

Rural Health Information Technology Workforce Program
Health IT Curriculum Deliverable
Pueblo Community College HIT Certificate Curriculum

Option A: Medical Coding Emphasis (Graduates of Medical Coding Program Only)			42-47
	BIO 106	**Basic Anatomy and Physiology	4
	HIT 102	**Medical Vocabulary	3
	CIS 118	**Introduction to PC Applications	3
	HIT 111	Health Data Management and Information Systems	3
	HIT 220	ICD Coding	3
	HIT 241	CPT Coding Basic Principles	3
	HIT 150	**Healthcare Delivery Systems	3
	HPR 232	Disease Process and Treatment	5
	HIT 261	**Healthcare Software	3
	HIT 252	Coding Applications	3
	HIT 105	Principles of Healthcare Reimbursement	3
	HIT 188	Practicum Coding	2
	HIT 268	Certificate Test Preparation	1
	BTE 287	**Coop/Internship	3
	Elective	Electives to be approved by Dept. Chair before enrolling in courses	3-5
Option B: HIT Management & Support			41.5
	HIT 102	**Medical Vocabulary	3
	CIS 115	Intro to Information Systems	3
	CIS 118	**Introduction to PC Applications	3
	HIT 122	Work Flow Fundamentals of Healthcare	3
	HIT 121	Networking and Health Info	2.5
	CSC 119	Introduction to Programming	3
	HIT 120	Working with Health IT System	4
	HIT 123	Configuring EHRs	3
	HIT 261	**Healthcare Software	3
	MAN 241	Project Management in Organizations	3
	HIT 111	Health Data Management and Information Systems	3
	HIT 222	**Quality Management	3
	HIT 112	**Legal Aspects Health Records	2
	BTE 287	**Coop/Internship	3

Option C: HIT Network Security/Technical Support			46.5
	HIT 102	**Medical Vocabulary	3
	CIS 118	**Introduction to PC Applications	3
	HIT 122	Work Flow Fundamentals of Healthcare	3
	CNG 124	Networking 1: Network + (** Take with CNG 121) Eligible: CompTIA Network+ Certificate)	3
	CSC 119	Introduction to Programming (+ include curriculum from HIT 122 Focus: Data Logic)	3
	CNG 132	Network Security Fundamentals Eligible: CompTIA Sec+ Certificate	3
	CNG 133	Firewalls/Network Security	3
	CNG 224	Microsoft Windows Wireless Network Eligible: CWNA	3
	HIT 121	Networking & Health Information Exchange	2.5
	HIT 261	**Healthcare Software	3
	CNG 121	Computer Technician I: A+	4
	CNG 122	Computer Technician II: A+	4
	CNG 136	Guide to IT Disaster Recovery	3
	CNG 254	Data Encryption	3
	BTE 287	**Coop/Internship	3

**Health Information Technology
Medical Coding Certificate (AHIMA Accredited) Course Descriptions**

BIO 106 Basic Anatomy and Physiology 4CR HRS

Focuses on basic knowledge of body structures and function, and provides a foundation for understanding deviations from normal and disease conditions. This course is designed for individuals interested in health care and is directly applicable to the Practical Nursing Program, Paramedic Program and the Medical Office Technology program.

HIT 102 Medical Terminology 3CR HRS
(Starting Summer 2014 the course name and number will change to HIT 102 Medical Vocabulary)

Introduces the student, to medical terminology through the study of word structures, such as common medical prefixes & suffixes, and the origins of terminology currently used in medical practice. Also includes basic anatomy and physiology, appropriate medical terminology, and procedures and diagnostic testing for each body system. Exercises in reading, writing and speaking new vocabularies are required. This course also includes an introduction to the medical record. Students read and analyze patient records. In turn, students are assigned writing exercise creating medical records using learned vocabulary.

CIS 118 Introduction to PC Applications 3CR HRS

Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.

