Course Descriptions for HIT Programs

University of Alaska Fairbanks

CS F462 Intrusion Detection Systems (online)  
3 Credits  
Offered Fall Even-numbered Years

Focus on IDS theory and practice and its importance; the origin and resolution of common security threats and vulnerabilities; host and network approaches to IDS implementation; and the legal, ethical, and privacy issues associated with IDS use and policies. Prerequisites: CS F361; or permission of instructor. (3+0)

*Prerequisite Skills*

CS F361 Systems Security and Administration (m)  
3 Credits  
Advanced systems programming including privileged instructions and system services, authentication technologies, host-based and network-based security issues. Applications to asynchronous I/O, process control and communication, device drivers and file management. Prerequisites: CS F301. (3+0)

CS F301 Assembly Language Programming (m)  
3 Credits  
Organization of computer registers, I/O and control. Digital representation of data. Symbolic coding, instructions, addressing modes, program segmentation, linkage, macros and subroutines. Prerequisites: CS F201. (3+0)

CS F201 Computer Science I (m)  
3 Credits  
The discipline of computer science including problem solving, algorithm development, structured programming, top-down design, good programming style, object-oriented programming and elementary data structures. Concepts implemented with extensive programming experience in a structured language and with a group programming project. Prerequisites: One year high school level programming or CS F103 and mathematics placement at the F200-level. (3+0)

Regis University (all online)

Course Listings for MS HIIM & Health Care Informatics Certificate

Master’s Core Courses: (18 semester hours)  
MSCI 610 Ethics in Information Technology  
HSA 672 Patient Quality & Safety  
HSA 604 Foundations of Economics, Accounting & Finance  
HSA 623 Legal Aspects in Health Care Settings*  
HSA 658 Strategic & Project Management in HC*  
HCI 680 HIIM Capstone Research Project

HIIM Core (18 semester hours):
HCI 610-Design & Selection of IT Systems in Health Care
HCI 615 Device Strategies
HCI 620 Clinical Data Mining in Health Services
HCI 625 Change Management in Adoption of IT Health Care Solutions
HCI 645 Management of E-HIM
MSIA 672 Managing a Secure Enterprise

*HIM Progression students will take this in the B.S. Program but at graduate level

COURSE DESCRIPTIONS:

HSA 6XX Fiscal Management in Health IT (3SH)
Focuses on the fiscal implications of technology include system purchases, maintenance, security, replacement and return on investment. This course is not developed

HSA 658 Strategic & Project Management in Health Care Settings (3SH) Focuses on the general principles of project and strategic management. Introduces the project management body of knowledge (PMBOK) including project management software, task assignments, workflow analysis, project planning and the differences in managing IT projects vs. business and other projects. Process reengineering will also be investigated. The graduate component extends foundational knowledge through additional readings, case analysis and/or applied project work. Prerequisite(s): Junior Standing required. Cross listing(s): HCA 458.

HCI 680 Capstone: Applied Research Project (3 SH)
A capstone seminar examining a range of contemporary issues in health services delivery systems including integration of delivery settings, stakeholder relations, health policy, regulatory initiatives, health care workforce, health promotion and complimentary medicine. Includes presentation of the masters project.

Prerequisite: HSA 696

MSCI 610-H Ethics in Information Technology (3SH)
Course illuminates ethical issues regarding information systems (access, data storage, and data utilization). Focuses on developing a set of ethical standards for professionals in information technology. Prerequisite(s): MSCI 600

MSIA 672-H Managing a Secure Enterprise (3SH)
Provides the knowledge of designing and managing a secure healthcare enterprise. Includes aspects of enterprise security, physical security, disaster-recovery planning, regulatory compliance and business continuity planning. Cross listing(s): MSCT 672.

HSA 623 LEGAL ASPECTS OF HEALTH SERVICES (3.00) Studies the legal and ethical issues involved in the management and delivery of health care services and the interrelations between hospital, physician, and patient. Emphasizes law as it pertains to negligence, contracts, consents, confidentiality, risk management and current medical/legal issues. Explores the use of the health record as a legal document, privacy rights, corporate compliance, and peer review. Examines release of information,
quality of documentation, and retention of records issues. The graduate component extends foundational knowledge through additional readings, case analysis and/or applied project work. Prerequisite(s): Approval of academic advisor required. Cross listing(s): CLP 623 HCA 423 HIM 423.

HSA 672 MANAGING PATIENT SAFETY & ORG. RISK (3.00) Examines practical and ethical dimensions of patient care and organizational leadership within the context of patient safety and risk management. Identifies common concepts and applicable tools in risk management and quality improvement. Investigates the role of professional codes, regulatory requirements, the legal environment, practice standards, institutional policies and procedures, organizational culture and societal norms in managing patient safety and organizational risk. Students gain competency in the identification, measurement, analysis, and response to patient safety issues and organizational risk. Note: Graduate Standing

HCI 610 DESIGN/SELCNT OF IT SYS HEALTH CARE (3.00) Introduces planning, acquisition, and implementation of systems which include migration paths, functional requirements, costs, benefits realization and a critical analysis of the system proposed, in addition to the technological infrastructure needed to support facility-wide systems. Activities include evaluating RFPs and RFIs and designing communication and clinical documentation guidelines.

