Implementation Date
Fall 2008

PROGRAM CONCENTRATION: **Healthcare Science**
CAREER PATHWAY: **Health Informatics**
COURSE TITLE: **Applications of Health Informatics**

PREREQUISITES: Introduction to Healthcare Science, Medical Terminology in Healthcare Systems

In this course, health data content and structure are analyzed in a variety of major healthcare delivery systems. The purpose, utilization, ownership, and evolution of clients' medical records are analyzed. Medicolegal issues surrounding the management, storage, retrieval, and release of medical records are examined including new legal issues surrounding current electronic and imaging technology developments and trends in health information records management. Health information technology professional accrediting agencies are discussed as students initiate and enhance their professional growth by participating in leadership development activities provided by Health Occupations Students of America (HOSA) which are integrated throughout the course. Students will develop health information management career skills utilized within health unit coordination, patient access/admissions, and medical coding. Upon successful completion of this course, students will be eligible to apply skills in a healthcare facility setting.

ACADEMIC FOUNDATIONS

HS-AHI-1. Students will demonstrate knowledge and understanding of the academic subject matter required for proficiency within their area. Academic standards are integrated throughout the standard statements within their applicable discipline areas and documented immediately following the standard statement.

HEALTH INFORMATION MANAGEMENT AND CAREER PLANNING

HS-AHI-2. Students will analyze the role of health information management in healthcare organizations.

  a. Research the history of health information technology and trends in the management of health records.
  b. Explain the role of the health information management department in the healthcare organizations.
  c. Describe the variations in definitions of health information management.

HS-AHI-3. Students will analyze career opportunities within the Health Informatics pathway.

a. Describe the role of the health unit coordinator.
b. Describe the role of the medical coder.
c. Describe the role of the patient access representative.
d. Describe the role of the health information manager/supervisor.
e. Identify the credentialing processes necessary for health informatics careers to include licensure and certification.
f. Describe nontraditional roles of health information professionals.
g. Explore entrepreneurship and related opportunities within the health informatics pathway.

HS-AHI-4. Students will engage in self-assessment, develop a detailed career plan, initiate portfolio development, and recognize the need for continuous self-assessment with goals modification in order to encourage personal and professional growth in the process of life-long learning.

a. Plan and evaluate a career choice within the health informatics pathway, explain the educational/credentialing requirements, and identify various employment opportunities including career growth potential.
b. Differentiate between a job and a career; professional networking and professional development; and a job application and a resume.
c. Explore entrepreneurial opportunities within the health informatics pathway.
d. Develop an individual career portfolio including a detailed career plan.

HEALTH DATA CONCEPTS

HS-AHI-5. Students will outline the evolution of a client's medical record and analyze the purpose, utilization, ownership, and the value of data contents.

a. Describe internal systems utilization of the medical record including encoders (coding purposes), transcriptions, and patient records/billing (medical records interfaces with billing) – patient access.
b. Describe external systems that impact the revenue cycle for medical information (workers compensation, third party payers such as insurance, Centers for Medicaid and Medicare Services, TRICARE/Champus and others).
c. Discuss the importance having a complete health record as related to regulatory agencies (Centers for Medicaid and Medicare Services, Joint Commission on Accreditation of Healthcare Organizations, Georgia Department of Human Resources) and the importance of continuously analyzing the record.
d. Determine who has responsibility for completing each portion of the health record and differentiate between quantitative and qualitative analysis.

Implementation Date
Fall 2008

ACADEMIC STANDARDS:

SSEF4. The student will compare and contrast different economic systems, and explain how they answer the three basic economic questions of: what to produce, how to produce, and for whom to produce.