HIT 111 Health Data Management and Information Systems 3CR HRS

This course covers maintenance, compilation, analysis, and presentation of healthcare statistics. Discussion is focused on the use, collection, presentation, and verification of health care data including fundamental concepts of descriptive statistics; data validity and reliability; data presentation techniques; and vital statistics. Students will be introduced to topics such as basic statistical principles; morbidity and mortality, commonly computed hospital rates, uniform reporting requirements, and selection and construction of data displays. This course also introduces principles of quality improvement, utilization management, and risk management in health care. Topics include the continuous quality improvement philosophy, including tools, data analysis/application, and related committee functions; utilization management and risk management; and credentialing, accreditation and regulation.

HIT 220 ICD Coding 1 3CR HRS

An introduction to the basic coding guidelines using Volumes 1, 2, and 3 of the ICD-9-CM coding classification system. Students will practice the application of diagnosis and procedure codes validating coding accuracy using clinical information found in the health record. Ethical coding standards will be applied and promoted while adhering to current regulations and established guidelines in code assignment.

HIT 241 CPT Coding Basic Principals 3CR HRS

Provides an introduction to the basic coding guidelines of the Current Procedural Terminology (CPT) nomenclature. Students will practice the application of CPT/HCPCS codes validating coding accuracy using clinical information found in the health record. Ethical coding standards will be applied and promoted while adhering to current regulations and established guidelines such as the National Correct Coding Initiative. Encoding systems and software with practice applications are included. This course is designed according to the standards of the American Hospital Management Association to prepare students for national certification exams.

HIT 150 Healthcare Delivery Systems 3CR HRS

This course provides an overview of the health care delivery system at the national, state and local level including the organizations that provide health care, applicable regulations and standards, reimbursement methods used professionals that provide the services, as well as resources. Current trends in health care delivery are presented including health facilities, medical staff organization and functions, the changing roles of health care professionals, and patterns of financing health care.

HPR 232 Disease Process and Treatment 5CR HRS

Covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. The disease process, basic concepts and terminology are presented. This course also includes an examination of the most common diseases of each body system, with normal anatomy and physiology compared to pathologic anatomy and physiologic malfunctioning due to disease process. Diagnostic methods, management, treatment modalities and prognosis are discussed. The course also provides an investigation into the study pharmacology and pharmacotherapeutics, including terminology, drug category, use, side effects, contraindications, and interactions. Common dosage ranges and routes of administration will also be examined. A general understanding of the actions; absorption, metabolism and excretion; and reasons for use of various groups of pharmacologic agents are introduced. Medications are discussed according to major drug classifications, body systems and disease process.

HIT 261 Healthcare Software 3CR HRS

This course covers basic computer system architecture, file structure, and design for health care settings. Topics include system analysis, design, security, and selection for a variety of hardware environments. This course provides students with a review of computer fundamentals and the fundamentals of the electronic health record and an introduction to the information systems life cycle with software application. Security and confidentiality issues, concerns and implications in relation to the electronic health record will be addressed.

HIT 252 Coding Applications 3CR HRS

This advanced course will cover medical necessity, coding issues for specific body systems, and for general conditions using ICD-9-CM and CPT coding principles. Students should already possess a fundamental understanding of the CPT, ICD-CM, and HCPCS coding principles at the start of this course. Intensive coding application will be achieved through the use of real medical records, case studies, and scenarios. DRGs, APC's, RUGs, RBRVs, and the Correct Coding

Initiative (CCI) will also be covered in this class. This coding class requires hands-on coding skills, knowledge of basic use of applicable codebooks are essential.

HIT 105 Principles of Healthcare Reimbursement 3CR HRS

This course provides students the opportunity to learn the history, rationale, and methodology of the systems used by third party payers to determine the reimbursement that health care providers will receive. Reimbursement concepts include fee-for-service, managed care, capitation systems, Diagnosis-Related Groups (DRGs), Resource Based Relative Value Scale (RBRVS), Ambulatory Payment Classifications (APCs), and related concepts. The use of the charge description master (chargemaster) in reimbursement will be discussed. The importance of compliance with regulations and the related issues of fraud and abuse will also be addressed.

