

MISSISSIPPI
CURRICULUM FRAMEWORK
FOR
HEALTH INFORMATION TECHNOLOGY
(Program CIP: 51.0707 – Medical Records Technol./Tech.)

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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.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses which focus on the development of occupational competencies. Each vocational-technical course in this sequence has been written using a common format which 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:
 - Vocational-technical core – A required vocational-technical course for all students.
 - Vocational-technical elective – An elective vocational-technical course.
 - Related academic course – An academic course which provides academic skills and knowledge directly related to the program area.
 - Academic core – An academic course which is required as part of the requirements for an Associate degree.
- Description – A short narrative which 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:
 - 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 which 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 was developed/revised.
 - Activities which 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:
 - Assist community/junior college personnel in developing articulation agreements with high schools, and
 - 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 which 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.

May 21, 2004

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PROGRAM DESCRIPTION

HEALTH INFORMATION TECHNOLOGY

The Health Information Technology program is a two-year technical program leading to an Associate Degree which prepares the individual to work as a technical specialist in Health Record Systems. When accredited by the Commission on the Accreditation of Allied Health Educational Program (CAAHEP) 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.

A total of 69 semester credit hours are required for an Associate Degree in Health Information Technology. This total includes 48 semester hours of vocational-technical core courses, 15 semester hours of academic core courses, and 6 semester hours of academic related courses.

HEALTH INFORMATION TECHNOLOGY

SUGGESTED COURSE SEQUENCE*

**Baseline Competencies for Health Information Technology

FIRST YEAR

4 sch Health Record Systems (HIT 1114)	3 sch Alternate Care Systems (HIT 2123)
3 sch Medical Terminology (HIT 1213)	3 sch Health Care Law and Ethics (HIT 1323)
1 sch Health Care Delivery Systems (HIT 1311)	3 sch Pathophysiology I (HIT 1413)
4 sch Anatomy & Physiology I (BIO 2514)	3 sch Computers in Health Care (HIT 2913)
3 sch Written Communications Elective	4 sch Anatomy & Physiology II (BIO 2524)
3 sch Fundamentals of Microcomputer Applications (CPT 1113)***	3 sch Humanities/Fine Arts Elective
	<hr/> 19 sch
<hr/> 18 sch	

SECOND YEAR

4 sch Coding Systems I (HIT 2614)	4 sch Coding Systems II (HIT 2624)
3 sch Pathophysiology II (HIT 2423)	3 sch Health Care Supervision (HIT 2713)
2 sch Pharmacology (HIT 2212)	2 sch Performance Improvement Techniques (HIT 2812)
3 sch Professional Practice Experience I (HIT 2513)	3 sch Professional Practice Experience II (HIT 2523)
3 sch Health Statistics (HIT 2133)	2 sch Reimbursement Methodologies (HIT 2632)
3 sch Oral Communications Elective	3 sch Social/Behavioral Science Elective
<hr/> 18 sch	<hr/> 17 sch

- * Students who lack entry level skills in math, English, science, etc., 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) may be taken instead of Fundamentals of Microcomputer Applications (CPT 1113).

TECHNICAL ELECTIVES (may be taken in addition to required courses)

Survey of Health Information Systems (HIT 1123)

Medical Transcription (HIT 2222)

Fundamentals of Professional Practice Experience (HIT 1513)

May 21, 2004

SECTION I:
CURRICULUM GUIDE
FOR
HEALTH INFORMATION TECHNOLOGY

HEALTH INFORMATION TECHNOLOGY COURSES

May 21, 2004

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 the current healthcare environment; admissions procedures; record content, analysis, and use; retention requirements; and numbering and filing systems. **This course was previously called Health Record Systems I.** (4 sch: 3 hr. lecture, 2 hr. lab)

Prerequisite: Admission to the HIT Program

Competencies and Suggested Objectives:

1. Gather data to support patient-related information system needs and departmental operations and services.
 - a. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources (e.g., patient care, management, billing reports and/or databases.).
 - b. Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings, and discharge status.
 - c. Abstract records for department indices/databases/registries.
 - d. Collect data for quality management, utilization management, risk management, and other patient care related studies.
 - e. Present data in verbal and written forms.
 - f. Collect and report data on incomplete records.
 - g. Design forms, computer input screens, and other health record documentation tools.
2. Maintain data to support patient-related information system needs and departmental operations and services.
 - a. Assist in developing health record documentation guidelines.
 - b. Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
 - c. Perform qualitative analysis of health records to evaluate compliance.
 - d. Assist in preparing the facility for an accreditation, licensing, and/or certification survey.
 - e. Ensure facility-wide adherence to health information services/compliance with regulatory requirements (e.g., ICD-9-CM Cooperative Parties coding guidelines, HCFA Compliance Plan, Correct Coding Initiative).
 - f. Maintain filing and retrieval systems for paper-based patient records.
 - g. Maintain integrity of master patient/client index.
 - h. Maintain integrity of patient numbering and filing systems.

- i. Discuss the role of transcription as related to health information technology.

Standards

Related Academic Topics

- C1 Interpret written material.
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.
- M2 Explore patterns and functions.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT3 The curriculum must include Health Data Content and Structure.

Course Name: Survey of Health Information Systems

Course Abbreviation: HIT 1123

Classification: Vocational-Technical Elective

Description: This course presents an overview of automated information systems used in various settings in the health care delivery system. It includes basic computer concepts, terminology, and privacy/security issues which affect access to and use of patient information. (3 sch: 3 hr. lecture)

Prerequisites: Alternate Care Systems (HIT 2123) and Computers in Health Care (HIT 2913)

Competencies and Suggested Objectives

1. Identify resources to support departmental operations and information systems.
 - a. Participate in defining data elements for institution-wide data collection.
 - b. Retrieve patient data from departmental databases.
 - c. Coordinate other relevant functions with appropriate departments.
 - d. Create a database inventory of all data components.
 - e. Maintain a database inventory of all data components.

Standards

Related Academic Topics

- C1 Interpret written material.
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.

- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT2 The curriculum must include Information Technology.

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:

1. Recognize and discuss word components, terms, procedures, and abbreviations related to the various body systems.
 - a. Identify combining forms, suffixes, and prefixes related to the various body systems.
 - b. Identify and discuss disease terms related to the various body systems.
 - c. Identify diagnostic imaging, clinical, surgical, and laboratory procedures related to the various body systems.
 - d. Identify abbreviations related to the various body systems.
 - e. Define, spell, pronounce, and use terms related to the various body systems.

Standards

Related Academic Topics

- C1 Interpret written material.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology, and pathophysiology.

Course Name: Health Care Delivery Systems

Course Abbreviation: HIT 1311

Classification: Vocational-Technical Core

Description: This course is an introduction to the United States health care delivery system with emphasis on the changing role of health care providers, hospitals and other facilities, and governmental agencies. (1 sch: 1 hr. lecture)

Prerequisite: Admission to the HIT program

Competencies and Suggested Objectives:

1. Describe the current United States health care delivery system, its providers, and health service organizations.
 - a. Understand the role of various providers and disciplines through the continuum of healthcare services.
2. Discuss state and federal regulations and their relationship to accreditation standards for health care organizations.
 - a. Interpret and apply laws and accreditation, licensure, and certification standards; monitor changes; and communicate information-related changes to other people in the facility.