HCI 615 HUMAN COMPUTER INTERACTION/DEVICE STRAT (3.00) Explores human computer interaction, development, and strategy for adopting peripheral devices. Discusses clinician’s needs and technical requirements for patient care devices including bar coding, single sign on strategies, wireless networks, RFID and others.

HCI 620 CLINICAL DATA MINNING FOR DECISION SUPRT (3.00) Examines the role of information systems in supporting administrative and clinical decision-making in health care organizations. Focuses on discrete data capture to support examination of population health, patient care processes and organizational outcomes.

HCI 625 CHG MGMT ADOPTION OF IT HEALTHCARE SLTN (3.00) Examines human behavior in organizations focusing on the analysis of data and workflow diagrams, SSC methodology (Start-Stop-Continue Design Decisions), developing an impact analysis, training requirements, process assessment at the micro and macro level affected by the new technology and introduces change management theories necessary to parallel system implementation. User workflows and processes are used as a basis for analysis.

HCI 645 MANAGEMENT OF E-HIM (3.00) The focus of this course is on the advanced concepts of managing digital clinical information and other electronic storage media of information in healthcare facilities. Topics covered are e-Discovery, identity management, health information exchange, the legal medical record, the personal health record, confidentiality, privacy, and security that govern health care and institutional data on electronic media. Current trends and issues in electronic health information management (eHIM) are also included. Crosslist(s): HIM*445. Note- Graduate Standing Prerequisite(s): HIM 313 or HIM 415;

University of Wyoming

Health Sciences 4700, Health Informatics

Health Sciences 4700, Health Informatics, is currently offered at Wyoming in the Spring Semester. HLSC 4700 is a 3-hour course that provides an overview of the technological
resources, databases, standardized languages and applications of information systems in the provision of health care. Emphasis is placed on application to health care in rural settings. Enrollment is limited to seniors and graduate students in the Colleges of Health Sciences, Business, Engineering, and in pre-professional programs (other students may enroll with the consent of the instructor). It is a required course for the Health Sciences minor. It is not offered online at this time, but could be.

Course materials are posted at [http://www.uwyo.edu/rex/hlsc4700](http://www.uwyo.edu/rex/hlsc4700)

**University of Alaska Southeast**

**HIM S111 Introduction to Health Information Practice**
3 credits (2+2)
An overview of health care systems and the health information management profession. Introduces data collection standards and data quality methods, forms design, patient record automation and control procedures, and health care statistics. Presents the uses of record content in reimbursement, risk management, and planning. Professional practice experience: Students use a virtual electronic health records environment to gain hands-on experience in the use of health information technology. Co-requisite: HIM 135 or instructor permission.

**HIM S135 Medical Terminology**
3 credits (3+0) S
Cross-listed as HS S135.
An introduction to root forms, prefixes and suffixes, and medical abbreviations. Focus is on terminology of body systems related to symptomatology, diseases, and treatment.
Prerequisite: Placement at ENGL S110 or higher.

**HIM S160 Alternative Delivery Systems**
3 credits (3+0) S
Discussion of applications in alternative health care systems. Guest speakers will introduce students to emerging roles of health information professionals, and to challenges facing alternative care delivery systems. Students will complete a clinical site visit at an alternative care facility. Prerequisite: Admission to HIM degree program.

**HIM S181 Computer Applications and Emerging Technologies**
3 credits (2+2) S
Introduces the use of electronic records and resources in today’s health care environment. Presents an overview of automated health information management functions and emerging technologies. Examines the movement toward an electronic health record and emerging technologies. Examines the movement toward an electronic health record and the impact of privacy and security concerns.

**HIM S190 CPT Coding**
3 credits (3+0) S
Focus on HCPCS/CPT ambulatory care coding. Overview of fraud and abuse regulations as they pertain to coding and billing. Professional practice experience: observe coding and billing at an ambulatory care setting (minimum 6 hours.) Prerequisite: BIOL S111 and admission to HIM program or departmental permission. Co-requisite: HIM S135 and BIOL S112.

HIM S210 ICD–9–CM Coding
3 credits (3+0) S
Introduction to International Classification of Diseases (U.S.). Introduction to coding diagnoses and procedures, sequencing, coding conventions, and software. Review of complications and co–morbidities. Professional practice: Students complete activities that provide an overview of Diagnostic Related Groups (DRGs). interface between business office and health information management to optimize reimbursement, coding quality studies, and working with physicians for DRG management. Practice in analyzing actual medical records to identify data elements to be coded. Prerequisite: BIOL S111 and admission to HIM program or departmental permission. Corequisite: BIOL S112 and HIM S135.

HIM S211 ICD-10-CM/PCS Coding
3 credits (2+2)
An introduction to International Classification of Diseases (U.S.) Introduces coding of diagnoses and procedures, sequencing, coding conventions, and software. Professional practice experience: Students complete activities that provide an overview of Diagnostic Related Groups. Topics include the interface between business office and health information management to optimize reimbursement, coding quality studies and working with physicians for DRG management. Provides practice in analyzing medical records to identify data elements to be coded. Prerequisite: HIM 272 and admission to HIM program or departmental permission.