HIT 268 Test Preparation 1CR HR

This course is designed for students who have made the decision to earn the Certified Coding Associate (CCA) credential. This credential is an entry-level certification in coding. Individuals earning the CCA credential demonstrate professional competency and express a high level of commitment to the health information management field. Certification is a process by which a non-governmental organization or association recognizes the competence of an individual who has met certain qualifications as determined by that organization or association. To achieve certification from the American Health Information Management Association (AHIMA), individuals must meet certain eligibility requirements and pass the certification examination.

HIT 188 Health Information Practicum I 2CR HRS

Provides a directed clinical experience in a health information department in a health care facility or in a controlled environment. This experience focuses on the practice of skills related to medical coding and billing, the application of legal principles, record analysis and abstraction and record retention and retrieval.

Focuses on the ability of the student to apply classroom knowledge of medical billing and coding in a clinical setting, practice professionalism, gain insight into the functions of the department and understand the relationship of health records to the facility as a whole. Emphasis is on the ability to act independently, complete assigned projects and demonstrate a good understanding of health information management concepts.

BTE 287 Cooperative Education/Internship 1-3CR HRS

Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work sites that are related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

HIT Management and Support Course Descriptions

HIT 102 Medical Vocabulary 3 CR HRS

Introduces medical vocabulary through the study of word structures and phrases with reinforcement in writing narratives and the study of medical records. Anatomy and physiology of all body systems are reviewed with discussion of related diseases, diagnostic procedures, treatments and drugs. Emphasis on learning to read, pronounce and interpret medical documentation prepares the student for document review in HIT fields. Illustrates the importance of HIPAA, in both physical and electronic dissemination of medical records.

CIS 115 Intro to Information System 3 CR HRS

Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications.

CSI 118 Introduction to PC Applications 3 CR HRS

Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.

HIT 261 Healthcare Software 3 CR HRS

This course covers basic computer system architecture, file structure, and design for health care settings. Topics include system analysis, design, security, and selection for a variety of hardware environments. This course provides students with a review of computer fundamentals and the fundamentals of the electronic health record and an introduction to the information systems life cycle with software application. Security and confidentiality issues, concerns and implications in relation to the electronic health record will be addressed.

HIT 111 Health Data Management and Information Systems 3 CR HRS

Introduces the practice of maintenance, compilation, analysis, and presentation of healthcare statistical data. Discussion is focused on the use, collection, presentation, and verification of health care data including fundamental concepts of descriptive statistics; data validity and reliability; data presentation techniques; and vital statistics. Introduces the electronic health record (EHR), health informatics and the infrastructure required for the EHR. Data reliability and validity will be emphasized.

HIT 112 Legal Aspects Health Records 2 CR HRS

Introduces the student to the legal system and identified the role of the HIM professional in this system. Specific Federal and State laws are identified and discussed as they relate to release of medical information. Proposed Federal and State legislation that affects the health care industry is examined and discussed.

BTE 287 Coop/Internship

3CR HRS

Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work sites that are related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

HIT 122 Work Flow Fundamentals of Healthcare 3 CR HRS

This course covers the fundamentals of health workflow, process analysis, and redesign. Also includes medical practice automation, dealing with the topics of process validation, quality management, and change management.

HIT 121 Networking and Health Info. 2.5 CR HRS

In-depth analysis of data mobility including the hardware infrastructure (wires, wireless, and devices supporting them), the ISO stack, standards, Internet protocols, federations and grids. The Nationwide Health Information Network and other nationwide approaches to distribution of Electronic Health Records by Health Information Exchanges will also be explored. Also covered are the functional models and certification of the Electronic Health Record and Data Standards for these Records.

CSC 119 Introduction to Programming 3 CR HRS

Focuses on a general introduction to computer programming. Emphasizes the design and implementation of structured and logically correct programs with good documentation. Focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language is used to implement the student's program designs.