Standards

Related Academic Topics

- C1 Interpret written material.
- C4 Access, organize, and evaluate information.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T4 Technology communications tools

T5 Technology research tools

Standards Based on the American Health Information Management Association

HIT4 The curriculum must include Healthcare Delivery Systems.

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)

Prerequisites: Health Record Systems (HIT 1114) and Health Care Delivery Systems (HIT 1311)

Competencies and Suggested Objectives:

1. Gather data to support patient-related information system needs and departmental operations and services while observing appropriate health care law and ethics.
 - a. Interpret and apply laws and accreditation, licensure, and certification standards; monitor changes; and communicate information-related changes to other people in the facility.
 - b. Release patient-specific data to authorized users.
 - c. Request patient-specific information from other sources.
 - d. Summarize patient encounter data for release to authorized users.
 - e. Maintain and enforce patient health record confidentiality, privacy, and security requirements.

Standards

Related Academic Topics

- C1 Interpret written material.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

HIT10 The curriculum must include Legal and Ethical Issues.

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. **This course was formerly called Disease I.** (3 sch: 3 hr. lecture)

Prerequisites: Medical Terminology (HIT 1213) and Anatomy and Physiology I (BIO 2514)

Competencies and Suggested Objectives:

1. Discuss general concepts of disease and principles of diagnosis.
 - a. Describe characteristics of disease processes.
 - b. List classifications of disease.
 - c. Discuss basic principles of diagnosis.
 - d. Discuss the use of diagnostic tests and procedures.
 - e. Identify common medications used to treat major disease processes in each body system.
2. Discuss the structure and function of cells and tissues in health and disease.
 - a. Describe how cells form the four basic types of tissues.
 - b. Discuss the organization of tissues into organ systems.
 - c. List processes by which cells adapt to changing conditions.
 - d. Explain the ways in which an aging cell becomes increasingly vulnerable to injury.
3. Describe the inflammation process and its role in disease and injury.
 - a. List characteristics and clinical manifestations of an acute inflammation.
 - b. Describe the possible outcomes of an inflammatory reaction.
 - c. Compare inflammation and infection, naming some terms used to describe infections.
4. Discuss cell-mediated and humoral immunity.
 - a. Explain the role of lymphocytes in the immune response.
 - b. Compare immunity and hypersensitivity.
 - c. List the classes of antibodies, and explain how they differ from one another.
 - d. Describe allergic manifestations and methods of treatment.
5. Discuss the role of pathogenic microorganisms and animal parasites in disease.
 - a. List and describe the major groups of pathogenic bacteria.
 - b. Describe the mechanism by which antibiotics inhibit the growth of bacteria.
 - c. Explain the mode of action of virus infections, and describe how the body's response to viral infection leads to recovery.

- d. List common infections caused by chlamydia, mycoplasmas, and rickettsiae.
 - e. Discuss the spectrum of infections caused by fungi.
 - f. List common parasitic infestations that affect humans and how they are acquired.
 - g. Describe clinical manifestations of parasitic infestations and explain their clinical significance.
6. Discuss communicable diseases' transmission and control.
- a. Explain how communicable diseases are transmitted and controlled.
 - b. List the common sexually transmitted diseases and describe their major clinical manifestations, complications, and methods of treatment.
 - c. Describe symptoms of herpes infection in men and women, and explain the effects on sexual partners or the fetus/newborn of an infected mother.
 - d. Discuss the pathogenesis of human immunodeficiency virus infections, groups affected, and the effects of the virus on the immune system.
 - e. List the major clinical manifestations of HIV infection, the significance of a positive test for antibody to the virus, and the methods of preventing spread of the infection.
7. Discuss congenital and hereditary diseases' causes and manifestations.
- a. List common causes of congenital malformations.
 - b. List abnormalities of sex chromosomes and their clinical manifestations.
 - c. Describe some common genetic abnormalities and explain methods of transmission.
 - d. Explain multifactorial inheritance, give an example of a multifactorial defect, and describe the relevant factors.
 - e. List the causes of Down's syndrome and describe its clinical manifestations.
8. Discuss the types and characteristics of neoplasms, principal modalities of treatment, and incidence and survival rates for various types of malignant tumors.
- a. Compare general characteristics of benign and malignant tumors.
 - b. Summarize general features of principal types of lymphoma.
 - c. Differentiate between infiltrating and in situ carcinoma.
 - d. Explain the mechanisms of the body's immunologic defenses against tumor.
 - e. Summarize the principal modalities of tumor treatment, including advantages, disadvantages, and common side effects of each technique.
 - f. Compare the incidence and survival rates for various types of malignant tumors.
9. Discuss abnormalities of blood coagulation and circulatory disturbances.
- a. List the most common clinically significant disturbances of hemostasis and describe their clinical manifestations.
 - b. Describe the causes and effects of venous thrombosis.
 - c. Describe the causes and effects of arterial thrombosis.

- d. List factors regulating the circulation of fluid between capillaries and interstitial tissue, and explain the major clinical disturbances leading to edema.

Standards

Related Academic Topics

- C1 Interpret written material.
- C4 Access, organize, and evaluate information.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology and pathophysiology.

Course Name: Fundamentals of Professional Practice Experience

Course Abbreviation: HIT 1513

Classification: Vocational-Technical Core

Description: In this course, students get an introduction to health care settings by rotating 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)

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

Competencies and Suggested Objectives:

1. Perform basic health information procedures in the health information setting.
 - a. Abstract records for department indices/databases/registries.
 - b. Present data in verbal and written forms.
 - c. Release patient-specific data to authorized users.
 - d. Maintain and enforce patient health record confidentiality requirements.
 - e. Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
 - f. Perform qualitative analysis of health records to evaluate compliance.
 - g. Collect and report data on incomplete records.
 - h. Maintain filing and retrieval systems for paper-based patient records.
 - i. Maintain integrity of master patient/client index.
 - j. Maintain integrity of patient numbering and filing systems.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.
- S1 Explain the Anatomy and Physiology of the human body.

- S8 Apply concepts related to the scientific process and method to include safety procedures for classroom and laboratory; use and care of scientific equipment; interrelationships between science, technology and society; and effective communication of scientific results in oral, written, and graphic form.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools

Standards Based on the American Health Information Management Association

- HIT2 The curriculum must include Information Technology.
- HIT3 The curriculum must include Health Data Content and Structure.
- HIT4 The curriculum must include Healthcare Delivery Systems.
- HIT10 The curriculum must include Legal and Ethical Issues.

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. **This course was previously called Health Record Systems II.** (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Health Record Systems (HIT 1114), Medical Terminology (HIT 1213), and Health Care Delivery Systems (HIT 1311)

Competencies and Suggested Objectives:

1. Gather data to support patient-related information system needs and departmental operations and services in alternate care systems.
 - a. Verify timeliness, completeness, accuracy, and appropriateness of data and data sources (e.g., patient care, management, billing reports, and/or databases.)
 - b. Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings, and discharge status.
 - c. Abstract records for department indices/databases/registries.
 - d. Collect data for quality management, utilization management, risk management, and other patient care related studies.
 - e. Present data in verbal and written forms.
 - f. Collect and report data on incomplete records.
 - g. Design forms, computer input screens, and other health record documentation tools.
2. Maintain data to support patient-related information system needs and departmental operations and services in alternate care systems.
 - a. Assist in developing health record documentation guidelines.
 - b. Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
 - c. Perform qualitative analysis of health records to evaluate compliance.
 - d. Assist in preparing the facility for an accreditation, licensing, and/or certification survey.
 - e. Ensure facility-wide adherence to health information services/compliance with regulatory requirements (e.g., ICD-9-CM Cooperative Parties coding guidelines, HCFA Compliance Plan, Correct Coding Initiative).
 - f. Maintain filing and retrieval systems for paper-based patient records.
 - g. Maintain integrity of master patient/client index.
 - h. Maintain integrity of patient numbering and filing systems.