HIM S215 Billing and Reimbursement
2 credits (2+0) S
Focus is on issues of billing and reimbursement for health care facilities. Includes an overview of the role of the health insurance specialist; third party payers such as Medicare, workers compensation and disability, Tricare and commercial insurance claims. Legal and regulatory considerations and ambulatory ICD-9 are covered. Students will complete a project focused on coding and reimbursement issues. Prerequisite: HIM S190 and admission to HIM program or departmental permission.

HIM S240 Legal Aspects of Health Information
3 credits (2+2) S
Review of legal implications of health records and related legal issues including the patient record as a legal document. Examination of emerging laws and legal trends impacting the management of health care information. Introduction to risk management and the role of the HIM professional as compliance and privacy officer. Students attend a court hearing and complete a project on the impact of recent regulatory laws on healthcare settings. Prerequisites: HIM S124 and admission to HIM degree program.

HIM S251 Quality Improvement and Project Management
3 credits (2+2) S
Introduction to total quality management including history, philosophy, definitions, and tools. Explores performance improvement through review of case studies, with an overview of the historical development of case management. Introduces project management as related to HIM and implementation of electronic health information. Prerequisite: HIM S111 and admission to HIM program.

**HIM S260 Data Quality and Reimbursement**
2 credits (2+0) S
A continuation of HIM S210 with in-depth focus on coding issues, including coding validation, data accuracy, coding guidelines and training; and reimbursement issues including Diagnostic Related Groups (DRGs), Ambulatory Patient Classifications (APCs) and Resource Based Relative Value scales (RBRVs). Impact of coding and DRG accuracy on financial stability of facility. Overview of specialist credentials: CCS and CCS-P. Prerequisite: HIM S210 and admission to HIM program or departmental permission.

**HIM S272 Pathophysiology**
4 credits (3+2) S
Introduces basic concepts underlying various pathological processes. Students draw on their knowledge of normal anatomy and physiology to understand how pathogenesis of disease occurs. Discussion of diseases, diagnostic process, appropriate testing, and various treatment options. Introduction to drug terminology, administration, toxicity, vocabulary, standards and references. May not meet requirements for nursing programs. Prerequisite: BIOL S111 and S112. Corequisite: HIM/HS S135 or permission.

**HIM S280 Health Care Management**
3 credits (3+0) S
Concepts of management including management functions are discussed and a case study approach is employed to review responses to a variety of management problems. Prerequisite: Completion of all lower level HIM courses or concurrent. Corequisite: HIM S291.

**HIM S285 Healthcare Privacy**
3 credits (2+2) S
An in-depth review of federal and state regulations and laws, with emphasis on the Health Insurance Portability and Accountability Act (HIPPA). Students will complete an on-site project under the supervision of the facility's Compliance Officer or designee. Prerequisite: HIM S240 or permission.

**HIM S289 Healthcare Information Technology**
3 credits (2+2) S
An overview of the clinical, research, and administrative applications of computers in the health care industry. Emphasizes the role of this technology and the data collected in accomplishing the objectives and procedures of the principle functional areas, and the interrelationships of the organizational units with respect to data acquisition, storage analysis, retrieval and use.

**HIM S291 Internship in Healthcare Management**
2 credits (.5+0+6) J, K, S
Eighty clock hours of professional internship in an assigned health care setting. Application of operational management theory for a health information service. Orientation to all aspects of practice as a health information manager. Completion of management projects designed jointly by student and clinical supervisor. Student writes project report and site evaluation. Prerequisite: Completion of all lower level HIM courses or concurrent.

Montana State University Billings

Undergraduate --- HADM 307 Health Informatics 3 cr. Offered Online. Explores the resources, devices, and methods required to optimize the acquisition, storage, retrieval, and use of health information to strengthen the organization’s operational performance and market position. The course will explore how information technology can be used to restructure work processes and systems, as well as facilitate change within the healthcare organization.

Graduate -- HADM 607 Health Information Management 3 cr. Offered Online. Provides students with an understanding of how information systems and health informatics can be used to improve the quality of clinical and patient services, support management and clinical decision-making, and facilitate processes of managed care and integrated delivery systems. Topics include the analysis, development, acquisition, use, and management of computer-based information and control systems, electronic medical records, organization and management of information in integrated delivery systems, and future trends.

Telemedicine

University of Alaska Anchorage

SWK 690 Innovative Practices in Telehealth

Overview of telemedicine with an emphasis on telebehavioral health in Alaska. Topics include the history of telemedicine; current legal, technical and logistical considerations; and best clinical practices. This course will prepare master's level providers and administrators to become leaders in the expanding field of telebehavioral health. Course elements will include hands-on experience with telehealth technology, e-learning modules, written assignments, readings, and clinical exercises and critique.

Most of the class is offered online with a 2 day local hands-on section.