HIT 120 Working with Health IT System 4 CR HRS

Provides hands-on experience with a computerized HIT system/electronic health record, utilizing contemporary on-line systems with simulated data. The course will include additional lecture, project work, and practice in the use of HIT systems. Students will play the role of practitioners using these systems and experience threats to security and gain an appreciation of the need for standards and high levels of usability. Students will also learn how errors can occur and ways to minimize them.

HIT 123 Configuring EHRs 3CR HRS

Provides a practical experience addressing approaches to assessing, selecting, and configuring EHRs to meet the specific needs of customers and end-users. The course provides additional opportunities for hands on experience, on a computer, or in a classroom simulated environment, in configuring an EHR system that will provide features required to meet meaningful use.

HIT 222 Quality Management 3 CR HRS

Introduces the student to the basic concepts of quality management in the health care environment. Requirements by regulatory agencies regarding quality, utilization and risk management are discussed. Data collection, verification, analysis and presentation techniques

will be studied. The course emphasizes the ongoing use of objective data and feedback to improve processes, systems and patient outcomes.

MAN 241 Project Management in Organizations 3 CR HRS

Introduces students to the planning, implementation, and control activities of project management, including project and performance evaluation, quality control and work flow analysis. Emphasis will be on the initiating, planning, executing, controlling and closing activities of project management.

HIT Network Security Course Descriptions

HIT 102 Medical Vocabulary 3CR HRS

Introduces medical vocabulary through the study of word structures and phrases with reinforcement in writing narratives and the study of medical records. Anatomy and physiology of all body systems are reviewed with discussion of related diseases, diagnostic procedures, treatments and drugs. Emphasis on learning to read, pronounce and interpret medical documentation prepares the student for document review in HIT fields. Illustrates the importance of HIPAA, in both physical and electronic dissemination of medical records.

CIS 115 Intro to Information System 3CR HRS

Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications.

CSI 118 Introduction to PC Applications 3CR HRS

Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.

HIT 261 Healthcare Software 3CR HRS

This course covers basic computer system architecture, file structure, and design for health care settings. Topics include system analysis, design, security, and selection for a variety of hardware environments. This course provides students with a review of computer fundamentals and the fundamentals of the electronic health record and an introduction to the information systems life cycle with software application. Security and confidentiality issues, concerns and implications in relation to the electronic health record will be addressed.

CNG 124 Networking 1 3CR HRS

Provides students with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. Covers the vendor-independent networking skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP. This course also prepares students for the Networking II: Network + course.

CNG 132 Network Security Fundamentals 3CR HRS

Examines the field of information security to prepare information systems students for their future roles as business decision-makers. The course presents a balance of the managerial and the technical aspects information security. The concepts covered in this course should be helpful for students working towards the Certified Information Systems Security Professional (CISSP) certification.

CNG 133 Firewalls/Network Security 3CR HRS

Teaches students the basics of network firewall security. It covers basic installation techniques, discusses how to make an intelligent choice of firewall technology, and presents basic firewall troubleshooting

CNG 224 Microsoft Windows Wireless Network 3CR HRS

Provides the student with the Microsoft official curriculum from the Microsoft Regional Academy. Offers detailed instruction on the foundation concepts and technologies of wireless data networking. Upon completion of this course, students are prepared to take the Certified Wireless Network Administrator (CWNP) Certification Exam.

CNG 121 Computer Technician I 4 CR HRS

Provides students with an in-depth look at personal computer hardware, introduces O.S. features and security concepts, and covers interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with computer systems, PC setup and configuration, and basic maintenance and troubleshooting. This course helps prepare you for the CompTIA A+ Essentials Exam.

CNG 122 Computer Technician II 4 CR HRS

Provides students with an in-depth look at Operating System support, maintenance, and troubleshooting, and an overview of hardware, security concepts, and interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with Windows 2000 and/or XP, including using common GUI and command line tools, registry editing, System backup and Recovery, Networking, and O.S. Troubleshooting. This course helps prepare you for the CompTIA A+ 602 Exam.

CNG 136 Guide to IT Disaster Recovery 3 CR HRS

Presents methods to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. It will take an enterprise-wide approach to developing a disaster recovery plan.

BTE 287 Coop/Internship 3CR HRS

Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work sites that are related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

HIT 122 Work Flow Fundamentals of Healthcare 3CR HRS

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CSC 119 Introduction to Programming

3CR HRS

Focuses on a general introduction to computer programming. Emphasizes the design and implementation of structured and logically correct programs with good documentation. Focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language is used to implement the student's program designs.

CNG 254 Data Encryption

3CR HRS

Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet.

HIT Program Certificates **Certificates and Certification Exams**

Medical Coding Certificate (AHIMA Accredited)

Candidate Guide Handbook:

http://www.ahima.org/~media/AHIMA/Files/Certification/Candidate_Guide.ashx

Certified Coding Associate (CCA®)

<http://www.ahima.org/certification/CCA>

Based upon job analysis standards and state-of-the-art test construction, the CCA designation has been a nationally accepted standard of achievement in the health information management (HIM) field since 2002. More than 8,000 people have attained the certification since inception. The CCA, the CCS and the CCS-P are the only coding credentials worldwide currently [accredited by the National Commission for Certifying Agencies \(NCCA\)](#).

HIT Management and Support

AHIMA Certification CHTS

<http://www.ahima.org/certification/chts>

CHTS CANDIDATE HANDBOOK:

<http://www.ahima.org/~media/AHIMA/Files/Certification/CHTS%20Candidate%20Guide.ashx>

Certified Healthcare Technology Specialist (CHTS) Exams

As the nation moves toward industry-wide adoption of electronic health records (EHRs), the Bureau of Labor Statistics expects a shortage of about 50,000 qualified health IT workers to meet the needs of hospitals and healthcare affiliates. The Certified Healthcare Technology Specialist (CHTS) competency exams allow professionals and employers to capitalize on new technologies, procedures and careers.

Exams



Implementation Manager Examination (CHTS-IM)

Implementation Manager Examination demonstrates a candidate's ability to provide on-site management of mobile adoption support teams throughout the implementation process of health IT

systems. Prior to training, workers will have experience in health, IT environments, administrative or managerial positions.



Implementation Support Specialist Examination (CHTS-IS)

Implementation Support Specialist Examination tests a candidate's ability to provide on-site user support throughout the health IT system implementation process. Previous background in this role includes information technology or information management.

HIT Network Security Certificate

AHIMA Certification

Certified Healthcare Technology Specialist (CHTS) Exams



Technical/Software Support Staff Examination (CHTS-TS)

<http://www.ahima.org/certification/CCA>

CHTS CANDIDATE HANDBOOK:

<http://www.ahima.org/~media/AHIMA/Files/Certification/CHTS%20Candidate%20Guide.ashx>

Technical/Software Support Staff Examination assesses a candidate's ability to maintain systems in clinical and public health settings, including patching and upgrading software. Candidate backgrounds include information technology or information management.

CompTIA A+

<http://certification.comptia.org/getCertified/certifications/a.aspx>

800 series



The CompTIA A+ certification is the starting point for a career in IT. The exams cover maintenance of PCs, mobile devices, laptops, operating systems and printers.

Certification Information

In order to receive the CompTIA A+ certification, you must pass two exams.

CompTIA A+ 220-801 covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking.

CompTIA A+ 220-802 covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS.

CWNA[®]

Certified Wireless Network Administrator

<http://www.cwnp.com/certifications/cwna>

The CWNA certification is the foundation level enterprise Wi-Fi certification for the CWNP Program, and CWNA is required for your CWSP, CWAP, CWDP and CWNE certifications. Your CWNA certification will get you started in your wireless career by ensuring you have the skills to successfully survey, install, and administer enterprise Wi-Fi networks.