SSEF2. The student will give examples of how rational decision making entails comparing the marginal benefits and the marginal costs of an action

MEDICOLEGAL PRINCIPLES AND RISK MANAGEMENT

HS-AHI-6. Students will analyze medicolegal concepts and risk management.

a. Differentiate between ethical and legal issues affecting the management of medical information.
b. Identify federal, state, and private agencies associated with the regulation of medical information management and discuss the impact of each, including, but not limited to the following: Centers for Medicare and Medicaid Services (CMS), American Health Information Management Association (AHIMA), Occupational Safety and Health Administration (OSHA), Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Georgia Department of Human Resources, Georgia Statutes and Judicial Rulings and Accreditation Association for Ambulatory Health Care (AAAHC).
c. Identify the importance of following established medical records security protocol which follows legal guidelines for maintenance, storage/retention, transportation, and release of all client record's information.
d. Discuss the following medicolegal concepts – confidentiality, release of information, correction or amendment to medical records, patient's rights, and risk management.
e. Distinguish between private and privileged information.
f. State the ownership and apply the legal doctrine of privileged communication to the content of the medical record.
g. Discuss the Health Insurance Portability and Accountability Act of 1996 and its impact on healthcare insurance coverage, medical records standards, and the medical administrator.
h. Access client records while maintaining confidentiality and evaluating threats to confidential information.
i. Maintain legal guidelines for documentation and releasing of all client records.
j. Discuss methods healthcare systems use to provide risk management and quality assurance.
k. Discuss the importance of healthcare research and demonstrate the ability to interpret a qualitative healthcare report containing statistics.

l. Discuss the function of the National Committee on Vital and Health Statistics (NCVHS).
m. Explain Georgia's laws as they relates to healthcare based on scope of practice.

ACADEMIC STANDARDS:

SSEPF5. The student will describe how insurance and other risk-management strategies protect against financial loss.

ELA10LSV2(a). Assesses the way language and delivery affect the mood and tone of the oral communication and audience.

ELA10RC3. The student acquires new vocabulary in each content area and uses it correctly.

ELA9RL5. The student understands and acquires new vocabulary and uses it correctly in reading and writing.

COMMUNICATION TECHNOLOGY AND EQUIPMENT

HS-AHI-7. Students will demonstrate correct use of the telephone, fax, scanner, intercom, pager, and other office equipment.

a. Demonstrate how to manage the effects of a power outage on telephones and other office equipment.
b. Demonstrate appropriate etiquette when utilizing the intercom, telephone, answering the patient's call signal, and dealing with complaints/ grievances.

ACADEMIC STANDARDS:

ELA11W3. The student uses research and technology to support writing.

MM2P1. Students will solve problems (using appropriate technology)

SCSh2. Students will use standard safety practices for all classroom, laboratory, and field investigations.

ELA10W1(a). Establishes a clear, distinctive perspective and maintains a consistent tone and focus throughout.

HS-AHI-8. Students will recognize key elements in types of documentation on the medical record.

a. Describe format and style of medical records (inpatient versus outpatient).

b. Identify key or core documents in the health record.

HS-AHI 9. Students will analyze different types of technical filing.

a. Demonstrate understanding of filing systems.
b. Recognize what files need to be cross referenced.
c. Explain the use of the computer for patient database files (master patient indexes).

HS-AHI 10. Students will demonstrate an understanding of electronic health/medical records applications, maintenance, and storage.

a. Analyze trends in automated office communication systems and medical record maintenance including, but not limited to, electronic health records, digital signatures, and data capture methods.
b. Discuss types of computerized patient care utilized to generate medical information/records included within diagnostic, treatment, and monitoring systems such as: Computer Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), Ultrasound Imaging, arrhythmia monitoring, pulmonary monitoring, Obstetrical/Neonatal monitoring, fiber optics and laser treatment.
c. Evaluate the advantages and disadvantages of technology use in patient care particularly the impact on Bioethics or the ethical issues that arise with advancements in technology.
d. Demonstrate basic computer skills including entering data, correcting mistakes, and retrieving information stored in computer.
e. Identify the statute of limitations on keeping various medical records (acute care versus mental health) and discuss its purpose.

ACADEMIC STANDARDS:

ELA11W3 – The student uses research and technology to support writing.