Standards

Related Academic Topics

- C1 Interpret written material.
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.
- M2 Explore patterns and functions.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT3 The curriculum must include Health Data Content and Structure.

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)

Prerequisites: Alternate Care Systems (HIT 2123)

Competencies and Suggested Objectives:

1. Gather data to support patient-related information system needs and departmental operations and services using health statistics.
 - a. Collect data for quality management, utilization management, risk management, and other patient care related studies.
 - b. Query facility-wide databases to retrieve information.
 - c. Collect and report data on incomplete records.
 - d. Design forms, computer input screens, and other health record documentation tools
2. Validate data for patient-related information system needs and departmental operations and services.
 - a. Calculate and interpret descriptive statistics.
 - b. Present data in verbal and written forms.
3. Analyze data for patient-related information system needs and departmental operations and services.
 - a. Use common software packages (e.g., spreadsheets, databases, word processing, graphics, presentation, statistical, email).
 - b. Generate reports from various databases.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.
- M1 Relate number relationships, number systems, and number theory.
- M2 Explore patterns and functions.

M6 Explore the concepts of statistics and probability in real world situations.

Workplace Skills

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.

WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.

WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

National Educational Technology Standards for Students

T1 Basic operations and concepts

T3 Technology productivity tools

T4 Technology communication tools

T5 Technology research tools

T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

HIT6 The curriculum must include Healthcare Statistics and Data Literacy.

Course Name: Pharmacology

Course Abbreviation: HIT 2212

Classification: Vocational-Technical Course

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

Prerequisites: Medical Terminology (HIT 1213)

Competencies and Suggested Objectives:

1. Identify common medications used to treat major disease processes in each body system.
 - a. Given a condition, indicate the specific medications used in treatment of the condition.
 - b. Given a medication, indicate the conditions it is used to treat.

Standards

Related Academic Topics

- C1 Interpret written material.
- C3 Listen, comprehend, and take appropriate action.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, reasoning, and knowing how to learn.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology, and pathophysiology.

Course Name: Medical Transcription

Course Abbreviation: HIT 2222

Classification: Vocational-Technical Elective

Description: This course covers concepts in computerized medical transcription in health care facilities with emphasis on content of various medical reports and application of medical transcription standards in a hospital medical transcription center. (2 sch: 1 hr. lecture, 2 hr. lab)

Prerequisites: Medical Terminology (HIT 1213), Fundamentals of Microcomputer Applications (CPT 1113) or Microcomputer Applications (CSC 1123), Anatomy and Physiology I (BIO 2514), and Pathophysiology I (HIT 1413)

Competencies and Suggested Objectives:

1. Apply terminology, word processing, language, and health information system skills in transcription of authentic physician dictation.
 - a. Transcribe dictation of clinical reports into an accurate and acceptable format.
 - b. Utilize appropriate references to locate unfamiliar medical, surgical, and pharmaceutical terms.
 - c. Demonstrate utilizations of basic rules of punctuation, capitalization, and sentence structure.
 - d. Apply proofreading and editing skills to a transcribed report.
 - e. Input data into a computerized patient record.

Standards

Related Academic Topics

- C1 Interpret written material.
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.

- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology and pathophysiology.
- HIT2 The curriculum must include Information Technology.

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. **This course was previously called Disease II.** (3 sch: 3 hr. lecture)

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

Competencies and Suggested Objectives:

1. Discuss major disease conditions relating to specific body systems and identify drugs most commonly used in treatment.
 - a. List and describe common disease conditions and drugs affecting the cardiovascular and circulatory systems.
 - b. List and describe common disease conditions and drugs affecting the respiratory system.
 - c. List and describe common disease conditions and drugs affecting the breast and female reproductive system, including those occurring during the prenatal period and pregnancy.
 - d. List and describe common disease conditions and drugs affecting the urinary system.
 - e. List and describe common disease conditions and drugs affecting the male reproductive system.
 - f. List and describe common disease conditions and drugs affecting the pancreas, liver, and biliary system.
 - g. List and describe common disease conditions and drugs affecting the gastrointestinal tract.
 - h. List and describe common disease conditions and drugs affecting the endocrine system.
 - i. List and describe common disease conditions and drugs affecting the nervous system.
 - j. List and describe common disease conditions and drugs affecting the musculoskeletal system.
2. Discuss the major types of neoplasms and their manifestations, along with methods of treatment for the various body systems.
 - a. List the major types of lung carcinoma.
 - b. Describe the clinical manifestations of lung carcinoma.
 - c. Explain the principles of treatment.
 - d. Describe the clinical manifestations of breast carcinoma and explain methods of diagnosis and treatment.
 - e. List the common tumors and cysts of the ovary.

- f. Name the more common kinds of tumors affecting the urinary tract.
- g. Differentiate between benign prostatic hypertrophy and prostatic carcinoma, describing clinical manifestations and methods of treatment.
- h. List the three most common types of testicular cancer; describe their manifestations; and explain the methods of treatment.
- 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

Related Academic Topics

- C1 Interpret written material.
- C4 Access, organize, and evaluate information.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology and pathophysiology.

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)

Prerequisites: 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. Validate coding accuracy using clinical information found in the health record.
 - b. Assign diagnosis/procedural codes using ICD-9-CM.
 - c. Assign procedural codes using CPT/HCPCS.
 - d. Abstract records for department indices/databases/registries.
 - e. Calculate and interpret descriptive healthcare statistics.
 - f. Present data in verbal and written forms.
 - g. Release patient-specific data to authorized users.
 - h. Maintain and enforce patient health record confidentiality requirements.
 - i. Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
 - j. Perform qualitative analysis of health records to evaluate compliance.
 - k. Collect and report data on incomplete records.
 - l. Maintain filing and retrieval systems for paper-based patient records.
 - m. Maintain integrity of master patient/client index.
 - n. Maintain integrity of patient numbering and filing systems.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.

- M6 Explore the concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.
- S8 Apply concepts related to the scientific process and method to include safety procedures for classroom and laboratory; use and care of scientific equipment; interrelationships between science, technology and society; and effective communication of scientific results in oral, written, and graphic form.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools

Standards Based on the American Health Information Management Association

- HIT2 The curriculum must include Information Technology.
- HIT3 The curriculum must include Health Data Content and Structure.
- HIT4 The curriculum must include Healthcare Delivery Systems.
- HIT6 The curriculum must include Healthcare Statistics and Data Literacy.
- HIT8 The curriculum must include Clinical Classification Systems.
- HIT10 The curriculum must include Legal and Ethical Issues.

