect, organize, and present data for quality management, utilization management, risk management, and other related studies.</li> </ol> </li> </ol>



## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 2 Health Statistics, Biomedical Research, and Quality Management

*Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)

- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2007). *Health information: Management of a strategic resource* (3rd ed.). St. Louis, MO: Saunders Elsevier.
- Johns, M. (2007). *Health information management technology: An applied approach* (2nd ed.). Chicago, IL: American Health Information Management Association.
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- Schnering, P. J., McCuen, C., & Sayles, N. B. (2008). *Case studies for health information management*. Clifton Park, NY: Thomson Delmar Learning.

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- Shaw, P., Elliott, C., Isaacson, P., & Murphy, E. (2007). *Quality and performance improvement in healthcare* (3rd ed.). Chicago, IL: American Health Information Management Association.
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- Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Computers in Health Care

**Course Abbreviation:** HIT 2913

**Classification:** Vocational–Technical Core

**Description:** This course is an overview of computer use in health-care facilities with an emphasis on applications for health information systems, including the electronic health record. (3 sch: 2-hr lecture, 2-hr lab)

**Prerequisite:** Fundamentals of Microcomputer Applications (CPT 1113), Microcomputer Applications (CSC 1123), Business Management and Microcomputer (BAD 2533), Survey of Microcomputer Applications (CPT 1323), or consent of instructor

### Competencies and Suggested Objectives

1. Apply information technology principles in the health information setting.
  - a. Use technology, including hardware and software, to ensure data collection, storage, analysis, and reporting of information.
  - b. Use common software applications such as spreadsheets, databases, word processing, graphics, presentation, e-mail, and so on in the execution of work processes.
  - c. Use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, quality improvement, and imaging.
  - d. Apply knowledge of data base architecture and design (such as data dictionary, data modeling, data warehousing, and so on) to meet departmental needs.
  - e. Participate in the planning, design, selection, implementation, integration, testing, evaluation, and support for organization-wide information systems.

## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 4      Information Technology and Systems

*Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)

- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2007). *Health information: Management of a strategic resource* (3rd ed.). St. Louis, MO: Saunders Elsevier.
- Gartee, R. (2007). *Electronic health records: Understanding and using computerized medical records*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Johns, M. (2007). *Health information management technology: An applied approach* (2nd ed.). Chicago, IL: American Health Information Management Association.

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- Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

**Course Name:** Electronic Health Records

**Course Abbreviation:** HIT 2142

**Classification:** Vocational–Technical Core

**Description:** This course covers the aspects of electronic health records (EHR) in the health-care environment. In addition, it explores implementation of EHR in various health-care settings. (2 sch: 2-hr lecture)

**Prerequisite:** Computers in Health Care (HIT 2913)

### Competencies and Suggested Objectives

1. Apply electronic health records principles.
  - a. Apply policies and procedures to the use of networks, including intranet and Internet applications to facilitate the electronic health record (EHR), personal health record (PHR), public health, and other administrative applications.
  - b. Apply confidentiality and security measures to protect electronic health information.
  - c. Protect data integrity and validity using software or hardware technology.
  - d. Apply departmental and organizational data and information system security policies.
  - e. Use and summarize data compiled from audit train and data quality monitoring programs.
  - f. Contribute to the design and implementation of risk management, contingency planning, and data recovery procedures.

## STANDARDS

*Standards Based on the American Health Information Management Association*

AHIM 4      Information Technology and Systems

### *Related Academic Standards*

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)

- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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### *21st Century Skills*

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- CS1 Global Awareness
- CS2 Financial, Economic, and Business Literacy
- CS3 Civic Literacy
- CS4 Information and Communication Skills
- CS5 Thinking and Problem-Solving Skills
- CS6 Interpersonal and Self-Directional Skills

### **SUGGESTED REFERENCES**

- Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2007). *Health information: Management of a strategic resource* (3rd ed.). St. Louis, MO: Saunders Elsevier.
- Amatayakul, M. K. (2007). *Electronic health records a practical guide for professionals and organizations* (3rd ed.). Chicago, IL: American Health Information Management Association.
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Schnering, P. J., McCuen, C., & Sayles, N. B. (2007). *Case studies for health information management DVD series Version 1.0* [DVD]. Clifton Park, NY: Thomson Delmar Learning.

Tyson-Howard, C., & Thomas, S. C. (2009). *Comprehensive review guide for health information RHIA & RHIT exam prep*. Sudbury, MA: Jones and Bartlett Publishers.

## Recommended Tools and Equipment

### CAPITALIZED ITEMS

1. Networked computer lab (1 per program with minimum 15 computers)
2. Computer tables/desks/workstations (minimum 15 per program)
3. Printer, laser (with classroom networking)
4. Data (LCD) projector and screen
5. Filing system, HIPAA compliant (minimum of 1 per program)

### NON-CAPITALIZED ITEMS

1. Cabinet, file (4 per program)
2. Scanner (1 per program)
3. Anatomy visual aids (models, charts, etc.)

### SOFTWARE

1. Microsoft Office Suite – Word, Access, Excel, PowerPoint, VISIO
2. Cancer Registry software
3. Encoder Software package
4. Health Information System Application packages (1 per computer)
5. Library search tools
6. Statistical

Instructors should have access to the following:

1. Copier
2. VCR/DVD player

## Assessment

Students will be assessed using the *American Health Information Management Association (AHIMA) Registered Health Information Technician (RHIT) Examination*.