HEALTH UNIT COORDINATION

HS-AHI-11. Students will demonstrate understanding of the role of the health unit coordinator in obtaining supplies and services.

a. Discuss the functions of ancillary departments and demonstrate the procedures to process orders and obtain supplies/services from ancillary departments for unit based and/or patient use during regular operating hours and "off-hours" as indicated by each facility/laboratory utilized.
b. Identify the purpose of and demonstrate the health unit coordinator's responsibilities as indicated by policy/procedures as specified by the clinical facility/laboratory utilized for each of the following: classification of

patient acuity; maintenance of census; compiling patient and unit statistics; patient bed assignment; and posting informational materials.
c. Analyze methods of indicating services and supplies used by each patient include tracking of services provided by outside agencies/personnel.
d. Identify methods to ensure accuracy of accountability of patient charges.
e. List the types of common diagnostic tests and the routine times they are performed.

HS-AHI-12. Students will demonstrate understanding of the role of the health unit coordinator/unit secretary in transcribing orders.

a. Identify and discuss all elements necessary for a complete physician's order.
b. Discuss methods for indicating there are orders to communicate/transcribe and identify the utilized methods for each facility, unit, individual physician's office, or laboratory.
c. Differentiate between routine orders and stat orders and include the primary differences in the health unit coordinator's role in processing and handling of each within the proper timeframe.
d. Identify the components of medication administration records and demonstrate the health unit coordinator's role in compiling records as indicated by the facility's policies/procedures or in a laboratory simulation.

ACADEMIC STANDARDS:

MM2P1. Students will solve problems (using appropriate technology).

SSEF2. The student will give examples of how rational decision making entails comparing the marginal benefits and the marginal costs of an action).

ELA10LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.

PATIENT ACCESS/ADMISSIONS

HS-AHI-13. Students will demonstrate understanding of the role of the patient access representative.

a. Demonstrate how to register patients/admissions.
b. Demonstrate accurate retrieval of payer information and verification of benefits eligibility.
c. Calculate deductible, copay, HMOs, PPOs, and traditional insurance.

ACADEMIC STANDARDS:

Implementation Date
Fall 2008

MM2P4. Students will make connections among mathematical ideas and to other disciplines.

MEDICAL CODING

HS-AHI-14. Students will demonstrate understanding of the role of the medical coder.

a. Identify and apply math skills pertinent to medical coding including, but not limited to: interpret and record data on graphs, charts, and tables; demonstrate conversions between Roman and Arabic numerals, U.S. Standard time (Greenwich Mean Time) and Military time (24 hour clock); and apply conversion constants between metric and avoirdupois systems and within each system.
b. Discuss the development of nomenclatures and uniform classifications systems and analyze their importance to coding accuracy.
c. Differentiate between coding conventions and classifications.
d. Recognize medical record coding terms, classifications, abstractions, and data elements.
e. Define principle and secondary diagnosis.
f. Discuss the impact of modifiers on reimbursements and common mistakes/omissions made by the medical coder, which creates delays in claims processing and reimbursement.
g. Recognize the differences between International Classification of Diseases (ICD), 9th Revision, Clinical Modification (ICD-9-CM) diagnostic codes and Current Procedural Terminology (CPT) procedural codes, HCPS I, II III, DSM-IV, and a general understanding of ICD-10 concepts.
h. Discuss Revenue Cycle Management and use of the Charge Master.
i. Examine various forms used for billing.
j. Identify resources (including internet websites) for coding updates, Georgia state specific guidelines, local medical review policies, and compliance issues.

ACADEMIC STANDARDS:

MM2P4. Students will make connections among mathematical ideas and to other disciplines.

MM2P3d. Use the language of mathematics to express mathematical ideas precisely.
SSEPF5. The student will describe how insurance and other risk-management strategies protect against financial loss.

CTAE Foundation Skills

Implementation Date
Fall 2008

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state's academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and

teamwork skills in collaborating with others to accomplish organizational goals and objectives.

CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.