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)

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

Competencies and Suggested Objectives:

1. Perform health information procedures in the alternate care setting and other facilities.
 - a. Validate coding accuracy using clinical information found in the health record.
 - b. Assign diagnosis/procedural codes using ICD-9-CM.
 - c. Assign procedural codes using CPT/HCPCS.
 - d. Abstract records for department indices/databases/registries.
 - e. Calculate and interpret descriptive healthcare statistics.
 - f. Present data in verbal and written forms.
 - g. Release patient-specific data to authorized users.
 - h. Maintain and enforce patient health record confidentiality requirements.
 - i. Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
 - j. Perform qualitative analysis of health records to evaluate compliance.
 - k. Collect and report data on incomplete records.
 - l. Maintain filing and retrieval systems for paper-based patient records.
 - m. Maintain integrity of master patient/client index.
 - n. Maintain integrity of patient numbering and filing systems.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.

- C6 Communicate ideas and information using oral and written forms for a variety of audiences and purposes.
- M6 Explore the concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.
- S8 Apply concepts related to the scientific process and method to include safety procedures for classroom and laboratory; use and care of scientific equipment; interrelationships between science, technology and society; and effective communication of scientific results in oral, written, and graphic form.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communication tools
- T5 Technology research tools

Standards Based on the American Health Information Management Association

- HIT2 The curriculum must include Information Technology.
- HIT3 The curriculum must include Health Data Content and Structure.
- HIT4 The curriculum must include Healthcare Delivery Systems.
- HIT6 The curriculum must include Healthcare Statistics and Data Literacy.
- HIT8 The curriculum must include Clinical Classification Systems.
- HIT10 The curriculum must include Legal and Ethical Issues.

Course Name: Coding Systems I

Course Abbreviation: HIT 2614

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. (4 sch: 3 hr. lecture, 2 hr. lab)

Prerequisites: 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. Gather data to support patient-related information system needs and departmental operations and services utilizing basic coding.
 - a. Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings and discharge status.
 - b. Validate coding accuracy using clinical information found in the health record.
 - c. Assign procedural codes using ICD-9-CM.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT8 The curriculum must include Clinical Classification Systems.
- HIT9 The curriculum must include Reimbursement Methodologies.

Course Name: Coding Systems II

Course Abbreviation: HIT 2624

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. (4 sch: 3 hr. lecture, 2 hr. lab)

Prerequisites: Pathophysiology II (HIT 2423), Coding Systems I (HIT 2614), and Pharmacology (HIT 2212)

Competencies and Suggested Objectives:

1. Gather data to support patient-related information systems needs and departmental operations and services utilizing advanced coding.
 - a. Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings and discharge status.
 - b. Validate coding accuracy using clinical information found in the health record.
 - c. Assign procedural codes using CPT/HCPCS.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT8 The curriculum must include Clinical Classification Systems.
- HIT9 The curriculum must include Reimbursement Methodologies.

Course Name: Reimbursement Methodologies

Course Abbreviation: HIT 2632

Classification: Vocational-Technical Core

Description: This course is design to identify the uses of coded data and health information in reimbursement and payment systems appropriate to all health care settings and managed care. (2 sch: 2 hr. lecture)

Prerequisites: Pathophysiology II (HIT 2423), Pharmacology (HIT 2212), and Coding Systems I (HIT 2614)

Competencies and Suggested Objectives:

1. Gather data to support patient-related information system needs and departmental operations and services utilizing reimbursement methodologies.
 - a. Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings, and discharge status.
 - b. Assist in the facility's billing processes.
 - c. Validate coding accuracy using clinical information found in the health record.
 - d. Assign procedural codes using ICD-9-CM.
 - e. Assign procedural codes using CPT/HCPCS.
 - f. Ensure facility-wide adherence to health information services' compliance with regulatory requirements (e.g., ICD-9-CM Cooperative Parties coding guidelines, HCFA Compliance Plan, Correct Coding Initiative).

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.
- S1 Explain the Anatomy and Physiology of the human body.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT8 The curriculum must include Clinical Classification Systems.
- HIT9 The curriculum must include Reimbursement Methodologies.

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)

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

Competencies and Suggested Objectives:

1. Evaluate the effectiveness and efficiency of departmental systems, operational and service systems, and information systems.
 - a. Monitor staffing levels, turnaround time, productivity and workflow for supervisory purposes.
 - b. Determine resources (equipment and supplies) to meet workload needs.
 - c. Develop departmental procedures.
 - d. Develop strategic plans, goals, and objectives for area of responsibility.
 - e. Participate in intra-departmental teams/committees.
 - f. Participate in facility-wide teams/committees responsible for health information services issues.
 - g. Provide consultation, education, and training to users of health information services.
 - h. Use quality improvement tools and techniques to improve departmental processes.
 - i. Plan and conduct meetings.
 - j. Resolve customer complaints.
 - k. Prioritize department functions and services.
 - l. Implement staff orientation and training programs.
 - m. Manage special projects.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

- M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills

- WP1 Allocates resources (time, money, materials and facilities, and human resources).
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, reasoning, and knowing how to learn.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T3 Technology productivity tools
- T4 Technology communications tools

Standards Based on the American Health Information Management Association

- HIT5 The curriculum must include Organization and Supervision.

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)

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

Competencies and Suggested Objectives:

1. Validate data for patient-related information system needs and departmental operations and services.
 - a. Abstract records for department indices/databases, registries.
 - b. Collect data for quality management, utilization management, risk management, and other patient care related studies.
 - c. Participate in facility-wide quality management program.
 - d. Present data in verbal and written forms.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.
- M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills

- WP1 Allocates resources (time, money, materials and facilities, and human resources).
- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.

- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP5 Selects, applies, and maintains/troubleshoots technology.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, reasoning, and knowing how to learn.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT7 The curriculum must include Quality Management.

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 emphasis on applications for health information services, including the electronic medical record. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Fundamentals of Microcomputer Applications (CPT 1113) or Microcomputer Applications (CSC 1123)

Competencies and Suggested Objectives:

1. Apply computer-based technology principles in the health information setting.
 - a. Use common software packages such as spreadsheets, databases, word processing, graphics, presentation, statistical, and email.
 - b. Use electronic and imaging technology to store medical records.
 - c. Query facility-wide databases to retrieve information.
 - d. Generate reports from various databases.
 - e. Protect data integrity and validity using software or hardware technology.
 - f. Identify common software problems.

Standards

Related Academic Topics

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate action.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

Workplace Skills

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP5 Selects, applies, and maintains/troubleshoots technology.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.

- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, reasoning, and knowing how to learn.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T3 Technology productivity tools
- T4 Technology communications tools
- T5 Technology research tools
- T6 Technology problem-solving and decision-making tools

Standards Based on the American Health Information Management Association

- HIT 2 The curriculum must include Information Technology.

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RELATED VOCATIONAL-TECHNICAL COURSES

Course Name: Fundamentals of Microcomputer Applications

Course Abbreviation: CPT 1113

Classification: Related Vocational-Technical (From Computer Information Systems Technology)

Description: This course will introduce information processing concepts to include: work processing, spreadsheet, and database management software. **Service course; not to be taken by Business and Office and Related Technology students.** (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: None

Competencies and Suggested Objectives:

1. Discuss hardware components.
 - a. Describe the input, output, and storage elements of the information processing cycle and explain each element.
 - b. Describe and discuss the three main classifications of the computer to include micro, mid-range, and mainframes.
2. Explain classes of software.
 - a. Describe functions of systems software.
 - b. Identify widely used software applications.
 - c. Discuss various high level languages.
 - d. Discuss data organization.
3. Create and print mailable documents.
 - a. Develop keyboarding skills.
 - b. Prepare letters using full block style.
 - c. Use word processing software to produce documents.
4. Create and print spreadsheet.
 - a. Use spreadsheet software to produce acceptable worksheets.
 - b. Generate graphs from worksheets.
5. Create and print database files.
 - a. Use database software to produce databases.
 - b. Edit database records.
 - c. Print reports.
6. Integrate application information.
 - a. Merge a database with a word processing letter.
 - b. Merge a spreadsheet with a letter.

RELATED ACADEMIC COURSES

Course Name: Anatomy and Physiology I

Course Abbreviation: BIO 2514

Classification: Related Academic

Description: A lecture/laboratory course dealing with the anatomical and physiological study of the human body, particularly the molecular, cellular, tissue, organs, and systems. Each system is considered in detail regarding both structure and function.

Course Name: Anatomy and Physiology II

Course Abbreviation: BIO 2524

Classification: Academic Core

Description: A lecture/laboratory course of the systems listed but not covered in BIO 2514.

Course Name: Microcomputer Applications

Course Abbreviation: CSC 1123

Classification: Related Academic

Description: This course is designed to teach the use of a major application package(s) as used on microcomputers in business, education, and other environments.

SECTION II:
RECOMMENDED TOOLS AND EQUIPMENT
FOR
HEALTH INFORMATION TECHNOLOGY

RECOMMENDED TOOLS AND EQUIPMENT
FOR
HEALTH INFORMATION TECHNOLOGY

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. Transcriber w/ Headphones & Foot Pedal (minimum 15 per program)
5. LCD
6. Filing System, HIPAA compliant (minimum of 1 per program)

NON-CAPITALIZED ITEMS

1. Cabinet, File (4 per program)
2. Scanner (1 per program)

SOFTWARE

1. Microsoft Office Suite – Word, Access, Excel, PowerPoint
2. Cancer Registry Software
3. Encoder Software Package
4. Health Information System Application Packages (1 per computer)
5. VISIO Software
6. Harvard Graphics
7. EduCode by MC Strategies (web-based)
8. Reimbursement Software

TEXTBOOKS

2004 CPT Coding Workbook. (2003). St. Paul, MN: Medical Learning Incorporated.

Abdelhak, M., Grostick, S., Hanken, M. A., & Jacobs, E. (2001). *Health information: Management of a strategic resource.* Philadelphia: W. B. Saunders.

Amatayakul, M. (1999). *The role of health information managers in CPR projects: A practical guide.* Chicago: American Health Information Management Association.

Ashton, J. R., & Brown, F. (1997). *ICD-9-CM workbook for beginning coders.* Chicago: American Hospital Association.

Asperheim, M. K. (2001). *Pharmacology: An introductory text* (9th ed.). Philadelphia: W. B. Saunders.

- Bayes, N. L., Keller, C., & Valerius, J. (2002). *Glencoe medical insurance coding workbook*. New York: Glencoe/McGraw Hill.
- Brown, F. (2004). *ICD-9-CM coding handbook 2004* (without answers). Chicago: American Hospital Association.
- Buck, C. (2002). *Step-by-step medical coding* (4th ed.). Philadelphia: W. B. Saunders.
- Cancer Program Manual*. Retrieved October 31, 2003, from <http://www.facs.org/cancer/index.html>.
- Coding clinic*. (2002). Chicago: American Hospital Association.
- Cofer, J., & Greeley, H. P. (1996). *Quality improvement techniques for medical records*. Kansas City, KS: Opus Communications.
- Cohen, B. (1998). *Medical terminology: An illustrated guide* (3rd ed.). New York: Lippincott Publishers.
- Crowley, L. (2001). *Introduction to human disease* (5th ed.). Boston: Jones and Bartlett.
- Current procedural terminology CPT 2004*. (2004). Chicago: American Medical Association. (Published annually.)
- Davis, N., & Lacour, M. (2002). *Introduction to health information technology* (1st ed.). Philadelphia: W. B. Saunders.
- Glondys, B. (1999). *Documentation requirements for the acute care patient record*. Chicago: American Health Information Management Association.
- Gyls, B. A., & Wedding, M. E. (1999). *Medical terminology: A systems approach*. Philadelphia: F. A. Davis Co.
- Hart, A. C., & Hopkins, C. (2003). *ICD-9-CM for hospitals*. Salt Lake City, UT: Ingenix St. Anthony Publishing/Medicode.
- Hartley, C. P., & Jones, E. D. (2003). *HIPAA plain and simple: A compliance guide for health care professionals*. Chicago: American Medical Association.
- Hazelwood, A. (2003). *ICD-10-CM preview*. Chicago: American Health Information Management Association.
- Hospital chargemaster guide*. (2001). Salt Lake City, UT: Ingenix St. Anthony Publishing/Medicode.
- ICD-9-CM code books*. (n.d.). (Published annually by numerous publishers.)

- JCAHO Manual for Hospitals*. (2004). Chicago: Joint Commission on Accreditation of Healthcare Organizations.
- Johns, M. (2002). *Health information technology: An applied approach*. Chicago: American Health Information Management Association.
- Jones, L. (2001). *Reimbursement methodologies for healthcare services*. Chicago: American Health Information Management Association.
- Koch, G., Waterstraat, F., & Lontrato, N. (1999). *Basic allied health statistics and analysis* (2nd ed.). Albany, NY: Delmar Learning.
- Liebler, J. G., & McConnell, C. (1999). *Management principles for health professionals*. New York: Aspen Publishing.
- Mattingly, R. (1997). *Management of health information functions and applications* (1st ed.). Albany, NY: Delmar Learning.
- The Merck manual of diagnosis and therapy* (17th ed.). (1999). Rahway, NJ: Merck Research Laboratories.
- Mississippi law manual (Mississippi Code)*. Retrieved October 31, 2003, from <http://www.mslaw.com/mscode/>.
- Murphy, G. (1999). *Electronic health records: Changing the vision*. Philadelphia: W. B. Saunders.
- Peden, A. (1998). *Comparative records for health information management* (2nd ed.). Albany, NY: Delmar Learning.
- Physicians' desk reference*. (2004). Montvale, NJ: Medical Economics Company.
- Pozgar, G. D. (1999). *Legal aspects of health care administration* (7th ed.). New York: Aspen Publishing.
- Rizzo, C. D. (2000). *Uniform billing*. Albany, NY: Delmar Learning.
- Roach, W.H. (1998). *Medical records and the law*. New York: Aspen Publishing.
- Rogers, V. (2001). *Applying inpatient coding skills under prospective payment*. Chicago: American Health Information Management Association.
- Rowell, J. (2002). *Understanding health insurance: A guide to professional billing* (6th ed.). (Book with CD-ROM). Albany, NY: Delmar Learning.

- Rudman, W. (1997). *Performance improvement in health information services* (1st ed.). Philadelphia: W. B. Saunders.
- Schraffenberger, L. A. (2003). *Basic ICD-9-CM coding*. Chicago: American Health Information Management Association.
- Schraffenberger, L. A. (2001). *Effective management of coding services*. Chicago: American Health Information Management Association.
- Scott, R. (2000). *Legal aspects of documenting patient care* (2nd ed.). New York: Aspen Publishing.
- Shannon, M., Wilson, B. A., & Stang, C. (2004). *Health professionals drug guide*. Upper Saddle River, NJ: Prentice Hall.
- Shaw, P. (2003). *Quality and performance improvement in healthcare: A tool for programmed learning*. Chicago: American Health Information Management Association.
- Sheldon, H., & Boyd, W. (1992). *Boyd's introduction to the study of disease*. Philadelphia: Lea and Febiger.
- Shelly, G. B., Cashman, T. J., & Vermaat, M. E. (2003). *Discovering computers 2004: A gateway to information, Introductory*. Washington, DC: International Thomson Publishing.
- Shelly, G. B., Cashman, T. J., & Vermaat, M. E. (2003). *Microsoft Office XP introductory concepts and techniques*. Washington, DC: International Thomson Publishing.
- Stace-Naughton, D. (1999). *Coding and reimbursement: The complete picture within health care*. Chicago: American Hospital Association.
- Taber's medical dictionary* (2001). Philadelphia: F. A. Davis Company.
- Tan, J. K. (2001). *Health management information systems, methods, and practical applications* (2nd ed.). New York: Aspen Publishing.
- Turley, S. (2003). *Understanding pharmacology for health professionals* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.
- Youmans, K. (2000). *Basic healthcare statistics for health information management professionals*. Chicago: American Health Information Management Association.

APPENDIX A:
RELATED ACADEMIC TOPICS

APPENDIX A

RELATED ACADEMIC TOPICS FOR COMMUNICATIONS

- C1 Interpret written material.
- C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
- C3 Listen, comprehend, and take appropriate actions.
- C4 Access, organize, and evaluate information.
- C5 Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.
- C6 Communicate ideas and information effectively using various oral and written forms for a variety of audiences and purposes.

EXPANDED TOPICS FOR COMMUNICATIONS

TOPIC C1: Interpret written material.

- C1.01 Read and follow complex written directions.
- C1.02 Recognize common words and meanings associated with a variety of occupations.
- C1.03 Adjust reading strategy to purpose and type of reading.
- C1.04 Use sections of books and reference sources to obtain information.
- C1.05 Compare information from multiple sources and check validity.
- C1.06 Interpret items and abbreviations used in multiple forms.
- C1.07 Interpret short notes, memos, and letters.
- C1.08 Comprehend technical words and concepts.
- C1.09 Use various reading techniques depending on purpose for reading.
- C1.10 Find, read, understand, and use information from printed matter or electronic sources.

TOPIC C2: Interpret visual materials (maps, charts, graphs, tables, etc.).

- C2.01 Use visuals in written and in oral presentations.
- C2.02 Recognize visual cues to meaning (layout, typography, etc.).
- C2.03 Interpret and apply information using visual materials.

TOPIC C3: Listen, comprehend, and take appropriate action.

- C3.01 Identify and evaluate orally-presented messages according to purpose.
- C3.02 Recognize barriers to effective listening.
- C3.03 Recognize how voice inflection changes meaning.
- C3.04 Identify speaker signals requiring a response and respond accordingly.
- C3.05 Listen attentively and take accurate notes.
- C3.06 Use telephone to receive information.
- C3.07 Analyze and distinguish information from formal and informal oral presentations.

TOPIC C4: Access, organize, and evaluate information.

- C4.01 Distinguish fact from opinion.
- C4.02 Use various print and non-print sources for specialized information.
- C4.03 Interpret and distinguish between literal and figurative meaning.
- C4.04 Interpret written or oral communication in relation to context and writer's point of view.
- C4.05 Use relevant sources to gather information for written or oral communication.

TOPIC C5: Use written and/or oral language skills to work cooperatively to solve problems, make decisions, take actions, and reach agreement.

- C5.01 Select appropriate words for communication needs.
- C5.02 Use reading, writing, listening, and speaking skills to solve problems.
- C5.03 Compose inquiries and requests.
- C5.04 Write persuasive letters and memos.
- C5.05 Edit written reports, letters, memos, and short notes for clarity, correct grammar, and effective sentences.
- C5.06 Write logical and understandable statements, phrases, or sentences for filling out forms, for correspondence or reports.
- C5.07 Write directions or summaries of processes, mechanisms, events, or concepts.
- C5.08 Select and use appropriate formats for presenting reports.
- C5.09 Convey information to audiences in writing.
- C5.10 Compose technical reports and correspondence that meet accepted standards for written communications.

TOPIC C6: Communicate ideas and information using oral and written forms for a variety of audiences and purposes.

- C6.01 Give complex oral instructions.
- C6.02 Describe a business or industrial process/mechanism.
- C6.03 Participate effectively in group discussions and decision making.
- C6.04 Produce effective oral messages utilizing different media.
- C6.05 Explore ideas orally with partners.
- C6.06 Participate in conversations by volunteering information when appropriate and asking relevant questions when appropriate.
- C6.07 Restate or paraphrase a conversation to confirm one's own understanding.
- C6.08 Gather and provide information utilizing different media.
- C6.09 Prepare and deliver persuasive, descriptive, and demonstrative oral presentations.

RELATED ACADEMIC TOPICS FOR MATHEMATICS

- M1 Relate number relationships, number systems, and number theory.
- M2 Explore patterns and functions.
- M3 Explore algebraic concepts and processes.
- M4 Explore the concepts of measurement.
- M5 Explore the geometry of one-, two-, and three-dimensions.
- M6 Explore concepts of statistics and probability in real world situations.
- M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems

EXPANDED TOPICS FOR MATHEMATICS

TOPIC M1: Relate number relationships, number systems, and number theory.

- M1.01 Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, and scientific notation) in real world and mathematical problem situations.
- M1.02 Develop number sense for whole numbers, fractions, decimals, integers, and rational numbers.
- M1.03 Understand and apply ratios, proportions, and percents in a wide variety of situations.
- M1.04 Investigate relationships among fractions, decimals, and percents.
- M1.05 Compute with whole numbers, fractions, decimals, integers, and rational numbers.
- M1.06 Develop, analyze, and explain procedures for computation and techniques for estimations.
- M1.07 Select and use an appropriate method for computing from among mental arithmetic, paper-and-pencil, calculator, and computer methods.
- M1.08 Use computation, estimation, and proportions to solve problems.
- M1.09 Use estimation to check the reasonableness of results.

TOPIC M2: Explore patterns and functions.

- M2.01 Describe, extend, analyze, and create a wide variety of patterns.
- M2.02 Describe and represent relationships with tables, graphs, and rules.
- M2.03 Analyze functional relationships to explain how a change in one quantity results in a change in another.
- M2.04 Use patterns and functions to represent and solve problems.
- M2.05 Explore problems and describe results using graphical, numerical, physical, algebraic, and verbal mathematical models or representations.
- M2.06 Use a mathematical idea to further their understanding of other mathematical ideas.
- M2.07 Apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as art, music, and business.

TOPIC M3: Explore algebraic concepts and processes.

- M3.01 Represent situations and explore the interrelationships of number patterns with tables, graphs, verbal rules, and equations.
- M3.02 Analyze tables and graphs to identify properties and relationships and to interpret expressions and equations.
- M3.03 Apply algebraic methods to solve a variety of real world and mathematical problems.

TOPIC M4: Explore the concepts of measurement.

- M4.01 Estimate, make, and use measurements to describe and compare phenomena.
- M4.02 Select appropriate units and tools to measure to the degree of accuracy required in a particular situation.
- M4.03 Extend understanding of the concepts of perimeter, area, volume, angle measure, capacity, and weight and mass.
- M4.04 Understand and apply reasoning processes, with special attention to spatial reasoning and reasoning with proportions and graphs.

TOPIC M5: Explore the geometry of one-, two-, and three-dimensions.

- M5.01 Identify, describe, compare, and classify geometric figures.
- M5.02 Visualize and represent geometric figures with special attention to developing spatial sense.
- M5.03 Explore transformations of geometric figures.
- M5.04 Understand and apply geometric properties and relationships.
- M5.05 Classify figures in terms of congruence and similarity and apply these relationships.

TOPIC M6: Explore the concepts of statistics and probability in real world situations.

- M6.01 Systematically collect, organize, and describe data.
- M6.02 Construct, read, and interpret tables, charts, and graphs.
- M6.03 Develop an appreciation for statistical methods as powerful means for decision making.
- M6.04 Make predictions that are based on exponential or theoretical probabilities.
- M6.05 Develop an appreciation for the pervasive use of probability in the real world.

TOPIC M7: Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

- M7.01 Use computers and/or calculators to process information for all mathematical situations.
- M7.02 Use problem-solving approaches to investigate and understand mathematical content.

- M7.03 Formulate problems from situations within and outside mathematics.
- M7.04 Generalize solutions and strategies to new problem situations.

RELATED ACADEMIC TOPICS FOR SCIENCE

- S1 Explain the Anatomy and Physiology of the human body.
- S2 Apply the basic biological principles of Plants, Viruses and Monerans, Algae, Protista, and Fungi.
- S3 Relate the nine major phyla of the kingdom animalia according to morphology, anatomy, and physiology.
- S4 Explore the chemical and physical properties of the earth to include Geology, Meteorology, Oceanography, and the Hydrologic Cycle.
- S5 Investigate the properties and reactions of matter to include symbols, formulas and nomenclature, chemical equations, gas laws, chemical bonding, acid-base reactions, equilibrium, oxidation-reduction, nuclear chemistry, and organic chemistry.
- S6 Explore the principles and theories related to motion, mechanics, electricity, magnetism, light energy, thermal energy, wave energy, and nuclear physics.
- S7 Explore the principles of genetic and molecular Biology to include the relationship between traits and patterns of inheritance, population genetics, the structure and function of DNA, and current applications of DNA technology.
- S8 Apply concepts related to the scientific process and method to include safety procedures for classroom and laboratory; use and care of scientific equipment; interrelationships between science, technology and society; and effective communication of scientific results in oral, written, and graphic form.

EXPANDED TOPICS FOR SCIENCE

TOPIC S1: Explain the Anatomy and Physiology of the human body.

- S1.01 Recognize common terminology and meanings.
- S1.02 Explore the relationship of the cell to more complex systems within the body.
- S1.03 Summarize the functional anatomy of all the major body systems.
- S1.04 Relate the physiology of the major body systems to its corresponding anatomy.
- S1.05 Compare and contrast disease transmission and treatment within each organ system.
- S1.06 Explore the usage of medical technology as related to human organs and organ systems.
- S1.07 Explain the chemical composition of body tissue.

TOPIC S2: Apply the basic biological principles of Plants, Viruses and Monerans, Algae, Protista, and Fungi.

- S2.01 Identify the major types and structures of plants, viruses, monera, algae protista, and fungi.

- S2.02 Explain sexual and asexual reproduction.
- S2.03 Describe the ecological importance of plants as related to the environment.
- S2.04 Analyze the physical chemical and behavioral process of a plant.

TOPIC S3: Relate the nine major phyla of the kingdom animalia according to morphology, anatomy, and physiology.

- S3.01 Explain the morphology, anatomy, and physiology of animals.
- S3.02 Describe the characteristics, behaviors, and habitats of selected animals.

TOPIC S4: Explore the chemical and physical properties of the earth to include Geology, Meteorology, Oceanography, and the Hydrologic Cycle.

- S4.01 Examine minerals and their identification, products of the rock cycle, byproducts of weathering, and the effects of erosion.
- S4.02 Relate the Hydrologic Cycle to include groundwater its zones, movement, and composition; surface water systems, deposits, and runoff.
- S4.03 Consider the effects of weather and climate on the environment.
- S4.04 Examine the composition of seawater; wave, tides, and currents; organisms, environment, and production of food; energy, food and mineral resources of the oceans.

TOPIC S5: Investigate the properties and reactions of matter to include symbols, formulas and nomenclature, chemical equations, gas laws, chemical bonding, acid-base reactions, equilibrium, oxidation-reduction, nuclear chemistry, and organic chemistry.

- S5.01 Examine the science of chemistry to include the nature of matter, symbols, formulas and nomenclature, and chemical equations.
- S5.02 Identify chemical reactions including precipitation, acids-bases, and reduction-oxidation.
- S5.03 Explore the fundamentals of chemical bonding and principles of equilibrium.
- S5.04 Relate the behavior of gases.
- S5.05 Investigate the structure, reactions, and uses of organic compounds; and investigate nuclear chemistry and radiochemistry.

TOPIC S6: Explore the principles and theories related to motion, mechanics, electricity, magnetism, light energy, thermal energy, wave energy, and nuclear physics.

- S6.01 Examine fundamentals of motion of physical bodies and physical dynamics.
- S6.02 Explore the concepts and relationships among work, power, and energy.
- S6.03 Explore principles, characteristics, and properties of electricity, magnetism, light energy, thermal energy, and wave energy.
- S6.04 Identify principles of modern physics related to nuclear physics.

TOPIC S7: Explore the principles of genetic and molecular Biology to include the relationship between traits and patterns of inheritance; population genetics, the structure and function of DNA, and current applications of DNA technology.

S7.01 Examine principles, techniques, and patterns of traits and inheritance in organisms.

S7.02 Apply the concept of population genetics to both microbial and multicellular organisms.

S7.03 Identify the structure and function of DNA and the uses of DNA technology in science, industry, and society.

TOPIC S8: Apply concepts related to the scientific process and method to include safety procedures for classroom and laboratory; use and care of scientific equipment; interrelationships between science, technology and society; and effective communication of scientific results in oral, written, and graphic form.

S8.01 Apply the components of scientific processes and methods in classroom and laboratory investigations.

S8.02 Observe and practice safe procedures in the classroom and laboratory.

S8.03 Demonstrate proper use and care for scientific equipment.

S8.04 Investigate science careers, and advances in technology.

S8.05 Communicate results of scientific investigations in oral, written, and graphic form.

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APPENDIX B:
WORKPLACE SKILLS

WORKPLACE SKILLS FOR THE 21ST CENTURY

- WP1 Allocates resources (time, money, materials and facilities, and human resources).
- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP5 Selects, applies, and maintains/troubleshoots technology.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

APPENDIX C:
NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS

NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS

- T1 Basic operations and concepts
- Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.
- T2 Social, ethical, and human issues
- Students understand the ethical, cultural, and societal issues related to technology.
 - Students practice responsible use of technology systems, information, and software.
 - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- T3 Technology productivity tools
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
 - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- T4 Technology communications tools
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- T5 Technology research tools
- Students use technology to locate, evaluate, and collect information from a variety of sources.
 - Students use technology tools to process data and report results.
 - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- T6 Technology problem-solving and decision-making tools
- Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

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APPENDIX D:
STANDARDS BASED ON THE AMERICAN HEALTH INFORMATION
MANAGEMENT ASSOCIATION

May 21, 2004

STANDARDS BASED ON THE AMERICAN HEALTH INFORMATION
MANAGEMENT ASSOCIATION

- HIT1 The curriculum must include Biomedical Sciences, including anatomy, physiology, medical terminology, pharmacology and pathophysiology.
- HIT2 The curriculum must include Information Technology.
- HIT3 The curriculum must include Health Data Content and Structure.
- HIT4 The curriculum must include Healthcare Delivery Systems.
- HIT5 The curriculum must include Organization and Supervision.
- HIT6 The curriculum must include Healthcare Statistics and Data Literacy.
- HIT7 The curriculum must include Quality Management.
- HIT8 The curriculum must include Clinical Classification Systems.
- HIT9 The curriculum must include Reimbursement Methodologies.
- HIT10 The curriculum must include Legal and Ethical Issues.

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APPENDIX E:
STUDENT COMPETENCY PROFILE

May 21, 2004

STUDENT COMPETENCY PROFILE FOR HEALTH INFORMATION TECHNOLOGY

Student: _____

This record is intended to serve as a method of noting student achievement of the competencies in each course. It can be duplicated for each student and serve as a cumulative record of competencies achieved in the program.

In the blank before each competency, place the date on which the student mastered the competency.

Health Record Systems (HIT 1114)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services.
- _____ 2. Maintain data to support patient-related information system needs and departmental operations and services.

Survey of Health Information Systems (HIT 1123)

- _____ 1. Identify resources to support departmental operations and information systems.

Medical Terminology (HIT 1213)

- _____ 1. Recognize and discuss word components, terms, procedures, and abbreviations related to the various body systems.

Health Care Delivery Systems (HIT 1311)

- _____ 1. Describe the current United States health care delivery system, its providers, and health service organizations.
- _____ 2. Discuss state and federal regulations and their relationship to accreditation standards for health care organizations.

Health Care Law and Ethics (HIT 1323)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services while observing appropriate health care law and ethics.

Pathophysiology I (HIT 1413)

- _____ 1. Discuss general concepts of disease and principles of diagnosis.

- _____ 2. Discuss the structure and function of cells and tissues in health and disease.
- _____ 3. Describe the inflammation process and its role in disease and injury.
- _____ 4. Discuss cell-mediated and humoral immunity.
- _____ 5. Discuss the role of pathogenic microorganisms and animal parasites in disease.
- _____ 6. Discuss communicable diseases' transmission and control.
- _____ 7. Discuss congenital and hereditary diseases' causes and manifestations.
- _____ 8. Discuss the types and characteristics of neoplasms, principal modalities of treatment, and incidence and survival rates for various types of malignant tumors.
- _____ 9. Discuss abnormalities of blood coagulation and circulatory disturbances.

Fundamentals of Professional Practice Experience (HIT 1513)

- _____ 1. Perform basic health information procedures in the health information setting.

Alternate Care Systems (HIT 2123)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services in alternate care systems.
- _____ 2. Maintain data to support patient-related information system needs and departmental operations and services in alternate care systems.

Health Statistics (HIT 2133)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services using health statistics.
- _____ 2. Validate data for patient-related information system needs and departmental operations or services.
- _____ 3. Analyze data for patient-related information system needs and departmental operations and services.

Pharmacology (HIT 2212)

- _____ 1. Identify common medications used to treat major disease processes in each body system.

Medical Transcription (HIT 2222)

- _____ 1. Apply terminology, word processing, language, and health information system skills in transcription of authentic physician dictation.

Pathophysiology II (HIT 2423)

- _____ 1. Discuss major disease conditions relating to specific body systems and identify drugs most commonly used in treatment.
- _____ 2. Discuss the major types of neoplasms and their manifestations, along with methods of treatment for the various body systems.

Professional Practice Experience I (HIT 2513)

- _____ 1. Perform health information procedures in the health information setting.

Professional Practice Experience II (HIT 2523)

- _____ 1. Perform health information procedures in the alternate care setting and other facilities.

Coding Systems I (HIT 2614)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services utilizing basic coding.

Coding Systems II (HIT 2624)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services utilizing advanced coding.

Reimbursement Methodologies (HIT 2632)

- _____ 1. Gather data to support patient-related information system needs and departmental operations and services utilizing reimbursement methodologies.

Health Care Supervision (HIT 2713)

- _____ 1. Evaluate the effectiveness and efficiency of departmental systems, operational and service systems, and information systems.

Performance Improvement Techniques (HIT 2812)

- _____ 1. Validate data for patient-related information system needs and departmental operations and services.

Computers in Health Care (HIT 2913)

- _____ 1. Apply computer-based technology principles in the health information setting.

May 21, 2004

APPENDIX F:
BASELINE COMPETENCIES

BASELINE COMPETENCIES FOR POSTSECONDARY HEALTH INFORMATION TECHNOLOGY PROGRAMS

The following competencies and suggested objectives are taken from the publication *Mississippi Curriculum Framework for Secondary Allied Health*. These competencies and objectives represent the baseline which was used to develop the community/junior college Health Information Technology program. 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 Health Information 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 six 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 Health Information Technology Programs, Introduction to Health Information Technology I, or Introduction to Health Information Technology II

Course Abbreviation(s): HIT 100(3-6), HIT 1013, HIT 1023

Classification: Vocational-Technical Core

Description: These courses contain the baseline competencies and suggested objectives from the high school curriculum which 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 2 courses for a maximum total of 6 hours of institutional credit.)

Competencies and Suggested Objectives

1. Review material related to the course and professional organizations.
 - a. Identify student and course expectations.
 - b. Explore allied health professional student organizations and their role in individual career development.
 - c. Compare the timeline 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.
3. Explain effective communication skills.
 - a. Identify the main factors required for the communication process.
 - b. Identify factors that may interfere with the communication process.
 - c. Demonstrate effective teamwork skills.
 - d. Explore professional literature and medical references.
4. Discuss professional ethics.
 - a. Explain professional ethics.
 - b. Discuss confidentiality.
 - c. Discuss HIPAA, the Health Insurance Portability and Accountability Act of 1996.
5. Recognize and use medical terminology.
 - a. Interpret the common medical abbreviations and symbols including meanings and uses.
 - b. Demonstrate the use of medical terms and abbreviations in reading, speaking, interpreting, and writing simulated medical records.
6. Demonstrate job seeking skills.
 - a. Prepare a resume containing essential information utilizing word processing software.
 - b. Complete a job application form on paper or online.
 - c. Discuss procedures for job interviews.
 - d. Demonstrate the role of an applicant in a job interview.
 - e. Describe job interview etiquette.
7. Explain job keeping skills.
 - a. Discuss positive relations with clients and peers.
 - b. Write a letter of resignation.