## Baseline Competencies

The following competencies and suggested objectives are taken from the publication Mississippi Curriculum Framework for Allied Health. These competencies and objectives represent the baseline that was used to develop the community/junior college Gerontology Technology courses. Students enrolled in postsecondary courses should either (1) have documented mastery of these competencies or (2) be provided with these competencies before studying the advanced competencies in the Gerontology Technology program.

Baseline competencies may be integrated into existing courses in the curriculum or taught as special “Introduction” courses. The “Introduction” courses may be taught for up to 6 semester hours of institutional credit and may be divided into two courses. If the Baseline Competencies are to be taught as “Introduction” courses, each course should be at least 3 credit hours. The following course number(s) and description should be used:

**Course Name(s):** Introduction to Gerontology Technology, Introduction to Gerontology Technology I, or Introduction to Gerontology Technology II

**Course Abbreviation(s):** GER 100(3–6), GER 1013, or GER 1023

**Classification:** Vocational–Technical Core

**Description:** These courses contain the baseline competencies and suggested objectives from the high school curriculum that directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3–6 semester hours based upon existing skills for each student may be divided into two courses for a maximum total of 6 hours of institutional credit.)

### Competencies and Suggested Objectives

1. Review material related to course and professional organizations.
  - a. Identify student and course expectations.
  - b. Identify allied health professional student organizations and their roles in individual career development.
  - c. Compare the time line of medical history.
2. Recognize safety procedures and policies.
  - a. Describe basic safety procedures.
  - b. Describe accident prevention methods and disaster plans of the local school district.
  - c. Discuss a safe and clean environment.
  - d. Follow state and facility guidelines, including dress requirements for clinical-type experiences.

## **Appendix A: Standards Based on the American Health Information Management Association**

### STANDARDS BASED ON THE AMERICAN HEALTH INFORMATION MANAGEMENT ASSOCIATION

- 1 Health Data Management
- 2 Health Statistics, Biomedical Research, and Quality Management
- 3 Health Services Organization and Delivery
- 4 Information Technology and Systems
- 5 Organizational Resources

## Appendix B: Related Academic Standards<sup>1</sup>

### Reading

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

### Mathematics Computation

- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations

### Applied Mathematics

- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)

### Language

- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

### Spelling

- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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<sup>1</sup> CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, forms 7 and 8*. Monterey, CA: Author. Reproduced with permission of CTB/McGraw-Hill LLC. TABE is a registered trademark of The McGraw-Hill Companies, Inc. Copyright © 1994 by CTB/McGraw-Hill LLC. Reproduction of this material is permitted for educational purposes only.

## Appendix C: 21st Century Skills<sup>2</sup>

### CS1 Global Awareness

- Using 21st century skills to understand and address global issues
- Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
- Promoting the study of non-English language as a tool for understanding other nations and cultures

### CS2 Financial, Economic, and Business Literacy

- Knowing how to make appropriate personal economic choices
- Understanding the role of the economy and the role of business in the economy
- Applying appropriate 21st century skills to function as a productive contributor within an organizational setting
- Integrating oneself within and adapting continually to our nation's evolving economic and business environment

### CS3 Civic Literacy

- Being an informed citizen to participate effectively in government
- Exercising the rights and obligations of citizenship at local, state, national, and global levels
- Understanding the local and global implications of civic decisions
- Applying 21st century skills to make intelligent choices as a citizen

### CS4 Information and Communication Skills

- Information and media literacy skills: Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media; understanding the role of media in society
- Communication skills: Understanding, managing, and creating effective oral, written, and multimedia communication in a variety of forms and contexts

### CS5 Thinking and Problem-Solving Skills

- Critical thinking and systems thinking: Exercising sound reasoning in understanding and making complex choices, understanding the interconnections among systems
- Problem identification, formulation, and solution: Ability to frame, analyze, and solve problems
- Creativity and intellectual curiosity: Developing, implementing, and communicating new ideas to others, staying open and responsive to new and diverse perspectives

### CS6 Interpersonal and Self-Directional Skills

- Interpersonal and collaborative skills: Demonstrating teamwork and leadership, adapting to varied roles and responsibilities, working productively with others, exercising empathy, and respecting diverse perspectives
- Self-direction: Monitoring one's own understanding and learning needs, locating appropriate resources, and transferring learning from one domain to another
- Accountability and adaptability: Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for one's self and others; tolerating ambiguity

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<sup>2</sup> *21st century skills*. (n.d.). Washington, DC: Partnership for 21st Century Skills.

- Social responsibility: Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts