2006 Mississippi Curriculum Framework

Postsecondary Business and Office and Related Technology

(Program CIP-Office Systems Technology: 52.0401-Administrative Assistant/Secretarial)
(Program CIP-Accounting Technology: 52.0302-Accounting Technology)
(Program CIP-Medical Office Technology: 51.0716-Medical Admin. Assistant/Secretarial)
(Program CIP-Microcomputer Technology: 52.0407-Microcomputer Technology)
(Program CIP-Medical Billing and Coding: 51.0713-Medical Insurance Coding Specialist/Coder)

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Workplace Skills for the 21st Century

Secretary's Commission on Achieving Necessary Skills

ISTE National Educational Technology Standards for Students

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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.
    - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs.
    - Vocational-technical elective – An elective vocational-technical course.
    - Related academic course – An academic course 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. For example, in a four semester hour course consisting of 30 hours lecture and 120 hours of laboratory activities, approximately 22 hours of lecture and 90 hours of lab should be taken by the competencies and suggested objectives identified in the course framework. 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.

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

- Adding new competencies and suggested objectives.
- Revising or extending the suggested objectives for individual competencies.
- Integrating baseline competencies from associated high school programs.
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change).

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

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

Table of Contents

Program Description

The Business and Office program includes a basic core of courses designed to prepare a student for a variety of entry-level positions through selections of a concentration of 66-72 semester credit hours in the following areas:

Office Systems Technology
Accounting Technology
Medical Office Technology
Microcomputer Technology
Medical Billing and Coding Technology

The curriculum is designed to give each student:

- a broad overview of the entire office function, not only his/her individual position.
- an opportunity to investigate the integration of systems—people and technology.
- an exposure to career options available within the office which involves the coordination of people, equipment, and resources as well as an opportunity to recognize the relationship between worker and supervisor.
- a concentration of skills in a specific area.

Business and Office is a two-year program of study which requires courses in the career technical core, designated areas of concentration, and the academic core. The Associate of Applied Science degree is earned upon successful completion of the Business and Office curriculum. Successful completion of the first year of the Office Systems Technology program entitles a student to receive an Office Assistant certificate.

The Office Systems Technology program of study provides training in administrative office procedures, integrated computer applications, business financial systems, communication, and related technologies.

The Accounting Technology program of study prepares students for entry-level accounting positions in accounts payable, accounts receivable, payroll, and inventory as well as enhances the skills of persons currently employed in accounting who wish to advance. The program provides a foundation for students transferring to a four-year college or university to pursue a specialized degree in the field.

The Medical Office Technology program of study is designed to prepare students to work in office positions in hospitals, doctors' offices, health clinics, insurance companies, and other health-related organizations. The student will develop skills using medical terminology, accounting, transcription, coding, and computer software applications.

The Microcomputer Technology program of study provides training in microcomputer operations in an office setting, including software configuration, troubleshooting, and systems operation.

The Medical Billing and Coding program includes a basic core of courses designed to prepare a student for entry-level employment in physician offices, hospitals, outpatient facilities, mental health clinics, nursing home facilities, and insurance companies.

Medical Billing and Coding is a two-year program of study which requires courses in the vocational-technical core, designated areas of concentration, and the academic core. The Associate of Applied Science degree is earned upon the successful completion of the Medical Billing and Coding curriculum.

The Medical Billing and Coding framework is based on the *Certified Coding Associate Competency Statements* and *Standards of Ethical Coding* published by the American Health Information Management Association. The competency statements were determined through a job analysis study of practitioners in the field. Additional research data used in the development of this publication were collected from a review of related literature and from surveys of local experts in business, industry, and education.

The curriculum complies with the National Standards for Business Education, the American Association for Medical Transcription Exam Specifications for Certified Medical Transcriptionist, and the American Health Information Management Association Certified Coding Associate Competency Statements.

Suggested Course Sequence*
Office Systems Technology**

Baseline Competencies for Office Systems Technology***

FIRST YEAR

3 sch	Professional Development (BOT 1213)	3 sch	Keyboard Skillbuilding (BOT 1123)
3 sch	Applied Business Math (BOT 1313)	3 sch	Word Processing (BOT 1143)
3 sch	Records Management (BOT 1413)	3 sch	Business Accounting (BOT 1433) OR Principles of Accounting I (ACC 1213)
3 sch	Mechanics of Communication (BOT 1713)	3 sch	Electronic Spreadsheet (BOT 1813)
3 sch	Document Formatting and Production (BOT 1113)****	3 sch	Business Communication (BOT 2813)
3 sch	Microcomputer Applications (BOT 1133)	3 sch	Written Communications Elective
18 sch		18 sch	

(Certificate Program Exit Point)

SECOND YEAR

3 sch	Desktop Publishing (BOT 2133)	3 sch	Machine Transcription (BOT 1513)
3 sch	Database Management (BOT 2323)	3 sch	Administrative Office Procedures (BOT 2723) OR Supervised Work Experience (BOT 2913)
3 sch	Computerized Accounting (BOT 2413)	3 sch	Integrated Computer Applications (BOT 2833)
3 sch	Communication Technology (BOT 2823)	3 sch	Social/Behavioral Science Elective
3 sch	Oral Communications Elective	3 sch	Humanities/Fine Arts Elective
3 sch	Math/Science Elective		
18 sch		15 sch	

* Total hours required for completion of this program may be reduced through articulation agreements with local high schools/vocational centers. Local demands for notetaking skills may be implemented through Continuing Education, Adult Education, Industry Services, etc.

** Students who lack entry level skills in math, English, science, etc., will be provided related studies.

*** Baseline competencies are taken from the high school Business and Computer Technology 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.

**** Prior to enrollment in Document Formatting and Production (BOT 1113), students will be required to key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute. Students who do not demonstrate this level of proficiency will be required to enroll in Introduction to Keyboarding (BOT 1013).

Suggested Course Sequence*
Accounting Technology

Baseline Competencies for Business and Office Technology**

FIRST YEAR

3 sch	Business Accounting (BOT 1433) OR Principles of Accounting I (ACC 1213)	3 sch	Advanced Business Accounting (BOT 1443) OR Principles of Accounting II (ACC 1223)
3 sch	Applied Business Math (BOT 1313)	3 sch	Business Communication (BOT 2813)
3 sch	Microcomputer Applications (BOT 1133)	3 sch	Word Processing (BOT 1143)
3 sch	Document Formatting and Production (BOT 1113)***	3 sch	Written Communications Elective
3 sch	Mechanics of Communication (BOT 1713)	3 sch	Electronic Spreadsheet (BOT 1813)
3 sch	Professional Development (BOT 1213)	3 sch	Computerized Accounting (BOT 2413)
18 sch		18 sch	

SECOND YEAR

3 sch	Math/Science Elective	3 sch	Accounting Elective ****
6 sch	Accounting Electives****	3 sch	Integrated Computer Applications (BOT 2833)
3 sch	Desktop Publishing (BOT 2133)	3 sch	Social/Behavioral Science Elective*****
3 sch	Database Management (BOT 2323)	3 sch	Humanities/Fine Arts Elective
15 sch		3 sch	Oral Communications Elective
		15 sch	

* Students who lack entry level skills in math, English, science, etc., will be provided related studies.

** Baseline competencies are taken form the high school Business and Computer Technology 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.

*** Prior to enrollment in Document Formatting and Production (BOT 1113), students will be required to key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute. Students who do not demonstrate

this level of proficiency will be required to enroll in Introduction to Keyboarding (BOT 1013).

**** The accounting electives will be chosen from Income Tax Accounting (BOT 2423), Payroll Accounting (BOT 2463), Supervised Work Experience (BOT 2913), Principles of Accounting I (ACC 1213), Principles of Accounting II (ACC 1223), or Cost Accounting (BOT 2473).

***** Principles of Economics (ECO 2113) is strongly recommended for this elective.

Suggested Course Sequence*
Medical Office Technology

Baseline Competencies for Business and Office Technology**

FIRST YEAR

3 sch	Applied Business Math (BOT 1313)	3 sch	Keyboard Skillbuilding (BOT 1123)
3 sch	Records Management (BOT 1413)	3 sch	Word Processing (BOT 1143)
3 sch	Mechanics of Communication (BOT 1713)	3 sch	Business Accounting (BOT 1433) OR Principles of Accounting I (ACC 1213)
3 sch	Document Formatting and Production (BOT 1113)***	3 sch	Medical Office Terminology II (BOT 1623)
3 sch	Microcomputer Applications (BOT 1133)	3 sch	Business Communication (BOT 2813)
3 sch	Medical Office Terminology I (BOT 1613)	3 sch	Medical Office Concepts (BOT 2743)
18 sch		18 sch	

SECOND YEAR

3 sch	Transcription Elective****	3 sch	Transcription Elective****
3 sch	Computerized Accounting (BOT 2413)	3 sch	Medical Information Management (BOT 2753)
3 sch	Communication Technology (BOT 2823)	3 sch	Written Communications Elective
3 sch	CPT Coding (BOT 2773/BCT 2123)	3 sch	Humanities/Fine Arts Elective
3 sch	ICD Coding (BOT 2783/ BCT 2133)	3 sch	Social/Behavioral Science Elective
3 sch	Math/Science Elective	3 sch	Oral Communications Elective
18 sch		18 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 Business and Computer Technology programs. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

*** Prior to enrollment in Document Formatting and Production (BOT 1113), students will be required to key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute. Students who do not demonstrate this level of proficiency will be required to enroll in Introduction to Keyboarding (BOT 1013).

**** The transcription electives will be chosen from Machine Transcription (BOT 1513), Medical Machine Transcription I (BOT 2523), and Medical Machine Transcription II (BOT 2533).

Suggested Course Sequence*
Microcomputer Technology**

Baseline Competencies for Business and Office Technology***

FIRST YEAR

3 sch	Professional Development (BOT 1213)	3 sch	Keyboard Skillbuilding (BOT 1123)
3 sch	Applied Business Math (BOT 1313)	3 sch	Word Processing (BOT 1143)
3 sch	Mechanics of Communication (BOT 1713)	3 sch	Business Accounting (BOT 1433) OR Principles of Accounting I (ACC 1213)
3 sch	Document Formatting and Production (BOT 1113)****	3 sch	Electronic Spreadsheet (BOT 1813)
3 sch	Microcomputer Applications (BOT 1133)	3 sch	Business Communication (BOT 2813)
3 sch	Social/ Behavioral Science Elective	3 sch	Visual BASIC Programming Language (CPT 1214)
18 sch		18 sch	

SECOND YEAR

3 sch	Database Management (BOT 2323)	3 sch	Integrated Computer Applications (BOT 2833)
3 sch	Computerized Accounting (BOT 2413)	3 sch	Network Management Elective (CSC/CNT/CPT)
3 sch	Communication Technology (BOT 2823)	3 sch	Math/Science Elective
3 sch	Desktop Publishing (BOT 2133)	3 sch	Humanities/Fine Arts Elective
3 sch	Computer Related Elective (CSC/CNT/CPT/NST)	3 sch	Oral Communications Elective
3 sch	Written Communications Elective	15 sch	
18 sch			

* Total hours required for completion of this program may be reduced through articulation agreements with local high schools/vocational centers.

** Students who lack entry level skills in math, English, science, etc., will be provided related studies.

*** Baseline competencies are taken from the high school Business and Computer Technology 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.

**** Prior to enrollment in Document Formatting and Production (BOT 1113), students will be required to key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute. Students who do not demonstrate this level of proficiency will be required to enroll in Introduction to Keyboarding (BOT 1013).

Suggested Course Sequence*
Medical Billing and Coding Technology

Baseline Competencies for Medical Billing and Coding Technology**

FIRST YEAR

3 sch	Applied Business Math (BOT 1313)	3 sch	Word Processing (BOT 1143)
3 sch	Records Management (BOT 1413)	3 sch	Business Accounting (BOT 1433) OR Principles of Accounting I (ACC 1213)
3 sch	Mechanics of Communication (BOT 1713)	3 sch	Medical Office Terminology II (BOT 1623)
3 sch	Document Formatting and Production (BOT 1113)***	3 sch	Business Communication (BOT 2813)
3 sch	Microcomputer Applications (BOT 1133)	3 sch	Medical Office Concepts (BOT 2743)
3 sch	Medical Office Terminology I (BOT 1613)	3 sch	Social/Behavioral Science Elective
18 sch		18 sch	

SECOND YEAR

3 sch	Math/Science Elective	3 sch	Advanced Coding (BOT 2663)
3 sch	Medical Machine Transcription I (BOT 2523)	3 sch	Medical Information Management (BOT 2753)
3 sch	CPT Coding (BOT 2643/BCT 2123)	3 sch	Medical Insurance Billing (BOT 2673)
3 sch	ICD Coding (BOT 2653/BCT 2133)	3 sch	Elective
3 sch	Computerized Accounting (BOT 2413)	3 sch	Oral Communications Elective
3 sch	Written Communications Elective	3 sch	Humanities/Fine Arts Elective
18 sch		18 sch	

APPROVED ELECTIVES

Electronic Spreadsheet (BOT 1813)
Database Management (BOT 2323)
Medical Machine Transcription II (BOT 2533)
Supervised Work Experience (BOT 2913)
Communication Technology (BOT 2823)
Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)]

* Students who lack entry level skills in math, English, science, etc., will be provided related studies.

** Baseline competencies are taken from the high school Business and Computer Technology programs. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

*** Prior to enrollment in Document Formatting and Production (BOT 1113), students will be required to key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute. Students who do not demonstrate this level of proficiency will be required to enroll in Introduction to Keyboarding (BOT 1013).

Business and Office Cluster
Framework of Courses and Programs

Courses	Accounting	Office Systems	Medical Office	Microcomputer	Billing & Coding
Vocational-Technical Core					
Document Formatting and Production	x	x	x	x	x
Microcomputer Applications	x	x	x	x	x
Word Processing	x	x	x	x	x
Applied Business Math	x	x	x	x	x
Business Accounting	x	x	x	x	x
Mechanics of Communication	x	x	x	x	x
Business Communication	x	x	x	x	x
Computerized Accounting	x	x	x	x	x
Academic Core					
Written Communications Elective	x	x	x	x	x
Math/Science Elective	x	x	x	x	x
Oral Communications Elective	x	x	x	x	x
Social/Behavioral Science Elective	x	x	x	x	x
Humanities/Fine Arts Elective	x	x	x	x	x
AOC Core					
Communication Technology		x	x	x	x
Integrated Computer Applications	x	x		x	
Keyboard Skillbuilding		x	x	x	
Professional Development	x	x		x	
Records Management		x	x		x
Administrative Office Procedures		x			
Desktop Publishing	x	x		x	
Machine Transcription		x	x		
Electronic Spreadsheet	x	x		x	x
Database Management	x	x		x	x
Medical Office Terminology I			x		x
Medical Office Terminology II			x		x
Medical Machine Transcription I			x		x
Medical Machine Transcription II			x		x
Medical Information Management			x		x
Medical Office Concepts			x		x
Advanced Business Accounting	x				

CPT Coding					x	x
ICD Coding					x	x
Advanced Coding						x
Medical Insurance Billing						x
Vocational-Technical Electives						
Supervised Work Experience	x	x				x
Income Tax Accounting	x					
Payroll Accounting	x					
Cost Accounting	x					
Introduction to Keyboarding	x	x	x		x	
Work-Based Learning I, II, III, IV, V, and VI						x
Related Academic						
Principles of Accounting I	x	x	x		x	x
Principles of Accounting II	x					
Principles of Economics (Macroeconomics)	x					
Related Vocational-Technical						
Visual BASIC Programming Language					x	

Business and Office and Related Technology Courses

Course Name: Introduction to Keyboarding

Course Abbreviation: BOT 1013

Classification: Vocational-Technical Elective

Description: This course provides an introduction to basic word processing commands and essential skill development using the touch system on the alphabetic keyboard. Course emphasis will be on speed and accuracy when keying documents and timed writings. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives

1. Apply appropriate techniques to produce alphanumeric material.
   a. Use computer equipment, operating system software, and word processing software.
      (1) Name the components of a microcomputer.
      (2) Use operating systems software.
      (3) Use word processing applications software.
   b. Operate the keyboard.
      (1) Demonstrate proper keyboarding techniques using the touch system.
      (2) Key straight-copy material at a minimum of 35 GWPM, on a 5-minute timed writing, with a maximum of 1 error per minute.
   c. Create various documents using proper formatting procedures.
      (1) Correctly format documents frequently used in personal, business, and professional life.
      (2) Evaluate document quality.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication
BE24 Technological Communication
BE59 Impact on Society

Related Academic Standards

C1 Interpret written material.
C3 Listen, comprehend, and take appropriate actions.

Workplace Skills for the 21st Century

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

Suggested References

Keyboarding Pro (Version 4) [Computer software]. (n.d.). Cincinnati, OH: South-Western.

Mitchell, W. M., Kapper, R. G., Mach, K. A., & LaBarre, J. E. (2004). *Paradigm keyboarding sessions 1-60* (4th rev. ed.). St. Paul, MN: Paradigm.

Van Huss, S. H., Forde, C. M., & Woo, D. L. (2005). *Keyboarding and formatting essentials, Lessons 1-60.* Cincinnati, OH: South-Western.

Van Huss, S. H., Forde, C. M., & Woo, D. L. (2002). *Keyboarding and word processing: Microsoft Word, Lessons 1-60.* Cincinnati, OH: South-Western.

Course Name: Document Formatting and Production

Course Abbreviation: BOT 1113

Classification: Vocational-Technical Core

Description: This course focuses on improving keyboarding techniques using the touch method and on production of documents using word processing functions. (3 sch: 2 hr. lecture, 2 hr. lab)

P**rerequisite:** Prior to enrollment in this course, students will be required to key straight-copy material at a minimum of 35 GWPM on a 5-minute timed writing, with a maximum of 1 error per minute OR successfully complete Introduction to Keyboarding (BOT 1013).

Competencies and Suggested Objectives

1. Improve keyboarding skills.
   a. Refine basic keyboarding techniques using the touch method.
   b. Key straight-copy material at a minimum of 40 GWPM on a 5-minute timed writing with a maximum of one error per minute.
2. Apply word processing skills to produce and format business documents with speed and accuracy.
   a. Produce mailable letters, memorandums, tables, and envelopes at a satisfactory production rate.
   b. Produce and assemble simple business reports with cover page and references at a satisfactory production rate.
   c. Use hard space, required hyphens, tables, headers, and footers.
   d. Solve common word processing problems applying standard business practices.

STANDARDS

National Standards for Business Education

BE24 Technological Communication

Related Academic Standards

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

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

Workplace Skills for the 21st Century

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, 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
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools

Suggested References

Shelly, G.B., Cashman, T.J., & Vermaat, M.E. (2002). *Microsoft Office XP: Introductory concepts and techniques.* Boston: Thomson Learning.

Shelly, G.B., Cashman, T.J., & Vermaat, M.E. (2001). *Microsoft Office 2000: Introductory concepts and techniques.* Boston: Thomson Learning.

Shelly, G.B., Cashman, T.J., & Vermaat, M.E. (2005). *Microsoft Word 2003: Comprehensive concepts and techniques.* Boston: Thomson Learning.

VanHuss, S.H., Forde, C.M., & Woo, D.L. (2005). *Formatting and document processing essentials.* Boston: Thomson Learning.

VanHuss, S.H., Forde, C.M., & Woo, D.L. (2002). *Keyboarding and word processing*. Boston: Thomson Learning.

Course Name: Keyboard Skillbuilding

Course Abbreviation: BOT 1123

Classification: AOC Core (Microcomputer, Office Systems, and Medical Office)

Description: This course further develops keyboard techniques emphasizing speed and accuracy. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Document Formatting and Production (BOT 1113)

Competencies and Suggested Objectives
1. Key alphanumeric material with speed and accuracy. a. Key straight-copy material at a minimum of 50 GWPM on a 5-minute timed writing with a maximum of one error per minute. b. Proofread for accuracy.

STANDARDS

National Standards for Business Education

BE64 Input Technologies
BE89 Personal Management Skills
BE90 Ethics And Social Responsibility
BE93 Technology and Information Management

Related Academic Standards

C1 Interpret written material.

Workplace Skills for the 21st Century

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

Suggested References

Clayton, D. (2000). *121 timed writings with skillbuilding drills* (6th ed.). Cincinnati, OH: South-Western.

Pagel, L. G., Jones, E., & Kane, D. (2001). *Proofreading & editing precision* (4th ed.). Cincinnati, OH: South-Western.

Peters, C., & Haley, M. (2005). *Championship keyboarding drills* (4th ed.). Boston: McGraw-Hill/Irwin.

Sharp, W. M., Olinzock, A. A., & Santos, O. (2003). *Keychamp* (2nd ed.). Cincinnati, OH: South-Western.

Sharp, W. M., Olinzock, A. A., & Santos, O. (2003). *KeyChamp: Technique analysis/speedbuilding.* Cincinnati, OH: South-Western.

MicroPace Pro 2.0. (2003). Cincinnati, OH: South-Western.

Course Name: Microcomputer Applications

Course Abbreviation: BOT 1133

Classification: Vocational-Technical Core

Description: This course will introduce an operating system and word processing, spreadsheet, database management, and presentation software applications. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Introduction to Keyboarding (BOT 1013) or consent of instructor

Competencies and Suggested Objectives
1. Demonstrate skills using a variety of software applications. a. Use operating system software. (1) Apply basic operating system commands. (2) Demonstrate proper file and disk management. b. Use word processing software. (1) Define terminology related to word processing. (2) Produce documents using basic word processing features to include margins, tabs, line spacing, underlining, boldface, centering, inserting, deleting, spell checking, saving, retrieving, and printing. c. Use spreadsheet application software. (1) Define terminology related to spreadsheet applications. (2) Apply basic spreadsheet software features to include alphabetic, numeric, and alphanumeric cell entries, values, formulas, column-widths, column and row headings, deleting, inserting, saving, and printing. d. Use database application software. (1) Define terminology related to database applications. (2) Apply basic database software features to design a file, add records, edit records, generate reports, and select certain records from files. e. Use presentation software. (1) Define terminology related to presentation applications. (2) Apply basic presentation software features to include slide development, transitions, and animation.

STANDARDS

National Standards for Business Education

BE24 Technological Communication
BE61 Operating Systems, Environments, and Utilities
BE63 Application Software
BE65 Information Retrieval

Related Academic Standards

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.

Workplace Skills for the 21st Century

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.

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

Suggested References

O'Leary, T., & O'Leary, L. (2005). *O'Leary series: Microsoft Office 2003 Volume 1 with student data file CD* (1st ed.). New York: Irwin-McGraw-Hill.

Pasewark, B., & Pasewark, W. (2004). *Microsoft Office 2003: Introductory course*. Boston: Course Technology.

Shaffer, A., Carey, P., & Finnegan, K. (2003). *New perspectives on Microsoft Office 2003, first course.* Boston: Course Technology.

Shelly, G., Cashman, T., & Vermaat, M. (2004). *Microsoft Office 2003: Introductory concepts and techniques.* Boston: Course Technology.

Course Name: Word Processing

Course Abbreviation: BOT 1143

Classification: Vocational-Technical Core

Description: This course focuses on production of documents using word processing functions. Production with accuracy is stressed and practice is given through a variety of documents for skillbuilding. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Mechanics of Communication (BOT 1713), Microcomputer Applications (BOT 1133), and Document Formatting and Production (BOT 1113) or consent of instructor

Competencies and Suggested Objectives
1. Apply word processing skills to produce and format complex business documents with speed and accuracy. a. Produce mailable business forms and financial documents, business meeting documents, and legal and medical documents at a satisfactory production rate. b. Create multi-page reports with title page, indexes, table of contents, references, footnotes, endnotes, cross-references, sections, and styles.
2. Use advanced word processing functions. a. Customize business documents. (1) Control pagination. (2) Sort paragraphs in lists and tables. (3) Use spreadsheet data in tables. (4) Perform calculations in tables. (5) Create, modify, and position graphics. (6) Create and modify charts using data from other applications. (7) Align text and graphics. b. Customize word processing software. (1) Create, edit, and run macros. (2) Customize menus and toolbars. c. Demonstrate workgroup collaboration. (1) Track, accept, and reject changes to documents. (2) Merge input from several reviewers. (3) Insert and modify hyperlinks to other documents and web pages. (4) Protect documents. d. Combine documents using software features. (1) Merge variable and constant information to create new documents. (2) Merge letters with a word processing, spreadsheet, or database data source. (3) Merge labels with a word processing, spreadsheet, or database data source. (4) Use personal information manager software as a data source.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications
BE64 Input Technologies
BE65 Information Retrieval
BE89 Personal Management Skills
BE93 Technology and Information Management

Related Academic Standards

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.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

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.
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.

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

Suggested References

Rutkosky, N. (2004). *Benchmark series: Microsoft Word 2003 specialist and expert.* St. Paul, MN: EMC/Paradigm.

Rutkosky, N., & Graviett, N. (2002). *Signature series: WordPerfect 10.* St. Paul, MN: EMC/Paradigm.

VanHuss, S., Forde, C., & Woo, D. (2005). *Formatting and document processing essentials, Lessons 61-120.* Cincinnati, OH: South-Western.

Van Huss, S., Forde, C., & Woo, D. (2003). *Business applications with Microsoft Word: Advanced document processing.* Cincinnati, OH: South-Western.

Van Huss, S., Forde, C., & Woo, D. (2002). *College keyboarding advanced word processing, Lessons 61-120* (15th ed.). Cincinnati, OH: South-Western.

Zimmerman, S. S., Zimmerman, B. B., & Shaffer, A. (2003). *New perspectives on Microsoft® Office Word 2003 comprehensive.* Boston: Course Technology.

Course Name: Professional Development

Course Abbreviation: BOT 1213

Classification: AOC Core (Accounting, Office Systems, and Microcomputer)

Description: This course emphasizes an awareness of interpersonal skills essential for job success. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Develop skills for personal and professional development. a. Discuss the necessity of lifelong learning. b. Describe the benefits of professional affiliations and certification programs. c. Develop a plan for personal, educational, and professional growth. d. Interpret ethical and legal responsibilities of office personnel.
2. Demonstrate essential skills for the employment process. a. Identify techniques to build a positive self-image. b. Project a professional image by applying the basics of good health practices and personal grooming and selecting a proper wardrobe. c. Research sources for locating job opportunities. d. Demonstrate effective employment interview skills.
3. Demonstrate interpersonal skills that affect personal and professional development. a. Discuss principles of effective time, stress, and money management. b. Demonstrate business etiquette skills in professional situations. c. Apply problem-solving and conflict-resolution skills to given case studies. d. Analyze case studies to demonstrate self-motivation, self-management, ethical business practices, a positive attitude, and problem-solving skills. e. Demonstrate appropriate verbal and nonverbal communication and listening skills that demonstrate sensitivity to diverse populations, including people from various cultural backgrounds and those with special needs.

STANDARDS

National Standards for Business Education

BE16 Self-Awareness
BE17 Career Research
BE18 Workplace Expectations
BE19 Career Strategy
BE20 School-to-Career Transition
BE21 Lifelong Learning
BE23 Social Communication
BE25 Employment Communication
BE42 Personal Decision Making

BE43 Earning a Living
BE44 Managing Finances and Budgeting
BE76 Foundations of International Business
BE77 The Global Business Environment
BE78 International Business Communication
BE79 Global Business Ethics
BE80 Organizational Structures for International Business Activities

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
C3 Listen, comprehend, and take appropriate actions.
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.
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 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.
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

T2 Social, ethical, and human issues

Suggested References

Bennett, C. (2002). *Business etiquette & protocol.* Cincinnati, OH: South-Western.

Cook, R. A., Cook, G. O., & Yale, L. J. (2005). *Guide to business etiquette.* Upper Saddle River, NJ: Pearson Education.

Crisp Learning Series. (2001). *Professionalism in the office.* Boston: Course Technology.

Crisp Learning Series. (2002). *Networking for success.* Boston: Course Technology.

Gaining the competitive edge with business etiquette, Tape I - Avoiding the 10 most commonly made business etiquette faux pas [Videotape]. (1989). (Available from At Ease, Inc., 119 East Court Street, Cincinnati, OH 45202)

Gaining the competitive edge with business etiquette, Tape 2 - How to conduct yourself professionally during a business meal [Videotape]. (1989). (Available from At Ease, Inc., 119 East Court Street, Cincinnati, OH 45202)

Manning, M., & Haddock, P. (2003). *Developing as a professional.* Boston: Thomson.

Ramsey, D. (2003). *The total money makeover workbook: A proven plan for financial fitness.* Nashville, TN: Thomas Nelson.

Wallace, H.R., & Masters, L.A. (2001). *Personal development for life and works.* Boston: Thomson Learning.

Web resumes [Videotape]. (1998). (Available from Cambridge Educational, 90 MacCorkle Avenue, SW, South Charleston, WV 25303, Phone 1.800.468.4227, Fax 1-800-FAX-ON-US, Web site www.cambridgeeducational.com)

Course Name: Applied Business Math

Course Abbreviation: BOT 1313

Classification: Vocational-Technical Core

Description: This course is designed to develop competency in mathematics for business use, with emphasis on the touch method. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Solve mathematical problems using the touch method to operate a calculator or numeric keypad. a. Build speed and accuracy in data entry. b. Proofread and edit numbers. c. Analyze the problem. d. Round numbers and estimate a solution to the problem. e. Perform mathematical computations. f. Compare estimated solutions with computed solutions.
2. Calculate business transactions for reports, documents, and personal finances. a. Complete and verify various business forms including calculating discounts on invoices. b. Compute and compare interest and finance charges. c. Calculate percent of increase/decrease. d. Complete depreciation schedules. e. Compute payroll and taxes. f. Compute commission, markup, and selling price. g. Use deductive reasoning to solve problems and generate conclusions. h. Reconcile a bank statement. i. Compute personal taxes. j. Compute insurance costs.

STANDARDS

National Standards for Business Education

BE27 Mathematical Foundations
BE28 Number Relationships and Operations
BE32 Problem-Solving Applications

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
C3 Listen, comprehend, and take appropriate actions.
C6 Communicate ideas and information effectively using various 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.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

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.
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

Suggested References

Burton, S., & Burton, N. (2005). *Practical math* (2nd ed.). Cincinnati, OH: South-Western.

Cleaves, C., & Hobbs, M. (2002). *Business math: Brief edition* (6th ed.). Upper Saddle River, NJ: Prentice Hall.

Deitz, J. E., & Southam, J. L. (2003). *Contemporary mathematics for college* (13th ed.). Cincinnati, OH: South-Western.

Tuttle, M. D. (2001). *Practical business math: An applications approach* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Course Name: Records Management

Course Abbreviation: BOT 1413

Classification: AOC Core (Office Systems, Medical Office, and Billing and Coding)

Description: This course focuses on the systems approach to managing recorded information in any form. Emphasis is placed on the three categories into which records generally fall and the treatment of these categories in proper management, storage, and retrieval. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Analyze storage and retrieval procedures in alphabetic, numeric, geographic, chronological, and subject filing systems. a. Code, sort, and file paper documents. b. Prepare cross references when necessary. c. Apply ARMA rules for filing and retrieving documents and for storing electronic information.
2. Use a variety of media forms used to manage information. a. Determine the appropriate storage systems for these media. b. Select appropriate storage equipment. c. Explain the purpose of color coding files. d. Analyze the numeric filing systems that are best suited for color coding. e. Apply alphabetic and numeric color coding and color accenting to various situations. f. Explain how computer indexes and database software can be used in records management. g. Explain how misfiles are recognized in color-coded files.
3. Describe records retention, retrieval, and transfer. a. Explain the use of a records retention schedule. b. Describe retrieval, requisition, charge-out, and follow-up procedures. c. Discuss records activity, transfer methods and procedures. d. Describe the difference between active and inactive records, and indicate how each is determined. e. Specify the recommended time period records should be retained. f. Describe the appropriate methods for destruction of records.

STANDARDS

National Standards for Business Education

BE18 Workplace Expectations
BE26 Organizational Communication
BE59 Impact on Society
BE73 Risk Management

BE74 Privacy and Ethics

Related Academic Standards

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.

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..

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

Suggested References

Brown, P. (2002). *File management: 10-hour series* (1st ed.). Stamford, CT: Thomson Learning.

Fosegan, J. (2003). *Alphabetic indexing rules: Application by computer* (4th ed.). Stamford, CT: Thomson Learning.

Read-Smith, J. (2002). *Records management projects.* Cincinnati, OH: South-Western.

Read-Smith, J., Ginn, M. L., & Kallaus, N. F. (2002). *Records management.* Cincinnati, OH: South-Western.

Course Name: Business Accounting

Course Abbreviation: BOT 1433

Classification: Vocational-Technical Core

Description: This course is designed to develop an understanding of analyzing, recording, classifying, and summarizing financial information of a sole proprietorship with insight into interpreting and reporting the resulting effects upon the business. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Demonstrate basic accounting procedures. a. Analyze business transactions in terms of the accounting equation. b. Determine the effects of business operations on owner's equity using the basic accounting equation. c. Analyze the flow of financial data, using the basic accounting cycle. d. Prepare a bank reconciliation and journalize entries. e. Classify, journalize, and post financial information. f. Perform end-of-period accounting functions. g. Prepare a balance sheet, an income statement, and a statement of owner's equity. h. Maintain accounting records for a sole proprietorship, including service and merchandising enterprises. i. Explain the importance of internal controls. j. Use special journals for recording transactions.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE9 Business Organizations
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications

Related Academic Standards

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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills for the 21st Century

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.

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

Suggested References

Heintz, J. A., & Parry, R. W. (2005). *College accounting* (18th ed.). Washington, DC: Thomson Learning.

Horngren, C. (2005). *Accounting*. Upper Saddle River, NJ: Prentice Hall.

Needles, B. (2005). *Principles of accounting*. Boston: Houghton Mifflin.

Warren, C. (2005). *Accounting* (21st ed.). Washington, DC: Thomson Learning.

Course Name: Advanced Business Accounting

Course Abbreviation: BOT 1443

Classification: AOC Core (Accounting)

Description: This course is a continuation of Business Accounting with emphasis in accounting for corporations. (3 sch: 3 hr. lecture)

Prerequisite: Business Accounting (BOT 1433) or Accounting Principles I (ACC 1213)

Competencies and Suggested Objectives

1. Apply advanced accounting principles and procedures.
   a. Account for inventory and plant assets in a sole proprietorship.
      (1) Calculate the cost of inventory using various methods, to include FIFO, LIFO, and average cost.
      (2) Calculate depreciation using various methods.
      (3) Journalize entries for the purchase, trade and disposal of plant assets.
   b. Apply basic principles of payroll accounting.
   c. Demonstrate the use of a payroll register and employee earning records.
   d. Journalize the employee and employer portions of a payroll system.
   e. Journalize entries for a corporation to include issuance and sale of various types of corporate stock, issuance of dividends, and bonds payable.
   f. Prepare a statement of cash flows using the direct and indirect method.
   g. Journalize entries for the allowance method of accounting for uncollectibles.
   h. Estimate uncollectible receivables based on sales and an analysis of receivables.
   i. Journalize entries for notes receivables transactions.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE9 Business Organizations
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications

Related Academic Standards

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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills for the 21st Century

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.

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

Suggested References

Dansby, R. L., Kaliski, B. S., & Lawrence, M. D. (2000). *College accounting*. Herndon, VA: Paradigm.

Heintz, J. A., & Parry, R. W. (2005). *College accounting* (18th ed.). Washington, DC: Thomson Learning.

Warren, C. (2005). *Accounting*. Washington, DC: Thomson Learning.

Course Name: Machine Transcription

Course Abbreviation: BOT 1513

Classification: AOC Core (Office Systems); Vocational-Technical Elective (Medical Office)

Description: This course is designed to teach transcription of a wide variety of business communications from machine dictation. (3 sch: 2 hr. lecture; 2 hr. lab)

Prerequisite: Word Processing (BOT 1143)

Competencies and Suggested Objectives
1. Use transcription equipment to produce mailable business, legal, and medical documents. a. Demonstrate proper utilization, maintenance, and care of transcription equipment using current technology. (1) Maintain headsets for safe and hygienic operation. (2) Develop the proper technique for foot-pedal control. b. Proofread for grammatical and contextual errors. c. Employ correct spelling, punctuation, grammar, and style. d. Use appropriate reference materials.

STANDARDS

National Standards for Business Education

BE24 Technological Communication

Related Academic Standards

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.

Workplace Skills for the 21st Century

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, 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
T3 Technology productivity tools

Suggested References

Ballentine, M. (2005). *Machine transcription & dictation, Text and CD.* Boston: Thomson Learning.

Clark, J. L., & Clark, L. R. (2004). *HOW 10: A handbook for office professionals.* Boston: Thomson Learning.

Mallinson, L. (2002). *The office guide.* Upper Saddle River, NJ: Prentice Hall.

Mallinson, L. (2004). *Transcription skills for business* (6th ed.). Upper Saddle River, NJ: Prentice Hall.

Mitchell, C. G. (2004). *Machine transcription: A comprehensive approach for today's Office professional short course text-workbook with CD-ROM.* New York: McGraw-Hill.

Sabin, W. A. (2005). *The Gregg reference manual: A manual of style.* New York: McGraw-Hill.

Course Name*:* Medical Office Terminology I

Course Abbreviation: BOT 1613

Classification: AOC Core (Medical Office and Billing and Coding)

Description: This course is a study of medical language relating to the various body systems including diseases, physical conditions, procedures, clinical specialties, and abbreviations. Emphasis is placed on correct spelling and pronunciation. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: None

Competencies and Suggested Objectives
1. Correctly use medical terminology. a. Recognize and discuss word components, terms, procedures, abbreviations, and symbols related to the various body systems. (1) Identify combining forms, suffixes, and prefixes related to the various body systems. (2) Identify and discuss disease terms related to the various body systems. (3) Identify diagnostic imaging, clinical, surgical, and laboratory procedures related to the various body systems. (4) Identify abbreviations and symbols related to the various body systems. (5) Define, spell, pronounce, and use medical terms. (6) Use terminology related to diagnoses, tests, and treatment modalities. b. Demonstrate ability to communicate information using medical terms in a clear, concise manner. (1) Read and comprehend medical terminology as viewed in medical documents. (2) Discuss medical terminology used in medical documents.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication

AAMT Exam Specifications for Certified Medical Transcriptionist

MT1 Medical Language
MT2 Anatomy and Physiology
MT3 Disease Processes
MT4 English Language

Related Academic Standards

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.
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 for the 21st Century

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.

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

Suggested References

Chabner, D.-E. (2004). *The language of medicine* (7th ed.). St. Louis, MO: Saunders/Elsevier.

Ehrlich, A., & Schroeder, C. L. (2005). *Medical terminology for health professionals*. Clifton Park, NY: Thomson Delmar Learning.

Fremgen, B. F., & Frucht, S. S. (2005). *Medical terminology: A living language.* Upper Saddle River, NJ: Prentice Hall.

Gylys, B. A., & Wedding, M. E. (2004). *Medical terminology: A systems approach.* Philadelphia: F. A. Davis.

Course Name: Medical Office Terminology II

Course Abbreviation: BOT 1623

Classification: AOC Core (Medical Office and Billing and Coding)

Description: This course presents medical terminology pertaining to human anatomy in the context of body systems. Emphasis is directed toward medical terminology as it relates to the medical office. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: None

Competencies and Suggested Objectives
1. Use electronic equipment to learn medical terms related to body systems. a. Spell medical terms. b. Pronounce medical terms. c. Define medical terms using Greek and Latin prefixes, suffixes, and combining forms. d. Identify medical abbreviations.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication

AAMT Exam Specifications for Certified Medical Transcriptionist

MT1 Medical Language
MT2 Anatomy and Physiology
MT3 Disease Processes
MT4 English Language

Related Academic Standards

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.
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 for the 21st Century

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.

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

Suggested References

Chabner, D.-E. (2004). *The language of medicine* (7th ed.). St. Louis, MO: Saunders/Elsevier.

Ehrlich, A., & Schroeder, C. L. (2005). *Medical terminology for health professionals*. Clifton Park, NY: Thomson Delmar Learning.

Fremgen, B. F., & Frucht, S. S. (2005). *Medical terminology: A living language.* Upper Saddle River, NJ: Prentice Hall.

Gylys, B. A., & Wedding, M. E. (2004). *Medical terminology: A systems approach.* Philadelphia: F. A. Davis.

Course Name: Mechanics of Communication

Course Abbreviation: BOT 1713

Classification: Vocational-Technical Core

Description: This course is designed to develop the basic English competencies necessary for success in the business world. A study of the parts of speech, sentence structure, sentence types, capitalization, punctuation, and spelling is emphasized. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Use effective grammar, punctuation, and editing skills. a. Construct complete sentences that convey ideas clearly. b. Use verbs correctly. c. Use nouns and pronouns correctly. d. Choose the correct verb form to agree with the noun or pronoun in a sentence. e. Select appropriate descriptive words (adjectives and adverbs). f. Use conjunctions and prepositions to join words clearly and correctly. g. Use end punctuation and internal punctuation correctly. h. Form possessives, contractions, and special plurals correctly. i. Capitalize words according to accepted standards. j. Use correct abbreviations and symbols where appropriate. k. Use correct form in writing numbers in communications. l. Use reference materials such as standard office manual, dictionary, and thesaurus. m. Use and understand commonly misused words. n. Maintain a list of frequently misspelled words.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication

Related Academic Standards

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.

Workplace Skills for the 21st Century

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

Suggested References

Biays, J. S., & Wershoven, C. (2004). *Along these lines: Writing sentences and paragraphs*. Upper Saddle River, NJ: Prentice Hall.

Clark, J. L., & Clark, L. R. (2004). *HOW 10: A handbook for office professionals.* Boston: Thomson Learning.

Guffey, M. E. (2005). *Business English*. Boston: Thomson Learning.

Guffey, M. E. (2005). *Professional English*. Boston: Thomson Learning.

Humphrey, D., & Conklin, R. (2005). *Connections: Writing for your world.* Boston: Thomson Learning.

Schachter, N., & Schnieter, K. (2005). *Basic English review: English the easy way*. Boston: Thomson Learning.

Course Name: Electronic Spreadsheet

Course Abbreviation: BOT 1813

Classification: AOC Core (Accounting, Office Systems, and Microcomputer); Vocational-Technical Elective (Billing and Coding)

Description: This course focuses on applications of the electronic spreadsheet as an aid to management decision making. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Applied Business Math (BOT 1313) and Microcomputer Applications (BOT 1133), or consent of instructor

Competencies and Suggested Objectives
1. Demonstrate electronic spreadsheet applications. a. Define terminology related to spreadsheet applications. b. Design and format effective spreadsheets. (1) Enter, edit, insert, delete, and move cell data. (2) Find and replace cell data and formats. (3) Apply and modify cell formats and row and column settings. (4) Use automated tools in formatting. (5) Use spellcheck. c. Create and revise formulas, using functions and relative and 3-D references. d. Create, modify, position, print, and interpret charts and graphs. e. Utilize the database functions of electronic spreadsheet software, including filtering, subtotals, and sorting using multiple fields. f. Manage and customize spreadsheet files and folders. (1) Create spreadsheets using templates and save using different names and file formats. (2) Insert and delete worksheets in a workbook and modify worksheet names and positions. (3) Convert worksheets into web pages and create hyperlinks. (4) View and edit comments. (5) Protect spreadsheets and spreadsheet elements. (6) Customize toolbars and menus. g. Create, edit, and run macros. h. Link and export data to word processing documents and presentations. i. Perform what-if analyses using electronic spreadsheets.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements

BE4 Special Applications
BE5 Interpretation and Use of Data
BE27 Mathematical Foundations
BE28 Number Relationships and Operations
BE29 Patterns, Functions, and Algebra
BE30 Measurements
BE31 Statistics and Probability
BE32 Problem-Solving Applications

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M4 Explore the concepts of measurement.
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.

Workplace Skills for the 21st Century

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, 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

Suggested References

Blanc, I., & Vento, C. (2004). *Performing with Microsoft Office Excel 2003: Comprehensive course*. Boston: Course Technology.

Parsons, J., Oja, D., Ageloff, R., & Carey, P. (2004). *New perspectives on Microsoft Office Excel 2003 comprehensive.* Boston: Course Technology.

Rutkosky, N., & Flynn, M. (2003). *Benchmark series: Microsoft Excel 2003 specialist and expert*. St. Paul, MN: EMC Paradigm.

Shelly, G. B., Cashman, T. J., & Quasney, J. S. (2005). *Microsoft Excel 2003: Comprehensive concepts and techniques.* Boston: Thomson Learning.

Singleton, M. (2004). *Learning Microsoft Excel 2002*. New York: DDC.

Stewart, K. (2002). *Excel 2002: Core and expert*. New York: Glencoe McGraw-Hill.

Course Name: Desktop Publishing

Course Abbreviation: BOT 2133

Classification: AOC Core (Accounting, Office Systems, and Microcomputer)

Description: This course will present graphic design techniques, principles of page layout and design, and electronic publishing terminology and applications to create a variety of documents such as flyers, brochures, newsletters, and business cards using advanced features of word processing software. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Word Processing (BOT 1143) or consent of instructor

Competencies and Suggested Objectives
1. Demonstrate knowledge of publishing concepts, ethics, and laws. a. Define terminology related to the publishing industry. b. Identify basic principles of design. c. Discuss copyright laws pertaining to scanned images and electronic clip art used in publications. d. Analyze situations where scanned images and electronic graphics may legally be used but are ethically questionable.
2. Design effective publications and multiple page documents using advanced features of word processing software. a. Determine the best type of publication based upon the purpose, intended audience, cost limitations, and time constraints. b. Produce effective presentations of text including appropriate typefaces, type sizes, leading, alignment, spacing, kerning, special characters, and emphasis features. c. Plan and create effective layouts including line length, white space, columns, margins, and graphic placement. d. Incorporate in publications a variety of graphic elements including clip art, boxes, shading, rules, and illustrations created with drawing and paint tools. e. Import charts, text, tables, and photos into publications. f. Generate a variety of documents such as flyers, newsletters, bulletins, proposals, reports, business cards, greeting cards, brochures, and forms. g. Produce multiple-page and multiple-column documents using style sheets, templates, and keyboard shortcuts.

STANDARDS

National Standards for Business Education

BE24 Technological Communication
BE30 Measurements
BE64 Input Technologies

BE74 Privacy and Ethics

Related Academic Standards

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.

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.
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

Suggested References

Arford, J., & Burnside, J. (2005). *Advanced Microsoft Word 2003: Desktop publishing*. St. Paul, MN: Paradigm.

Arford, J., & Burnside, J. (2002). *Signature series–Advanced Microsoft Word 2002: Desktop publishing*. St. Paul, MN: EMC Paradigm.

Cram, C. (2002). *Desktop publishing–Illustrated projects*. Boston: Course Technology.

Microsoft Learning. (2005). *Microsoft official academic course: Microsoft Word 2003 expert skills*. New York: Irwin/McGraw-Hill.

Weixel, S. (2003). *Desktop publishing basics.* Boston: Course Technology.

Course Name: Database Management

Course Abbreviation: BOT 2323

Classification: AOC Core (Accounting, Office Systems, and Microcomputer); Vocational-Technical Elective (Billing and Coding)

Description: This course applies database concepts for designing and manipulating data files and formatting output as complex documents and reports. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Microcomputer Applications (BOT 1133) and Records Management (BOT 1413) or by consent of instructor

Competencies and Suggested Objectives
1. Manipulate database files and format complex documents and reports. a. Design and create a database using specific criteria. (1) Open objects in multiple views. (2) Move among records. (3) Create and modify tables. (4) Create lookup fields and modify field properties. b. Modify database file structure and records to produce desired output. (1) Create and modify queries. (2) Enter, edit, sort, filter, and delete records. c. Demonstrate file management techniques. d. Define and create relationships enforcing referential integrity. e. Create, format, preview, and print reports. f. Design, create, and modify custom screen formats. g. Create and manipulate data using multiple databases. h. Perform mathematical operations, and relate their applications to existing information in a database.

STANDARDS

National Standards for Business Education

BE27 Mathematical Foundations
BE28 Number Relationships and Operations
BE29 Patterns, Functions, and Algebra
BE30 Measurements
BE31 Statistics and Probability
BE32 Problem-Solving Applications

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
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.

Workplace Skills for the 21st Century

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, 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

Suggested References

Briggs, T. (2003). *New perspectives on Microsoft Access 2003 with VBA, advanced*. Boston: Course Technology.

Friedrichsen, L. (2003). *Course guide: Microsoft Office Access 2003–Illustrated Basic*. Boston: Course Technology.

Rutkosky, N., & Flynn, M. (2003). *Benchmark series. Microsoft Access 2003 specialist and expert.* St. Paul, MN: EMC Paradigm.

Shelly, G. B., Cashman, T. J., Pratt, P. J., & Last, M. Z. (2005). *Microsoft Access 2003: Comprehensive concepts and techniques*. Boston: Course Technology.

Shelly, G. B., Cashman, T. J., Pratt, P. J., & Last, M. Z. (2002). *Microsoft Office: Comprehensive concepts and techniques*. Boston: Course Technology.

Course Name: Computerized Accounting

Course Abbreviation: BOT 2413

Classification: Vocational-Technical Core

Description: This course applies basic accounting principles using a computerized accounting system. (3 sch: 2 hr. lecture, 2 hr. lab)

Pre/corequisite: Business Accounting (BOT 1433) or Principles of Accounting I (ACC 1213)

Competencies and Suggested Objectives

1. Analyze accounting transactions and enter data into a computerized accounting system.
   a. Differentiate between manual and computerized accounting.
      (1) Identify the advantages and disadvantages of a computerized accounting system.
      (2) Identify the importance of maintaining backup copies of data.
   b. Perform the operations of the accounting cycle on the computer using accounting software.
      (1) Develop and use a computerized general ledger system and maintain a chart of accounts.
      (2) Develop and use a computerized system for accounts receivable and accounts payable.
      (3) Utilize an integrated, computerized accounting system.
   c. Analyze financial statements prepared using accounting software.
      (1) Prepare balance sheets, income statements, and statements of owner's equity.
      (2) Prepare schedules of accounts payable and accounts receivable.
      (3) Prepare statements of change in financial position.
   d. Use accounting software to maintain inventory, depreciation, and payroll records.
      (1) Compute depreciation schedules.
      (2) Maintain inventory records.
      (3) Calculate and prepare payroll records.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE5 Interpretation and Use of Data

Related Academic Standards

C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
C4 Access, organize, and evaluate information.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills for the 21st Century

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, 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
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

Suggested References

Klooster, D. H., & Allen, W.W. (2004*). Integrated accounting for Windows* (4th ed.). Boston: Thomson Learning.

Sleeter, D. (2003). *Introduction to QuickBooks Pro 2002*. New York: McGraw Hill.

Ulmer, D. (2005). *Computer accounting with QuickBooks Pro 2004*. New York: McGraw Hill.

Yacht, C. (2005). *Computerized accounting essentials using QuickBooks*. New York: McGraw Hill.

Yacht, C. (2005). *Computerized accounting with Peachtree Complete 2004*. New York: McGraw Hill.

Yacht, C. (2005). *Excel accounting with student CD-ROM*. New York: McGraw Hill.

Course Name: Income Tax Accounting

Course Abbreviation: BOT 2423

Classification: Vocational-Technical Elective (Accounting)

Description: This course introduces tax accounting including federal income tax laws and report preparation. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Business Accounting (BOT 1433) or Accounting Principles I (ACC 1213)

Competencies and Suggested Objectives
1. Prepare federal and state income tax returns. a. Apply basic tax accounting terminology concepts and procedures. b. Determine the taxpayer filing deduction status. c. Calculate taxable income and tax liability. d. Prepare state and federal income tax returns with accompanying schedules.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE6 Basics of the Law
BE8 Agency and Employment
BE9 Business Organizations
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications
BE43 Earning a Living

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.

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

Workplace Skills for the 21st Century

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

Suggested References

American Institute of Certified Public Accountants. (n.d.). Retrieved August 24, 2004, from http://www.aicpa.org/index.htm

Internal Revenue Service, Department of the Treasury. (n.d.). Retrieved August 25, 2004, from http://www.irs.gov

Schisler, D. (2004). *Fundamentals of taxation 2004: A forms approach.* Upper Saddle River, NJ: Prentice-Hall.

Whittenburg, G. (2004). *Income tax fundamentals (2004 edition).* New York: Thomson.

Course Name: Payroll Accounting

Course Abbreviation: BOT 2463

Classification: Vocational-Technical Elective (Accounting)

Description: This course provides an in-depth study of payroll accounting. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Business Accounting (BOT 1433) or Accounting Principles I (ACC 1213)

Competencies and Suggested Objectives
1. Manipulate database files and format complex documents and reports. a. Demonstrate a basic understanding of the need for payroll and personnel records. b. Identify the various laws affecting payroll operations including the Fair Labor Standards Act. c. Prepare a payroll register using various ways of calculating employee wages. d. Journalize payroll transactions. e. Prepare various monthly, quarterly, and yearly reports and payroll tax forms. f. Comply with federal and state withholding tax deposit requirements.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE8 Agency and Employment
BE9 Business Organizations
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications
BE43 Earning a Living

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.

M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills for the 21st Century

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

Suggested References

American Institute of Certified Public Accountants. (n.d.). Retrieved August 24, 2004, from http://www.aicpa.org/index.htm

Bieg, B. (2004). *Payroll accounting*. New York: Thomson.

Internal Revenue Service, Department of the Treasury. (n.d.). Retrieved August 25, 2004, from http://www.irs.gov

Wood, M. (2001). *Payroll records and procedures* (4th ed.). New York: Glencoe McGraw-Hill.

Course Name: Cost Accounting

Course Abbreviation: BOT 2473

Classification: Vocational-Technical Elective (Accounting)

Description: This course provides an in-depth study of cost accounting for manufacturing business. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Business Accounting (BOT 1433) or Accounting Principles I (ACC 1213)

Competencies and Suggested Objectives
1. Demonstrate principles of cost accounting for a manufacturing business. a. Compare cost and financial accounting. b. Explain the support function of managerial accounting in the overall management picture. c. Compute direct and indirect costs. d. Examine the financial statement elements and cost relationships for a manufacturing business. e. Journalize entries for process cost systems and job cost systems. f. Prepare a cost of production report. g. Apply cost-volume-profit analysis. h. Apply the budgeting process to control operational decision making.

STANDARDS

National Standards for Business Education

BE1 The Accounting Cycle
BE2 The Accounting Process
BE3 Financial Statements
BE4 Special Applications
BE24 Technological Communication
BE27 Mathematical Foundations
BE32 Problem-Solving Applications
BE33 Allocation of Resources

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

Workplace Skills for the 21st Century

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

Suggested References

American Institute of Certified Public Accountants. (n.d.). Retrieved August 24, 2004, from http://www.aicpa.org/index.htm

Horngren, C. (2005). *Introduction to management accounting.* Upper Saddle River, NJ: Prentice Hall.

Needles, B. (2005). *Managerial accounting.* Boston: Houghton Mifflin.

Warren, C. (2005). *Accounting* (21st ed.). New York: Thomson.

Course Name: Medical Machine Transcription I

Course Abbreviation: BOT 2523

Classification: AOC Core (Billing and Coding); Vocational-Technical Elective (Medical Office)

Description: This course is designed to teach transcription of various medical documents. (3 sch: 1 hr. lecture, 4 hr. lab)

Prerequisites: Document Formatting and Production (BOT 1113), Medical Office Terminology I (BOT 1613), and Medical Office Terminology II (BOT 1623)

Competencies and Suggested Objectives
1. Demonstrate proper and effective use of transcription equipment. a. Perform safe and hygienic operation of equipment. b. Acquire proper techniques for the use of transcription equipment. c. Transcribe medical reports accurately and expediently from various medical specialties. (1) Apply medical terminology and spell medical terms correctly. (2) Recognize spoken medical terms and categories. (3) Employ proper techniques for using medical resource materials. (4) Accurately and expediently transcribe reports from various medical specialties. (5) Transcribe medical reports dictated by doctors with foreign accents. d. Select and use appropriate references. (1) Use hard copy resources to include medical dictionaries (abridged and unabridged) and pharmacology references. (2) Use electronic resources to include medical terminology software, audio and videocassettes, and CD-ROM.

STANDARDS

AAMT Exam Specification for Certified Medical Transcriptionist

MT1 Medical Language
MT2 Anatomy and Physiology
MT3 Disease Processes
MT4 English Language
MT5 The Healthcare Record and Important Medicolegal Issues
MT6 Report Types
MT7 Specialty Areas
MT8 Interpretability
MT9 Transcription Issues Covered

Related Academic Standards

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.
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.
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.

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.

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

Suggested References

American Association for Medical Transcription. (2004). Retrieved June 10, 2004, from http://www.aamt.org

Becklin, K., & Sunnarborg, E. (2003). *Medical office transcription: An introduction to medical transcription text-workbook* (2nd ed.). New York: McGraw Hill.

Campbell, L. C., Heath, D. S., & Pitman, S. C. (2000). *Medical transcription fundamentals and practices (interactive).* Upper Saddle River, NJ: Prentice-Hall.

Diehl, M. O. (2002). *Medical transcription: Techniques and procedures.* St. Louis, MO: Elsevier.

Destafano, C., & Federman, F. M. (2004). *Advanced medical transcription.* St. Louis, MO: Saunders.

Dorland, W. A. (2003). *Dorland's illustrated medical dictionary* (30th ed.). St. Louis, MO: Saunders.

Ettinger, B., & Ettinger, A. G. (2003). *Medical transcription* (2nd ed.). St. Paul, MN: Paradigm.

Ireland, P. A., & Novak, M.A. (2005). *Hillcrest Medical Center: Beginning medical transcription course* (6th ed.). New York: Thomson Delmar Learning.

Fordney, M. T., & Diehl, M. O. (1999). *Medical transcription guide: Do's and don'ts.* St. Louis, MO: Saunders.

Stedman, T. L. (2004). *Stedman's concise medical dictionary, illustrated* (4th ed.). Philadelphia: Lippincott Williams & Wilkins.

Tessier, C. J. (2002). *The AAMT book of style for medical transcription.* Modesto, CA: AAMT.

Course Name: Medical Machine Transcription II

Course Abbreviation: BOT 2533

Classification: Vocational-Technical Elective (Medical Office and Billing and Coding)

Description: This course is designed to continue teaching transcription of various medical documents including dictation given by doctors with foreign accents and additional medical specialties. (3 sch: 1 hr. lecture, 4 hr. lab)

Prerequisite: Medical Machine Transcription I (BOT 2523)

Competencies and Suggested Objectives
1. Continue transcribing medical reports accurately and expediently from various medical specialties. a. Increase medical vocabulary. b. Continue to employ proper techniques for using medical resources. c. Accurately and expediently transcribe medical reports from additional specialties. d. Transcribe medical reports dictated by doctors with foreign accents. e. Select and use appropriate references. (1) Use hard copy resources to include medical dictionaries (abridged and unabridged) and pharmacology references. (2) Use electronic resources to include medical terminology software, audio and videocassettes, and CD-ROM.

STANDARDS

AAMT Exam Specifications for Certified Medical Transcriptionist

MT1 Medical Language
MT2 Anatomy and Physiology
MT3 Disease Processes
MT4 English Language
MT5 The Healthcare Record and Important Medicolegal Issues
MT6 Report Types
MT7 Specialty Areas
MT8 Interpretability
MT9 Transcription Issues Covered

Related Academic Standards

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.
S1 Explain the Anatomy and Physiology of the human body.
S3 Relate the nine major phyla of the kingdom animalia according to morphology, anatomy, and physiology.

Workplace Skills for the 21st Century

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.

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

Suggested References

American Association for Medical Transcription. (2004). Retrieved June 10, 2004, from http://www.aamt.org

Becklin, K., & Sunnarborg, E. (2003). *Medical office transcription: An introduction to medical transcription text-workbook* (2nd ed.). New York: McGraw Hill.

Campbell, L. C., Heath, D. S., & Pitman, S. C. (2000). *Medical transcription fundamentals and practices (interactive).* Upper Saddle River, NJ: Prentice-Hall.

Diehl, M. O. (2002). *Medical transcription: Techniques and procedures.* St. Louis, MO: Elsevier.

Destafano, C., & Federman, F. M. (2004). *Advanced medical transcription.* St. Louis, MO: Saunders.

Dorland, W. A. (2003). *Dorland's illustrated medical dictionary* (30th ed.). St. Louis, MO: Saunders.

Ettinger, B., & Ettinger, A. G. (2003). *Medical transcription* (2nd ed.). St. Paul, MN: Paradigm.

Ireland, P. A., & Novak, M.A. (2005). *Hillcrest Medical Center: Beginning medical transcription course* (6th ed.). New York: Thomson Delmar Learning.

Fordney, M. T., & Diehl, M. O. (1999). *Medical transcription guide: Do's and don'ts.* St. Louis, MO: Saunders.

Stedman, T. L. (2004). *Stedman's concise medical dictionary, illustrated* (4th ed.). Philadelphia: Lippincott Williams & Wilkins.

Stewart, D. L., & Lott, W. L. (1998). *Forrest General Medical Center: Advanced medical terminology and transcription course* (2nd ed.). New York: Delmar.

Tessier, C. J. (2002). *The AAMT book of style for medical transcription.* Modesto, CA: AAMT.

Course Name: Administrative Office Procedures

Course Abbreviation: BOT 2723

Classification: AOC Core (Office Systems)

Description: This course will provide comprehensive coverage and integration of business skills and issues, develop critical-thinking and problem-solving skills, and establish a foundation in business procedures. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Word Processing (BOT 1143)

Competencies and Suggested Objectives
1. Prioritize the responsibilities of an administrative assistant in relation to global competition with emphasis on personal productivity, customer service, and responsible business practices. a. Examine employment, health, and safety issues. b. Apply organizational and time management principles to increase productivity. c. Process mail and determine the most appropriate method to use in sending domestic and international mail. d. Demonstrate an understanding of reprographics equipment, procedures, and applications. e. Demonstrate knowledge of telephone systems and good telephone protocol. f. Demonstrate knowledge of the processes involved in making national and international travel arrangements and issues related to such travel. g. Plan and conduct a meeting.

STANDARDS

National Standards for Business Education

BE18 Workplace Expectations
BE20 School-to-Career Transition
BE21 Lifelong Learning
BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication
BE25 Employment Communication
BE26 Organizational Communication
BE27 Mathematical Foundations
BE89 Personal Management Skills
BE90 Ethics And Social Responsibility
BE93 Technology and Information Management

Related Academic Standards

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.
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.
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.

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.

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

Suggested References

Campbell, J. (2004). *Microsoft office specialist exam reference for Microsoft Office 2003.* Boston: Course Technology.

Clark, J. L., & Clark, L. R. (2004). *HOW 10: A handbook for office professionals.* Cincinnati, OH: South-Western.

Fulton-Calkins, P. (2003). *Technology & procedures for administrative office professionals* (12th ed.). Cincinnati, OH: South-Western.

Fulton-Calkins, P., & Hanks, J. D. (2000). *Procedures for the office professional.* Cincinnati, OH: South-Western.

Hanna, S. (2005). *Career by design: Communicating your way to success* (3rd ed.). Upper Saddle River, NJ: Pearson Education.

Jennings, S., & James S. (2004). *Internet office projects* (2nd ed.). Cincinnati, OH: South-Western.

Jennings, S., Stulz, K. M., & Rigby, S. (2003). *Online training for the administrative professional.* Cincinnati, OH: South-Western.

Levitt, J. G. (2004). *Your career: How to make it happen* (5th ed.). Cincinnati, OH: South-Western.

Odgers, P. (2005). *Administrative office management* (13th ed.). Cincinnati, OH: South-Western.

Parsons, J. J., & Oja, D. (2004). *Practical Office 2003.* Boston: Course Technology.

Pinard, N. J. (2005). *Microsoft Office specialist exam reference for Microsoft Office 2003.* Boston: Course Technology.

Rokes, B. (2002). *What your employer expects.* Cincinnati, OH: South-Western.

Schulman, M., & Kowadlo, B. F. (2000). *Working smart* (2nd ed.). Cincinnati, OH: South-Western.

Course Name: Medical Office Concepts

Course Abbreviation: BOT 2743

Classification: AOC Core (Medical Office and Billing and Coding)

Description: This course will provide coverage and integration of medical office skills and issues. Problem solving will be emphasized. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Document Formatting and Production (BOT 1113) and Records Management (BOT 1413)

Competencies and Suggested Objectives
1. Develop skills for personal and professional development. a. Discuss the necessity of lifelong learning. b. Describe the benefits of professional affiliations and certification programs. c. Develop a plan for personal, educational, and professional growth. d. Interpret ethical and legal responsibilities of office personnel.
2. Demonstrate essential skills for the employment process. a. Identify techniques to build a positive self-image. b. Project a professional image by applying the basics of good health practices and personal grooming and selecting a proper wardrobe. c. Research sources for locating job opportunities. d. Demonstrate effective employment interview skills.
3. Demonstrate interpersonal skills that affect personal and professional development. a. Discuss principles of effective time, stress, and money management. b. Demonstrate business etiquette skills in professional situations. c. Apply problem-solving and conflict-resolution skills to given case studies. d. Analyze case studies to demonstrate self-motivation, self-management, ethical business practices, a positive attitude, and problem-solving skills. e. Demonstrate appropriate verbal and nonverbal communication and listening skills that demonstrate sensitivity to diverse populations, including people from various cultural backgrounds and those with special needs.
4. Apply office management techniques. a. Acquire and practice medical office administrative responsibilities. (1) Simulate medical office telephone techniques. (2) Apply guidelines of medical office appointment scheduling. (3) Perform the steps in the medical office filing process. (4) Compose mailable written communications. b. Prepare and process incoming and outgoing mail and electronic communications. (1) Prepare and process mail. (2) Contrast various postal services. (3) Process electronic communications including e-mail and facsimile. (4) Demonstrate two-way videoconferencing.

c. Use reprographics equipment.
   (1) Identify types of copiers and their features.
   (2) Evaluate the most appropriate method to use in copying documents, i.e., scanning, copying, or printing.
   (3) Generate quality document reproductions.
d. Demonstrate medical office management techniques.
   (1) Design a patient information brochure.
   (2) Determine appropriate office procedures using an office procedures manual as a guide.
   (3) Organize the medical office work area.
   (4) Research and present information concerning safety and hygiene procedures in the medical office to include floors, electrical cords, fire hazards, and furniture, and bio-hazardous materials.
   (5) Research and present information concerning the Health Insurance Portability and Accountability Act of 1996 (HIPPA) mandates to include:
      - privacy of health information.
      - standards of electronic transactions of health information and claims.
      - security of electronic health information.
      - national identifiers for the parties in health care transactions.
e. Discuss responsibility toward housekeeping duties, laundry, maintenance, supplies, and the patient lobby.
f. Explain responsibilities of maintaining and paying office expenses.
g. Arrange medical meetings and travel.
   (1) Plan a formal meeting.
   (2) Prepare minutes of a meeting.
   (3) Analyze various methods of travel and determine the most appropriate method.
   (4) Create an itinerary.

STANDARDS

National Standards for Business Education

BE16 Self-Awareness
BE17 Career Research
BE18 Workplace Expectations
BE19 Career Strategy
BE20 School-to-Career Transition
BE21 Lifelong Learning
BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication
BE25 Employment Communication
BE26 Organizational Communication
BE27 Mathematical Foundations
BE64 Input Technologies

BE74 Privacy and Ethics
BE79 Global Business Ethics
BE89 Personal Management Skills
BE90 Ethics And Social Responsibility
BE93 Technology and Information Management

AAMT Exam Specifications for Certified Medical Transcriptionist

MT4 English Language
MT5 The Healthcare Record and Important Medicolegal Issues

AHIMA Registered Health Information Administrator Competency Statements

HI6 Healthcare Delivery Systems
HI7 Legal and Ethical Issues

Related Academic Standards

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.
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.
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.

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.

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

Suggested References

American Health Information Management Association. (2004). *Health information management resources*. Retrieved September 17, 2004, from http://www.ahima.org/infocenter/

Becklin, K. J. (2003). *Medical office procedures* (5th ed.). New York: Glencoe McGraw-Hill.

Fordney, M. T., French, L. L., & Follis J. J. (2004). *Administrative medical assisting.* New York: Thomson Delmar Learning.

Krager, D., & Krager, C. (2005). *HIPAA for medical office personnel.* Clifton Park, NY: Thomson/Delmar Learning.

United States Department of Health and Human Services. (2004). Retrieved December 7, 2004, from http://www.hhs.gov/ocr/index.html

Warren, M. T., Eason, C. C., Burch, P. F., & Pfeiffer-Ewens, J. (2002). *Medical assisting: A commitment to service—administrative competencies.* St. Paul, MN: EMC/Paradigm.

Course Name: Medical Information Management

Course Abbreviation: BOT 2753

Classification: AOC Core (Medical Office and Billing and Coding)

Description: This course will continue coverage of medical office issues with emphasis on health insurance filing. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Medical Office Concepts (BOT 2743)

Competencies and Suggested Objectives
1. Demonstrate medical office patient billing procedures. a. Utilize fee schedules. b. Prepare and maintain patient accounts. c. Demonstrate the process of aging patient accounts. d. Maintain monthly and yearly summaries of patient activity.
2. Process health insurance claim forms. a. Describe the various types of health insurance coverage. b. Use proper electronic equipment to prepare health insurance claim forms. c. Explain the purpose of workers' compensation insurance and alternative financing plans. d. Differentiate between health insurance and liability insurance coverage, i.e., home, auto, or business (customer) related accidents. e. Demonstrate use of ICD and CPT coding.

STANDARDS

National Standards for Business Education

BE27 Mathematical Foundations
BE28 Number Relationships and Operations
BE59 Impact on Society
BE63 Application Software

AAMT Exam Specifications for Certified Medical Transcriptionist

MT1 Medical Language
MT2 Anatomy and Physiology
MT3 Disease Processes

AHIMA Registered Health Information Administrator Competency Statements

HI1 Data Structure, Content and Use
HI2 Clinical Classification Systems – ICD-9-CM Coding
HI3 Clinical Classification Systems – CPT Coding
HI9 Information Technology
HI10 Health Information Systems

AHIMA Certified Coding Associate Competencies

CA1 Health Data Content, Requirements, and Standards
CA2 Clinical Classification Reimbursement Methodologies

Related Academic Standards

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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M4 Explore the concepts of measurement.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.
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 for the 21st Century

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
T6 Technology problem-solving and decision-making tools

Suggested References

American Health Information Management Association. (2004). *Coding*. Retrieved September 17, 2004, from http://www.ahima.org/coding/

American Health Information Management Association. (2004). *Health information management resources*. Retrieved September 17, 2004, from http://www.ahima.org/infocenter/

Gartee, R. (2004). *The medical manager version 10 student edition for Windows.* New York: Thompson Delmar Learning.

Sanderson, S. M. (2005). *Computers in the medical office, using NDC Medisoft Advanced* (4th ed.). New York: McGraw-Hill.

Course Name: CPT Coding

Course Abbreviation: BOT 2643/BCT 2123

Classification: AOC Core (Billing and Coding)

Description: This course is an introduction to the field of procedural coding and requirements for insurance reimbursement. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Medical Office Terminology I (BOT 1613), Medical Office Terminology II (BOT 1623), or consent of instructor.

Competencies and Suggested Objectives
1. Explore the purpose and use of the CPT manual. a. Discuss the history of CPT coding. b. Recognize and apply the conventions, format, index considerations, and guidelines. c. Distinguish among patient statuses, places of service, and types of service.
2. Apply CPT coding guidelines. a. Discuss the purpose of procedural coding. b. Assign specialty codes using the CPT system. c. Assign appropriate modifiers and evaluation and management codes (E/M codes). d. Assign procedure codes using HCPCS. e. Analyze records to assign patients to severity of illness categories.
3. Discuss third-party payer requirements and global fee periods.

STANDARDS

American Health Information Management Association
Standards of Ethical Coding

EC1 Coding professionals are expected to support the importance of accurate, complete, and consistent coding practices for the production of quality healthcare data.

EC2 Coding professionals in all healthcare settings should adhere to the ICD-9-CM (International Classification of Diseases, 9th revision, Clinical Modification) coding conventions, official coding guidelines approved by the Cooperating Parties (AHIMA, AHA, and CMS), the CPT (Current Procedural Terminology) rules established by the American Medical Association, and any other official coding rules and guidelines established for use with mandated standard code sets. Selection and sequencing of diagnoses and procedures must meet the definitions of required data sets for applicable healthcare settings.

EC3 Coding professionals should use their skills, their knowledge of currently mandated coding and classification systems, and official resources to select the appropriate diagnostic and procedural codes.

EC4 Coding professionals should only assign and report codes that are clearly and consistently supported by physician documentation in the health record.

EC5 Coding professionals should only consult physicians for clarification and additional documentation prior to code assignment when there is conflicting or ambiguous data in the health record.

EC6 Coding professionals should not change codes or the narratives of codes on the billing abstract so that meanings are misrepresented. Diagnoses or procedures should not be inappropriately included or excluded because payment or insurance policy coverage requirements will be affected. When individual payer policies conflict with official coding rules and guidelines, these policies should be obtained in writing whenever possible. Reasonable efforts should be made to educate the payer on proper coding practices in order to influence a change in the payer's policy.

EC7 Coding professionals, as members of the healthcare team, should assist and educate physicians and other clinicians by advocating proper documentation practices, further specificity, and resequencing or inclusion of diagnoses or procedures when needed to more accurately reflect the acuity, severity, and the occurrence of events.

EC8 Coding professionals should participate in the development of institutional coding policies and should ensure that coding policies complement, not conflict with, official coding rules and guidelines.

EC9 Coding professionals should maintain and continually enhance their coding skills, as they have a professional responsibility to stay abreast of changes in codes, coding guidelines, and regulations.

EC10 Coding professionals should strive for optimal payment to which the facility is legally entitled, remembering that it is unethical and illegal to maximize payment by means that contradict regulatory guidelines.

American Health Information Management Association
Certified Coding Associate Competency Statements

CA1 Health Data Content, Requirements, and Standards
CA2 Clinical Classification Reimbursement Methodologies
CA3 Information Technology and Healthcare Delivery

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A5 Measurement (money, time, temperature, length, area, volume)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)

Workplace Skills for the 21st Century

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, 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
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

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Course Name: ICD Coding

Course Abbreviation: BOT 2653/BCT 2133

Classification: AOC Core (Billing and Coding)

Description: This course is an introduction to the field of diagnostic coding. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Medical Office Terminology I (BOT 1613), Medical Office Terminology II (BOT 1623), or consent of instructor.

Competencies and Suggested Objectives
1. Explore ICD coding. a. Discuss the history of ICD coding. b. Apply ICD coding conventions, format, index considerations, and guidelines. c. Apply coding and sequencing rules. d. Discuss the role of various providers and disciplines throughout the continuum of health care services.
2. Apply ICD coding guidelines. a. Discuss the purpose of diagnostic and procedural coding. b. Assign diagnosis codes to the highest level of specificity using the ICD system.
3. Examine the use of supplementary classification codes. a. Assign appropriate Health Status/Health Services codes (V codes) and External Causes of Injury and Poisoning codes (E codes). b. Use Morphology of Neoplasms codes (M codes) appropriately.
4. Explain the use of Volume III of the ICD system.

STANDARDS

American Health Information Management Association
Standards of Ethical Coding

EC1 Coding professionals are expected to support the importance of accurate, complete, and consistent coding practices for the production of quality healthcare data.

EC2 Coding professionals in all healthcare settings should adhere to the ICD-9-CM (International Classification of Diseases, 9th revision, Clinical Modification) coding conventions, official coding guidelines approved by the Cooperating Parties (AHIMA, AHA, and CMS), the CPT (Current Procedural Terminology) rules established by the American Medical Association, and any other official coding rules and guidelines established for use with mandated standard code sets. Selection and sequencing of diagnoses and procedures must meet the definitions of required data sets for applicable healthcare settings.

EC3 Coding professionals should use their skills, their knowledge of currently mandated coding and classification systems, and official resources to select the appropriate diagnostic and procedural codes.

EC4 Coding professionals should only assign and report codes that are clearly and consistently supported by physician documentation in the health record.
EC5 Coding professionals should only consult physicians for clarification and additional documentation prior to code assignment when there is conflicting or ambiguous data in the health record.
EC6 Coding professionals should not change codes or the narratives of codes on the billing abstract so that meanings are misrepresented. Diagnoses or procedures should not be inappropriately included or excluded because payment or insurance policy coverage requirements will be affected. When individual payer policies conflict with official coding rules and guidelines, these policies should be obtained in writing whenever possible. Reasonable efforts should be made to educate the payer on proper coding practices in order to influence a change in the payer's policy.
EC7 Coding professionals, as members of the healthcare team, should assist and educate physicians and other clinicians by advocating proper documentation practices, further specificity, and resequencing or inclusion of diagnoses or procedures when needed to more accurately reflect the acuity, severity, and the occurrence of events.
EC8 Coding professionals should participate in the development of institutional coding policies and should ensure that coding policies complement, not conflict with, official coding rules and guidelines.
EC9 Coding professionals should maintain and continually enhance their coding skills, as they have a professional responsibility to stay abreast of changes in codes, coding guidelines, and regulations.
EC10 Coding professionals should strive for optimal payment to which the facility is legally entitled, remembering that it is unethical and illegal to maximize payment by means that contradict regulatory guidelines.

American Health Information Management Association
Certified Coding Associate Competency Statements

CA1 Health Data Content, Requirements, and Standards
CA2 Clinical Classification Reimbursement Methodologies
CA3 Information Technology and Healthcare Delivery

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A5 Measurement (money, time, temperature, length, area, volume)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)

Workplace Skills for the 21st Century

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
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

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Course Name: Advanced Coding

Course Abbreviation: BOT 2663

Classification: AOC Core (Billing and Coding)

Description: This course includes advanced analysis of diagnostic and procedural coding systems. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: CPT Coding (BOT 2643/BCT 2123) and ICD Coding (BOT 2653/BCT 2133)

Competencies and Suggested Objectives
1. Review, analyze, and interpret patient records as coding source documents. a. Analyze patient records to determine the appropriate diagnoses/procedure to be coded to receive the highest level of reimbursement. b. Verify codes and coding sequence involving complex medical cases. c. Abstract records for department indices, databases/registries, using scenarios or case studies.
2 Analyze supporting documentation contained in patient health records. a. Discuss health record documentation guidelines. b. Analyze documentation and code assignments contained in a health record to verify its accuracy and completeness, using examples, simulations, or case studies. c. Analyze health records to ensure that documentation supports the diagnosis and reflects the progress, clinical findings, and discharge status of the patient.

STANDARDS

American Health Information Management Association
Standards of Ethical Coding

EC1 Coding professionals are expected to support the importance of accurate, complete, and consistent coding practices for the production of quality healthcare data.

EC2 Coding professionals in all healthcare settings should adhere to the ICD-9-CM (International Classification of Diseases, 9th revision, Clinical Modification) coding conventions, official coding guidelines approved by the Cooperating Parties (AHIMA, AHA, and CMS), the CPT (Current Procedural Terminology) rules established by the American Medical Association, and any other official coding rules and guidelines established for use with mandated standard code sets. Selection and sequencing of diagnoses and procedures must meet the definitions of required data sets for applicable healthcare settings.

EC3 Coding professionals should use their skills, their knowledge of currently mandated coding and classification systems, and official resources to select the appropriate diagnostic and procedural codes.

EC4 Coding professionals should only assign and report codes that are clearly and consistently supported by physician documentation in the health record.

EC5 Coding professionals should only consult physicians for clarification and additional documentation prior to code assignment when there is conflicting or ambiguous data in the health record.

EC6 Coding professionals should not change codes or the narratives of codes on the billing abstract so that meanings are misrepresented. Diagnoses or procedures should not be inappropriately included or excluded because payment or insurance policy coverage requirements will be affected. When individual payer policies conflict with official coding rules and guidelines, these policies should be obtained in writing whenever possible. Reasonable efforts should be made to educate the payer on proper coding practices in order to influence a change in the payer's policy.

EC7 Coding professionals, as members of the healthcare team, should assist and educate physicians and other clinicians by advocating proper documentation practices, further specificity, and resequencing or inclusion of diagnoses or procedures when needed to more accurately reflect the acuity, severity, and the occurrence of events.

EC8 Coding professionals should participate in the development of institutional coding policies and should ensure that coding policies complement, not conflict with, official coding rules and guidelines.

EC9 Coding professionals should maintain and continually enhance their coding skills, as they have a professional responsibility to stay abreast of changes in codes, coding guidelines, and regulations.

EC10 Coding professionals should strive for optimal payment to which the facility is legally entitled, remembering that it is unethical and illegal to maximize payment by means that contradict regulatory guidelines.

American Health Information Management Association
Certified Coding Associate Competency Statements

CA1 Health Data Content, Requirements, and Standards
CA2 Clinical Classification Reimbursement Methodologies
CA3 Information Technology and Healthcare Delivery

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A5 Measurement (money, time, temperature, length, area, volume)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)

Workplace Skills for the 21st Century

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
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

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Course Name: Medical Insurance Billing

Course Abbreviation: BOT 2673

Classification: AOC Core (Billing and Coding)

Description: This course is a culmination of skills and knowledge of appropriate procedures for generating, processing, and submitting health insurance claims to private and governmental health insurance programs. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: CPT Coding (BOT 2643/BCT 2123) and ICD Coding (BOT 2653/BCT 2133)

Competencies and Suggested Objectives
1. Research and apply information from appropriate current reference guides involving federal, commercial, and general government/state programs. a. Interpret and apply information from current reference guides. b. Access online manuals; download and print information as needed. c. Complete claim forms for various insurance agencies such as Medicare, Medicaid, TriCare, Blue Cross/Blue Shield, HMOs, PPOs, Workers' Compensation, and commercial.
2. Demonstrate appropriate customer service techniques using effective oral and written communication and conflict resolution. a. Explain patient statement/billing procedures to patients/family members. b. Simulate communication with Medicare/Medicaid/private insurance carriers regarding claims/bills. c. Simulate communication between departments of the hospital and/or physicians' offices. d. Simulate professional communication with physicians.
3. Outline the steps of the billing process. a. Identify the origin of itemized charges.
4. Investigate health plan payment denials. a. Determine reasons for denial of claims using scenarios. b. Perform procedures for resubmitting claims for payment.
5. Assist in using coded data for strategic planning/reporting. a. Query databases to retrieve information. b. Perform calculations related to employee workload and productivity, etc. using information from the query and a calculator. c. Identify applications for line, bar, and pie graphs, and scatter diagrams.
6. Examine reimbursement classification systems such as DRGs, APGs, RBRVS, RUGs, APCs, etc. a. Identify and discuss prospective payment systems related to various healthcare facilities. b. Evaluate health records to determine compliance with reimbursement regulations and standards of various agencies, using examples, simulations, or case studies. c. Calculate payments based on case-mix and payment rates, using the payment formula.

7. Analyze medical office records for accuracy and completeness.
   a. Discuss the importance of timeliness, completeness, accuracy, and appropriateness of data and data sources in regard to patient care, management, billing reports, and/or databases.
   b. Analyze medical office records.

STANDARDS

American Health Information Management Association
Certified Coding Associate Competency Statements

CA1 Health Data Content, Requirements, and Standards
CA2 Clinical Classification Reimbursement Methodologies
CA3 Information Technology and Healthcare Delivery

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)

Workplace Skills for the 21st Century

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
T3 Technology productivity tools

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Fordney, M. (2004). *Insurance handbook for the medical office* (8th ed.). St. Louis, MO: Saunders.

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Course Name: Business Communication

Course Abbreviation: BOT 2813

Classification: Vocational-Technical Core

Description: This course develops communication skills with emphasis on principles of writing business correspondence and reports, and preparing presentations using electronic media. (3 sch: 3 hr. lecture)

Prerequisites: Mechanics of Communication (BOT 1713) and Document Formatting and Production (BOT 1113) or consent of instructor

Competencies and Suggested Objectives
1. Compose written communications and presentations. a. Identify direct, indirect, and persuasive approaches to writing business correspondence. b. Develop skills to produce clear, concise, complete, accurate, and courteous messages. c. Compose effective business letters and e-mail messages. d. Apply communications skills to the employment process. (1) Construct or update a resume. (2) Compose a letter of application. (3) Compose a follow-up letter. (4) Complete an employment application. (5) Apply appropriate techniques for employment interviews. e. Implement appropriate skills for communicating with a diverse workforce and international audiences.

STANDARDS

National Standards for Business Education

BE16 Self-Awareness
BE17 Career Research
BE19 Career Strategy
BE22 Foundations of Communication
BE24 Technological Communication
BE25 Employment Communication
BE79 Global Business Ethics

Related Academic Standards

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.
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.

Workplace Skills for the 21st Century

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

T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools

Suggested References

Beskeen, D. W. (2004). *Microsoft Office PowerPoint 2003—Illustrated introductory.* Boston: Course Technology.

Clark, J. L., & Clark, L. R. (2004). *HOW 10: A handbook for office professionals* (10th ed.). Cincinnati, OH: South-Western.

Guffey, M. E. (2003). *Business communication: Process & product* (4th ed.). Cincinnati, OH: South-Western.

Guffey, M. E., & Murphy, J. (2001). *The New York Times guide to business communication.* Cincinnati, OH: South-Western.

Seguin, J. A. (2000). *Business communication, the real world, and your career.* Cincinnati, OH: South-Western.

Course Name: Communication Technology

Course Abbreviation: BOT 2823

Classification: AOC Core (Office Systems, Medical Office, and Microcomputer); Vocational-Technical Elective (Billing and Coding)

Description: This course will present an overview of the resources available for communication using current technology. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisite: Word Processing (BOT 1143) or by consent of Instructor

Competencies and Suggested Objectives
1. Assess current and emerging technology affecting communication. a. Define terms associated with technology in communication. b. Communicate via e-mail, fax, and teleconference. c. Employ speech recognition and handwriting recognition software and equipment to input and edit data. d. Use foreign language translation software to translate information from two or more languages. e. Demonstrate the use of a personal digital assistant (PDA). f. Explain the use of a Global Positioning System (GPS). g. Research current and future applications of virtual reality.
2. Identify issues related to the use of resources for online communication. a. Investigate ethical, legal, and security issues pertaining to online resources. b. Investigate cultural, political, religious, and social differences involved in communicating with people from other countries.
3. Present information using current technology. a. Create and deliver a presentation using presentation design software, a digital camera, and scanner. b. Design web pages. (1) Critique the design of various websites and assess validity of their content. (2) Create and maintain web pages using effective web page design techniques.

STANDARDS

National Standards for Business Education

BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication
BE59 Impact on Society
BE64 Input Technologies
BE65 Information Retrieval
BE74 Privacy and Ethics
BE78 International Business Communication

BE79 Global Business Ethics

Related Academic Standards

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.

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.

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

Suggested References

Beskeen, D.W. (2004). *Microsoft Office PowerPoint 2003*. Boston: Thomson Learning.

Evans, J. (2004). *Microsoft Office FrontPage 2003*. Boston: Thomson Learning.

Layng, J. M., & Rosner, T. L. (2004). *Media design—The practice of communications technologies*. Upper Saddle River, NJ: Pearson Education.

Moore, R. (2004). *Telecommunications skills*. New York: Thomson Learning.

Course Name: Integrated Computer Applications

Course Abbreviation: BOT 2833

Classification: AOC Core (Accounting, Office Systems, and Microcomputer)

Description: This course integrates activities using applications software including word processing, database, spreadsheet, graphics, and multimedia. (3 sch: 2 hr. lecture, 2 hr. lab)

Prerequisites: Word Processing (BOT 1143), Business Communication (BOT 2813), Database Management (BOT 2323), and Electronic Spreadsheet (BOT 1813), or by consent of Instructor

Competencies and Suggested Objectives
1. Create integrated documents using applications software. a. Create integrated business documents transferring data among word processing, presentation, database, spreadsheet, and personal information management applications. b. Use advanced functions of software applications.

STANDARDS

National Standards for Business Education

BE27 Mathematical Foundations
BE28 Number Relationships and Operations
BE29 Patterns, Functions, and Algebra
BE30 Measurements
BE31 Statistics and Probability
BE32 Problem-Solving Applications

Related Academic Standards

C1 Interpret written material.
C2 Interpret visual materials (maps, charts, graphs, tables, etc.).
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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M4 Explore the concepts of measurement.
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.

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 for the 21st Century

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, 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

Suggested References

Brooks, L. (2003). *Integrated computer projects*. St. Paul, MN: EMC Paradigm.

Morrison, C., & Cable, S. (2002). *Office XP, Word, Excel, Access, PowerPoint, Outlook.* Cincinnati, OH: South-Western.

Olinzock, A., Arney, J., & Skean, W. (2005). *Integrated business projects.* Cincinnati, OH: South-Western.

Press, D. (2005). *Advanced computer applications: An information technology approach.* St. Paul, MN: EMC Paradigm.

Rutkosky, N. (2002). *Benchmark series: Microsoft Office XP comprehensive expert package.* St. Paul, MN: EMC Paradigm.

Course Name: Supervised Work Experience

Course Abbreviation: BOT 2913

Classification: Vocational-Technical Elective (Accounting, Office Systems)

Description: This course provides related on-the-job training in an office environment. This training must include at least 135 clock hours. (3 sch: 9 hr. externship)

Prerequisite: Successful completion of at least 30 semester hours in the program and consent of the instructor

Competencies and Suggested Objectives
1. Support existing staff in an office environment. a. Apply skills developed in coursework. b. Practice good human relation skills. c. Assume responsibility for attendance and punctuality. d. Display appropriate appearance for an individual work environment. e. Compile a written training agreement in cooperation with the instructor and employer which details work schedule and wages, and specific tasks and skills to be mastered in the program. f. Compile a daily log of activities and tasks. g. Submit weekly reports to the instructor summarizing activities and tasks completed. h. Follow written guidelines for work experience program.

STANDARDS

National Standards for Business Education

BE18 Workplace Expectations
BE20 School-to-Career Transition
BE21 Lifelong Learning
BE22 Foundations of Communication
BE23 Social Communication
BE24 Technological Communication
BE25 Employment Communication
BE26 Organizational Communication
BE27 Mathematical Foundations
BE89 Personal Management Skills
BE90 Ethics And Social Responsibility
BE93 Technology and Information Management

Related Academic Standards

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.
M1 Relate number relationships, number systems, and number theory.
M2 Explore patterns and functions.
M7 Apply mathematical methods, concepts, and properties to solve a variety of real-world problems.

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

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

Suggested References

Clark, J. L., & Clark, L. R. (2004). *HOW 10: A handbook for office professionals.* Cincinnati, OH: South-Western.

Fulton-Calkins, P. (2003). *Technology & procedures for administrative office professionals* (12th ed.). Cincinnati, OH: South-Western.

Hanna, S. (2005). *Career by design: Communicating your way to success* (3rd ed.). Upper Saddle River, NJ: Pearson Education.

Jennings, S., & James S. (2004). *Internet office projects* (2nd ed.). Cincinnati, OH: South-Western.

Jennings, S., Stulz, K. M., & Rigby, S. (2003). *Online training for the administrative professional.* Cincinnati, OH: South-Western.

Levitt, J. G. (2004). *Your career: How to make it happen* (5th ed.). Cincinnati, OH: South-Western.

Odgers, P. (2005). *Administrative office management* (13th ed.). Cincinnati, OH: South-Western.

Parsons, J. J., & Oja, D. (2004). *Practical Office 2003.* Boston: Course Technology.

Pinard, N. J. (2005). *Microsoft Office specialist exam reference for Microsoft Office 2003.* Boston: Course Technology.

Rokes, B. (2002). *What your employer expects.* Cincinnati, OH: South-Western.

Schulman, M. & Kowadlo, B. F. (2000). *Working smart* (2nd ed.). Cincinnati, OH: South-Western.

Recommended Tools and Equipment for Office Systems Technology

CAPITALIZED ITEMS

1. Networked microcomputer lab with server—16 Workstations to include the following:
   a. Multimedia computer with CD-RW, speakers, sound card, internal modem, USB port for jump drive (1 per workstation)
   b. Handwriting recognition tablet (1 per workstation)
   c. Microphone headsets for speech recognition (1 per workstation)
   d. Laser printer (1 per lab)
   e. Scanner, color page (1 per lab)
   f. Fax capability
   g. Internet access
2. Dedicated telephone line with cordless telephone (1 per lab)
3. 2 Videoconference cameras
4. LCD display panel with screen (1 per lab)
5. Global Positioning System (1 per lab)
6. Personal digital assistant (1 per lab)
7. Digital camera (1 per lab)
8. Transcription units with head sets and WAV pedals (1 per student)
9. Software:
   a. Network software
   b. LAN manager software
   c. Network compatible word processing software
   d. Network compatible database management software
   e. Network compatible electronic spreadsheet software
   f. Network compatible presentation software
   g. Network compatible multitasking software
   h. Network compatible operating system software
   i. Network compatible desktop publishing software
   j. Network compatible scanning software
   k. Network compatible speech recognition software
   l. Network compatible handwriting recognition software
   m. Network compatible keyboarding software
   n. Additional clip art software
10. Access to the following:
    a. Copier
    b. TV/VCR
    c. Telephone simulation system

NON-CAPITALIZED ITEMS

1. 10-key electronic desktop calculators (1 per workstation)
2. Overhead projector

Recommended Tools and Equipment for Accounting Technology

CAPITALIZED ITEMS

1. Networked microcomputer lab with server—18 Workstations to include the following:
   a. Multimedia computer with CD RW, speakers, sound card, internal modem, USB port for jump drive (1 per workstation)
   b. Laser printer (1 per lab)
   c. Internet access
2. LCD display panel with screen (1 per lab)
3. Software
   a. Network compatible accounting software
      (1) Peachtree software
      (2) QuickBooks software
      (3) Educational accounting software
      (4) Income tax accounting software
      (5) Payroll accounting software
      (6) Financial accounting software
   b. Word processing software
   c. Presentation software
4. Data projector (1 per lab)
5. Scanner
6. Access to the following:
   a. Copier
   b. TV/VCR

NON-CAPITALIZED ITEMS

1. 10-key electronic desktop calculators
2. Overhead projector

Recommended Tools and Equipment for Medical Office Technology

CAPITALIZED ITEMS

1. Computer workstations (desk and chair) (one per student) (one handicapped accessible) to include the following:
   a. Multimedia computer with CD-RW, speakers, sound card, internal modem, USB port for jump drive (1 per workstation)
   b. Laser printer (1 per lab)
   c. Flatbed scanner (1 per lab)
   d. Internet access
2. Dedicated telephone line with cordless telephone (1 per lab)
3. LCD display panel with screen (1 per lab)
4. Proxima with dedicated computer interface (1 per lab)
5. Data projector (1 per lab)
6. Telephone simulation system (1 per lab)
7. Filmstrip projectors with sound (1 per lab)
8. TV/VCR (1 per lab)
9. Cassette copier (1 per lab)
10. Software:
    a. Word processing software
    b. Terminology for allied health professionals CD-ROM
    c. Medical spellcheck
    d. Telecommunications simulation software
    e. Practice management software
11. Anatomy visual aids
12. Dictated medical reports on cassettes with duplicating rights
13. 2 Videoconference cameras
14. Access to the following:
    a. Copier
    b. Fax machine
    c. Transcription equipment with WAV Pedals

NON-CAPITALIZED ITEMS

1. Audio cassette player/recorder (1per lab)
2. Overhead projector
3. Damon Instructional Systems and audio-visual instructional material
4. Instructional videos
5. Reference books
   a. The Surgical Word Book
   b. Physicians Desk Reference
   c. Dorland’s Medical Dictionary
6. Insurance forms
7. Practice sets

Recommended Tools and Equipment for Microcomputer Technology

CAPITALIZED ITEMS

1. Networked microcomputer lab with server—16 Workstations to include the following:
   a. Multimedia computer with CD-RW, speakers, sound card, internal modem, USB port for jump drive (1 per workstation)
   b. Handwriting recognition tablet (1 per workstation)
   c. Microphone headsets for speech recognition (1 per workstation)
   d. Laser printer (1 per lab)
   e. Scanner, color page (1 per lab)
   f. Fax capability
   g. Internet access
2. Dedicated telephone line with cordless telephone (1 per lab)
3. LCD display panel with screen (1 per lab)
4. Global Positioning System (1 per lab)
5. Personal digital assistant (1 per lab)
6. Digital camera (1 per lab)
7. 2 Videoconference cameras
8. Software:
   a. Network software
   b. LAN manager software
   c. Network compatible word processing software
   d. Network compatible database management software
   e. Network compatible electronic spreadsheet software
   f. Network compatible presentation software
   g. Network compatible multitasking software
   h. Network compatible operating system software
   i. Network compatible desktop publishing software
   j. Network compatible scanning software
   k. Network compatible speech recognition software
   l. Network compatible handwriting recognition software
   m. Network compatible keyboarding software
   n. Additional clip art software
9. Access to the following:
   a. Copier
   b. TV/VCR

NON-CAPITALIZED ITEMS

1. 10-key electronic desktop calculators (1 per workstation)
2. Overhead projector

Recommended Tools and Equipment for Medical Billing and Coding

CAPITALIZED ITEMS

1. Teacher workstation with laptop computer and docking station with 19" monitor, keyboard, and scrolling mouse
2. Microcomputer lab with server and tape backup
   a. Multimedia computer with swappable hard drives, DVD drive, CD-RW drive, speaker, sound card, high-end video card, minimum 17" flat panel monitor (1 per student)
   b. Internet capability
   c. Laser printer – network (1 per lab)
   d. Color laser printer – network (1 per lab – suggested)
   e. OCR scanner
3. Cassette duplicator (1 per lab)
4. Telephone simulation system (1 per lab)

NON-CAPITALIZED ITEMS

1. Anatomy and physiology visual aids

RECOMMENDED INSTRUCTIONAL AIDS

Teachers should have access to:

1. Dedicated telephone line for technical support (1 per lab)
2. Cordless telephone (1 per lab)
3. Data projector
4. Reflective projector screen (1 per lab)
5. Smart board
6. Access to copier
7. Access to fax machine
8. TV/VCR

Student Competency Profile for Office Systems 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 course.

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

Introduction to Keyboarding (BOT 1013)

_____1. Apply appropriate techniques to produce alphanumeric material.

Document Formatting and Production (BOT 1113)

_____1. Improve keyboarding skills.
_____2. Apply word processing skills to produce and format business documents with speed and accuracy.

Keyboard Skillbuilding (BOT 1123)

_____1. Key alphanumeric material with speed and accuracy.

Microcomputer Applications (BOT 1133)

_____1. Demonstrate skills using a variety of software applications.

Word Processing (BOT 1143)

_____1. Apply word processing skills to produce and format complex business documents with speed and accuracy.
_____2. Use advanced word processing functions.

Professional Development (BOT 1213)

_____1. Develop skills for personal and professional development.
_____2. Demonstrate essential skills for the employment process.
_____3. Demonstrate interpersonal skills that affect personal and professional development.

Applied Business Math (BOT 1313)

_____1. Solve mathematical problems using the touch method to operate a calculator or numeric keypad.
_____2. Calculate business transactions for reports, documents, and personal finances.

Records Management (BOT 1413)

_____1. Analyze storage and retrieval procedures in alphabetic, numeric, geographic, chronological, and subject filing systems
_____2. Use a variety of media forms used to manage information.
_____3. Describe records retention, retrieval, and transfer.

Business Accounting (BOT 1433)

_____1. Demonstrate basic accounting procedures.

Machine Transcription (BOT 1513)

_____1. Use transcription equipment to produce mailable business, legal, and medical documents.

Mechanics of Communication (BOT 1713)

_____1. Use effective grammar, punctuation, and editing skills.

Electronic Spreadsheet (BOT 1813)

_____1. Demonstrate electronic spreadsheet applications.

Desktop Publishing (BOT 2133)

_____1. Demonstrate knowledge of publishing concepts, ethics, and laws.
_____2. Design effective publications and multiple page documents using advanced features of word processing software.

Database Management (BOT 2323)

_____1. Manipulate database files and format complex documents and reports.

Computerized Accounting (BOT 2413)

_____1. Analyze accounting transactions and enter data into a computerized accounting system.

Administrative Office Procedures (BOT 2723)

_____1. Prioritize the responsibilities of an administrative assistant in relation to global competition with emphasis on personal productivity, customer service, and responsible business practices.

Business Communication (BOT 2813)

_____1. Compose written communications and presentations.

Communication Technology (BOT 2823)

_____1. Assess current and emerging technology affecting communication.
_____2. Identify issues related to the use of resources for online communication.
_____3. Present information using current technology.

Integrated Computer Applications (BOT 2833)

_____1. Create integrated documents using applications software.

Supervised Work Experience (BOT 2913)

_____1. Support existing staff in an office environment.

Student Competency Profile for Accounting 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 course.

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

Introduction to Keyboarding (BOT 1013)

_____1. Apply appropriate techniques to produce alphanumeric material.

Document Formatting and Production (BOT 1113)

_____1. Improve keyboarding skills.
_____2. Apply word processing skills to produce and format business documents with speed and accuracy.

Microcomputer Applications (BOT 1133)

_____1. Demonstrate skills using a variety of software applications.

Word Processing (BOT 1143)

_____1. Apply word processing skills to produce and format complex business documents with speed and accuracy.
_____2. Use advanced word processing functions.

Professional Development (BOT 1213)

_____1. Develop skills for personal and professional development.
_____2. Demonstrate essential skills for the employment process.
_____3. Demonstrate interpersonal skills that affect personal and professional development.

Applied Business Math (BOT 1313)

_____1. Solve mathematical problems using the touch method to operate a calculator or numeric keypad.
_____2. Calculate business transactions for reports, documents, and personal finances.

Business Accounting (BOT 1433)

_____1. Demonstrate basic accounting procedures.

Advanced Business Accounting (BOT 1443)

_____1. Apply advanced accounting principles and procedures.

Mechanics of Communication (BOT 1713)

_____1. Use effective grammar, punctuation, and editing skills.

Electronic Spreadsheet (BOT 1813)

_____1. Demonstrate electronic spreadsheet applications.

Desktop Publishing (BOT 2133)

_____1. Demonstrate knowledge of publishing concepts, ethics, and laws.
_____2. Design effective publications and multiple page documents using advanced features of word processing software.

Database Management (BOT 2323)

_____1. Manipulate database files and format complex documents and reports.

Computerized Accounting (BOT 2413)

_____1. Analyze accounting transactions and enter data into a computerized accounting system.

Income Tax Accounting (BOT 2423)

_____1. Prepare federal and state income tax returns.

Payroll Accounting (BOT 2463)

_____1. Manipulate database files and format complex documents and reports.

Cost Accounting (BOT 2473)

_____1. Demonstrate principles of cost accounting for a manufacturing business.

Business Communication (BOT 2813)

_____1. Compose written communications and presentations.

Integrated Computer Applications (BOT 2833)

_____1. Create integrated documents using applications software.

Supervised Work Experience (BOT 2913)

_____1. Support existing staff in an office environment.

Student Competency Profile for Medical Office 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 course.

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

Introduction to Keyboarding (BOT 1013)

_____1. Apply appropriate techniques to produce alphanumeric material.

Document Formatting and Production (BOT 1113)

_____1. Improve keyboarding skills.
_____2. Apply word processing skills to produce and format business documents with speed and accuracy.

Keyboard Skillbuilding (BOT 1123)

_____1. Key alphanumeric material with speed and accuracy.

Microcomputer Applications (BOT 1133)

_____1. Demonstrate skills using a variety of software applications.

Word Processing (BOT 1143)

_____1. Apply word processing skills to produce and format complex business documents with speed and accuracy.
_____2. Use advanced word processing functions.

Applied Business Math (BOT 1313)

_____1. Solve mathematical problems using the touch method to operate a calculator or numeric keypad.
_____2. Calculate business transactions for reports, documents, and personal finances.

Records Management (BOT 1413)

_____1. Analyze storage and retrieval procedures in alphabetic, numeric, geographic, chronological, and subject filing systems
_____2. Use a variety of media forms used to manage information.

_____3. Describe records retention, retrieval, and transfer.

Business Accounting (BOT 1433)

_____1. Demonstrate basic accounting procedures.

Machine Transcription (BOT 1513)

_____1. Use transcription equipment to produce mailable business, legal, and medical documents.

Medical Office Terminology I (BOT 1613)

_____1. Correctly use medical terminology.

Medical Office Terminology II (BOT 1623)

_____1. Use electronic equipment to learn medical terms related to body systems.

Mechanics of Communication (BOT 1713)

_____1. Use effective grammar, punctuation, and editing skills.

Computerized Accounting (BOT 2413)

_____1. Analyze accounting transactions and enter data into a computerized accounting system.

Medical Machine Transcription I (BOT 2523)

_____1. Demonstrate proper and effective use of transcription equipment.

Medical Machine Transcription II (BOT 2533)

_____1. Continue transcribing medical reports accurately and expediently from various medical specialties.

Medical Office Concepts (BOT 2743)

_____1. Develop skills for personal and professional development.
_____2. Demonstrate essential skills for the employment process.
_____3. Demonstrate interpersonal skills that affect personal and professional development.
_____4. Apply office management techniques.

Medical Information Management (BOT 2753)

_____1. Demonstrate medical office patient billing procedures.
_____2. Process health insurance claim forms.

CPT Coding (BOT 2773)

_____1. Explore the purpose of and use of the CPT manual.
_____2. Apply CPT coding guidelines.
_____3. Discuss third-party payer requirements and global fee periods.

ICD Coding (BOT 2783)

_____1. Explore the purpose of and use of the ICD-9-CM manual and future revisions.
_____2. Apply ICD coding guidelines.
_____3. Examine the use of supplementary classification codes.
_____4. Explain the use of Volume III of the ICD system.

Business Communication (BOT 2813)

_____1. Compose written communications and presentations.

Communication Technology (BOT 2823)

_____1. Assess current and emerging technology affecting communication.
_____2. Identify issues related to the use of resources for online communication.
_____3. Present information using current technology.

Student Competency Profile for Microcomputer 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 course.

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

Introduction to Keyboarding (BOT 1013)

_____1. Apply appropriate techniques to produce alphanumeric material.

Document Formatting and Production (BOT 1113)

_____1. Improve keyboarding skills.
_____2. Apply word processing skills to produce and format business documents with speed and accuracy.

Keyboard Skillbuilding (BOT 1123)

_____1. Key alphanumeric material with speed and accuracy.

Microcomputer Applications (BOT 1133)

_____1. Demonstrate skills using a variety of software applications.

Word Processing (BOT 1143)

_____1. Apply word processing skills to produce and format complex business documents with speed and accuracy.
_____2. Use advanced word processing functions.

Professional Development (BOT 1213)

_____1. Develop skills for personal and professional development.
_____2. Demonstrate essential skills for the employment process.
_____3. Demonstrate interpersonal skills that affect personal and professional development.

Applied Business Math (BOT 1313)

_____1. Solve mathematical problems using the touch method to operate a calculator or numeric keypad.
_____2. Calculate business transactions for reports, documents, and personal finances.

Business Accounting (BOT 1433)

_____1. Demonstrate basic accounting procedures.

Mechanics of Communication (BOT 1713)

_____1. Use effective grammar, punctuation, and editing skills.

Electronic Spreadsheet (BOT 1813)

_____1. Demonstrate electronic spreadsheet applications.

Desktop Publishing (BOT 2133)

_____1. Demonstrate knowledge of publishing concepts, ethics, and laws.
_____2. Design effective publications and multiple page documents using advanced features of word processing software.

Database Management (BOT 2323)

_____1. Manipulate database files and format complex documents and reports.

Computerized Accounting (BOT 2413)

_____1. Analyze accounting transactions and enter data into a computerized accounting system.

Business Communication (BOT 2813)

_____1. Compose written communications and presentations.

Communication Technology (BOT 2823)

_____1. Assess current and emerging technology affecting communication.
_____2. Identify issues related to the use of resources for online communication.
_____3. Present information using current technology.

Integrated Computer Applications (BOT 2833)

_____1. Create integrated documents using applications software.

Student Competency Profile
for Postsecondary Medical Billing and Coding Technology

Student:_____

This record is intended to serve as a method of noting student achievement of the competencies in each unit. Noted in parentheses beside each unit is the cluster competency from the MS-CPAS. This form may be duplicated for each student and serve as a cumulative record of competencies achieved in the course.

As an alternative to the use of this form, you may note competency achievement by attaching a report showing comparable results for each student. Please indicate that you are using this alternative report by checking here. _____

CPT Coding (BOT 2643/BCT 2123)

_____1. Explore the purpose and use of the CPT manual.
_____2. Apply CPT coding guidelines.
_____3. Discuss third-party payer requirements and global fee periods.

ICD Coding (BOT 2653/BCT 2133)

_____1. Explore ICD coding.
_____2. Apply ICD coding guidelines.
_____3. Examine the use of supplementary classification codes.
_____4. Explain the use of Volume III of the ICD system.

Advanced Coding (BOT 2663)

_____1. Review, analyze, and interpret patient records as coding source documents.
_____2 Analyze supporting documentation contained in patient health records.

Medical Insurance Billing (BOT 2673)

_____1. Research and apply information from appropriate current reference guides involving federal, commercial, and general government/state programs.
_____2. Demonstrate appropriate customer service techniques using effective oral and written communication and conflict resolution.
_____3. Outline the steps of the billing process.
_____4. Investigate health plan payment denials.
_____5. Assist in using coded data for strategic planning/reporting.
_____6. Examine reimbursement classification systems such as DRGs, APGs, RBRVS, RUGs, APCs, etc.
_____7. Analyze medical office records for accuracy and completeness.

Baseline Competencies

The following competencies and suggested objectives are taken from the publication *Mississippi Curriculum Framework for Business and Computer Technology*. These competencies and objectives represent the baseline which was used to develop the community/junior college Business and Office Technology courses. Students enrolled in postsecondary courses should either (1) have documented mastery of these competencies, or (2) be provided with these competencies before studying the advanced competencies in the Business and Office 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 Business and Office Technology, Introduction to Business and Office Technology I, or Introduction to Business and Office Technology II

Course Abbreviation(s): BOT 100(3-6), BOT 1013, BOT 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. Explore safety policies and procedures related to the work environment.
   a. Identify OSHA standards for computer workstations.
   b. Research office safety policies for the workplace.
2. Examine ergonomic factors related to the work environment.
   a. Define terms related to ergonomics.
   b. Explore and identify factors to consider in creating an ergonomically sound environment, including the Americans with Disabilities Act (ADA).
3. Discuss ethics in the workplace.
   a. Discuss and analyze ethics and their effects in the workplace.
   b. Conduct research on ethics in business.
4. Use communications and time management principles to manage personal productivity.
   a. Apply strategies for decision-making and problem-solving activities.
   b. Conduct small group activities aimed at problem solving and decision making.
5. Use human relations skills in the office to work effectively as a team member.
   a. Cultivate personal qualities for the workplace.

   b. Demonstrate ability to cooperate and work with others.
6. Identify components related to a computer.
   a. Identify internal components.
   b. Identify external components.
7. Demonstrate a basic understanding of computer systems. (ongoing)
   a. Define terminology related to computer systems.
   b. Define and use Windows functions.
   c. Demonstrate the ability to perform operating systems commands.
8. Discuss and demonstrate software installation and maintenance. (ongoing)
   a. Describe software installation.
   b. Describe basic driver installation.
   c. Examine basic troubleshooting techniques.
9. Perform basic keyboarding techniques. (ongoing)
   a. Perform proper keyboarding techniques.
   b. Build touch-typing skill.
   c. Develop speed and accuracy.
10. Utilize word processing applications.
   a. Create and format documents.
   b. Proofread and edit documents using proofreaders' marks.
   c. Utilize formatting techniques in creating documents.
   d. Preview and print documents.
   e. Save documents.
   f. Format letters, memos, and reports in various styles.
   g. Create envelopes and labels.
   h. Insert and format graphics in a document.
   i. Use document templates.
   j. Use mail merge.
11. Develop reading, writing, listening, and speaking skills.
   a. Identify and describe the terms related to communication skills.
   b. Complete activities for reading and locating information.
   c. Develop proper listening techniques.
   d. Develop effective speaking skills.
12. Demonstrate effective oral communications.
   a. Compare and contrast acceptable and unacceptable telephone techniques.
13. Plan and create a professional-quality presentation using multimedia equipment.
   a. Plan and create a presentation.
   b. Edit and format a presentation.
   c. Present a project and provide a hard copy.
14. Demonstrate telecommunications.
   a. Identify emerging technologies in telecommunications.
   b. Demonstrate the proper use of telecommunications components.
15. Utilize on-line resources.
   a. Identify acceptable rules and procedures for Internet use.
   b. Discuss copyright laws for on-line resources.
   c. Conduct on-line research.
   d. Access and explore an electronic mail account.

16. Design a website using HTML programming.
    a. Develop HTML skills using a text editor.
    b. Discuss the components of a quality website.
    c. Complete a comprehensive website project.
    d. Discuss and/or demonstrate uploading a website.
17. Manually prepare personal and business names for alphabetic filing.
    a. Index, sort, code, and file personal and business names.
    b. Discuss subject, geographic, and numeric filing.
    c. Define and demonstrate methods of document duplication and file retention.
18. Utilize database applications.
    a. Identify database terminology and concepts.
    b. Create a database.
    c. Generate reports and labels.
    d. Perform mail merge.
19. Manage a checking account.
    a. Complete a deposit slip.
    b. Prepare checks.
    c. Record information in a check register.
    d. Reconcile a bank statement.
    e. Explore on-line banking options.
20. Develop business financial skills.
    a. Demonstrate the 10-key touch method.
    b. Use the 10-key touch method to perform basic financial applications.
21. Develop proficiency in spreadsheet applications.
    a. Solve problems using basic mathematical concepts.
    b. Use spreadsheet templates provided within the software package.
    c. Create graphs and charts.
22. Develop personal skills necessary for securing and maintaining employment.
    a. Perform a self-assessment to determine a career.
    b. Research careers.
    c. Investigate training and/or educational requirements for careers.
23. Develop professional skills necessary for securing and maintaining employment.
    a. Discuss the job search process.
    b. Discuss employment options.
    c. Prepare job search documents.
    d. Perform interview techniques.
24. Perform basic keyboarding techniques. (ongoing)
    a. Perform proper keyboarding techniques.
    b. Develop speed and accuracy.
25. Utilize a word processing software package.
    a. Demonstrate how to produce documents using word processing software package formatting features.
    b. Utilize merge features.
26. Construct a database project and manipulate data.
    a. Plan and design a database with multiple tables.
    b. Generate reports using statistical database functions.

27. Work efficiently with spreadsheet files.
    a. Produce documents using built-in functions and formulas to include if then, else, lookup, payment, etc.
    b. Create and enhance graphs using spreadsheet data by adding data labels, exploding pies, elevating, rotating, etc.
28. Complete an integration activity using a software suite.
    a. Integrate a database file into a word processing file.
    b. Integrate spreadsheet file into word processing and presentation files.
29. Utilize speech recognition software. (ongoing)
    a. Complete initial training.
    b. Create business documents by dictating voice commands and text.
    c. Format/edit text and navigate in documents utilizing voice commands.
30. Utilize handwriting recognition software. (ongoing)
    a. Start and adjust the writing pad.
    b. Input data and create documents with handwriting recognition tools.
    c. Utilize handwriting recognition tools to correct, edit, and format text.
31. Discuss and demonstrate key networking terms and components.
    a. Discuss important networking terms.
    b. Demonstrate the use of networking components.
32. Discuss network administration and support.
    a. Discuss the responsibilities of network administrators.
33. Discuss network and web security.
    a. Discuss and research issues related to network and Internet security.
    b. Discuss and research preventive measures to secure networks and data.
34. Explore and utilize advanced web page design applications.
    a. Investigate computer programs for developing websites.
    b. Construct a website using a computer program.
    c. Explore advanced web page design applications.
35. Discuss and utilize computer programming languages.
    a. Discuss and research current computer programming languages.
    b. Introduce computer programming applications and techniques using Microsoft Visual Basic®.
36. Examine office support procedures.
    a. Demonstrate making travel arrangements.
    b. Identify the responsibilities of organizing meetings and/or conferences.
37. Discuss and/or demonstrate teleconferencing and videoconferencing.
38. Examine effective management techniques.
    a. Utilize an electronic device such as a PDA to emphasize the importance of time management.
    b. Develop ways to reduce stress.
    c. Recognize the importance of ethical behavior within the business environment.
39. Develop personal and professional skills.
    a. Demonstrate proper business etiquette.
    b. Compare and contrast international business etiquette.
40. Enhance writing skills.
    a. Demonstrate personal writing skills.

b. Demonstrate penmanship.
c. Demonstrate technical writing skills.

41. Enhance reading and speaking skills.
    a. Demonstrate reading and speaking skills.
42. Research employment opportunities in business-related fields.
    a. Explore employment opportunities.
43. Compile and organize a personal portfolio for employment purposes.
    a. Create or update a title page, letter of application, resume, and two letters of recommendation.
    b. Organize the portfolio in an acceptable format that could be used in a multimedia presentation.
    c. Construct an electronic portfolio.
44. Participate in simulated interviews.
    a. Participate in a simulated job interview.
    b. Participate in a simulated performance review.
    c. Participate in a simulated exit interview.
45. Research desktop publishing software and design guidelines.
    a. Discuss desktop publishing concepts and terminology.
    b. Discuss the difference between desktop publishing and word processing.
    c. Investigate design guidelines for desktop published documents.
    d. Research the Internet for tutorials of DTP programs.
46. Create professional-quality desktop publishing documents.
    a. Discuss different publishing formats.
    b. Publish information using desktop publishing software.
    c. Conduct research and summarize information to design and create DTP projects utilizing appropriate teamwork skills.
47. Develop consumer awareness with regard to personal financial skills.
    a. Demonstrate an understanding of tax forms.
        (1) Complete a W-4 form.
        (2) Complete tax forms.
    b. Complete a loan application.
    c. Discuss credit cards.
    d. Discuss types of insurance.
48. Demonstrate accounting procedures.
    a. Define terminology related to accounting principles.
    b. Prepare journals and general ledgers.
    c. Complete a payroll problem.
49. Demonstrate accounting procedures using a computer.
    a. Complete an accounting cycle using a computer.
    b. Complete a payroll problem using a computer.
50. Analyze and interpret financial reports.
    a. Explain a balance sheet.
    b. Explain an income statement.
    c. Explain a statement of owner’s equity.

Appendix A: Professional/Industry Standards

National Standards for Business Education[1]

Accounting

BE1 The Accounting Cycle
Achievement Standard: Complete and explain the purpose of the various steps in the accounting cycle.

BE2 The Accounting Process
Achievement Standard: Apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity.

BE3 Financial Statements
Achievement Standard: Prepare, interpret, and analyze financial statements using manual and computerized systems for service, merchandising, and manufacturing businesses.

BE4 Special Applications
Achievement Standard: Apply appropriate accounting principles to payroll, income taxation, managerial systems, and various forms of ownership.

BE5 Interpretation and Use of Data
Achievement Standard: Use planning and control principles to evaluate the performance of an organization and apply differential analysis and present-value concepts to make decisions.

Business Law

BE6 Basics of the Law
Achievement Standard: Analyze the relationship between ethics and the law and describe sources of the law, the structure of the court system, different classifications of procedural law, and different classifications of substantive law.

BE7 Contract Law, Law of Sales, and Consumer Law
Achievement Standard: Analyze the relationships between contract law, law of sales, and consumer law.

BE8 Agency and Employment
Achievement Standard: Analyze the role and importance of agency law and employment law as they relate to the conduct of business in the national and international marketplaces.

BE9 Business Organizations
Achievement Standard: Describe the major types of business organizations operating within the socioeconomic arena of the national and international marketplace.

BE10 Property Law
Achievement Standard: Explain the legal rules that apply to personal property and real property.

[1] National Business Education Association. (2001). *Business education standards*. Retrieved June 8, 2004, from http://www.nbea.org/curfbes.html

BE11 Commercial Paper, Insurance, Secured Transactions, Bankruptcy
Achievement Standard: Analyze the functions of commercial paper, insurance, secured transactions, and bankruptcy.

BE12 Computer Law
Achievement Standard: Explain how advances in computer technology impact such areas as property law, contract law, criminal law, and international law.

BE13 Environmental Law And Energy Regulation
Achievement Standard: Explain the legal rules that apply to the environment and energy regulation.

BE14 Domestic Relations Law
Achievement Standard: Explain the legal rules that apply to marriage, divorce, and child custody.

BE15 Wills and Trusts
Achievement Standard: Determine the appropriateness of wills and trusts in estate planning.

Career Development

BE16 Self-Awareness
Achievement Standard: Assess personal skills, abilities, and aptitudes and personal strengths and weaknesses as they relate to career exploration and development.

BE17 Career Research
Achievement Standard: Utilize career resources to develop a career information database that includes international career opportunities.

BE18 Workplace Expectations
Achievement Standard: Relate the importance of workplace expectations to career development.

BE19 Career Strategy
Achievement Standard: Apply knowledge gained from individual assessment to a comprehensive set of goals and an individual career plan.

BE20 School-to-Career Transition
Achievement Standard: Develop strategies to make an effective transition from school to career.

BE21 Lifelong Learning
Achievement Standard: Relate the importance of lifelong learning to career success.

Communication

BE22 Foundations of Communication
Achievement Standard: Communicate in a clear, courteous, concise, and correct manner on personal and professional levels.

BE23 Social Communication
Achievement Standard: Apply basic social communication skills in personal and professional situations.

BE24 Technological Communication
Achievement Standard: Use technology to enhance the effectiveness of communication.

BE25 Employment Communication
Achievement Standard: Integrate all forms of communication in the successful pursuit of employment.
BE26 Organizational Communication
Achievement Standard: Incorporate appropriate leadership and supervision techniques, customer service strategies, and personal ethics standards to communicate effectively with various business constituencies.

Computation

BE27 Mathematical Foundations
Achievement Standard: Apply basic mathematical operations to solve problems.
BE28 Number Relationships and Operations
Achievement Standard: Solve problems involving whole numbers, decimals, fractions, percents, ratios, averages, and proportions.
BE29 Patterns, Functions, and Algebra
Achievement Standard: Use algebraic operations to solve problems.
BE30 Measurements
Achievement Standard: Use common international standards of measurement when solving problems.
BE31 Statistics and Probability
Achievement Standard: Analyze and interpret data using common statistical procedures.
BE32 Problem-Solving Applications
Achievement Standard: Use mathematical procedures to analyze and solve business problems.

Economics & Personal Finance

Economics

BE33 Allocation of Resources
Achievement Standard: Assess opportunity costs and trade-offs involved in making choices about how to use scarce economic resources.
BE34 Economic Systems
Achievement Standard: Explain why societies develop economic systems, identify the basic features of different economic systems, and analyze the major features of the U.S. economic system.
BE35 Economic Institutions and Incentives
Achievement Standard: Analyze the role of core economic institutions and incentives in the U.S. economy.
BE36 Markets and Prices
Achievement Standard: Analyze the role of markets and prices in the U.S. economy.
BE37 Market Structures
Achievement Standard: Analyze the different types of market structures and the effect they have on the price and the quality of the goods and services produced.

BE38 Productivity
Achievement Standard: Explain the importance of productivity and analyze how specialization, division of labor, investment in physical and human capital, and technological change affect productivity.

BE39 The Role Of Government
Achievement Standard: Analyze the role of government in economic systems, especially the role of government in the U.S. economy.

BE40 International Economic Concepts
Achievement Standard: Examine the role of trade, protectionism, and monetary markets in the global economy.

BE41 Aggregate Supply and Aggregate Demand
Achievement Standard: Analyze how the U.S. economy functions as a whole and describe selected macroeconomic measures of economic activity.

Personal Finance

BE42 Personal Decision Making
Achievement Standard: Use a rational decision-making process as it applies to the roles of citizens, workers, and consumers.

BE43 Earning a Living
Achievement Standard: Identify various forms of income and analyze factors that affect income as a part of the career decision-making process.

BE44 Managing Finances and Budgeting
Achievement Standard: Develop and evaluate a spending/savings plan.

BE45 Saving and Investing
Achievement Standard: Evaluate savings and investment options to meet short- and long-term goals.

BE46 Buying Goods and Services
Achievement Standard: Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

BE47 Banking
Achievement Standard: Evaluate services provided by financial deposit institutions to transfer funds.

BE48 Using Credit
Achievement Standard: Analyze factors that affect the choice of credit, the cost of credit, and the legal aspects of using credit.

BE49 Protecting Against Risk
Achievement Standard: Analyze choices available to consumers for protection against risk and financial loss.

Entrepreneurship

BE50 Entrepreneurs and Entrepreneurial Opportunities
Achievement Standard: Recognize that entrepreneurs possess unique characteristics and evaluate the degree to which one possesses those characteristics.

BE51 Marketing
Achievement Standard: Analyze customer groups and develop a plan to identify, reach, and keep customers in a specific target market.

BE52 Economics
Achievement Standard: Apply economic concepts when making decisions for an entrepreneurial venture.

BE53 Finance
Achievement Standard: Use the financial competencies needed by an entrepreneur.

BE54 Accounting
Achievement Standard: Recognize that entrepreneurs must establish, maintain, and analyze appropriate records to make business decisions.

BE55 Management
Achievement Standard: Develop a management plan for an entrepreneurial venture.

BE56 Global Markets
Achievement Standard: Analyze the effect of cultural differences, export/import opportunities, and trends on an entrepreneurial venture in the global marketplace.

BE57 Legal
Achievement Standard: Analyze how forms of business ownership, government regulations, and business ethics affect entrepreneurial ventures.

BE58 Business Plans
Achievement Standard: Develop a business plan.

Information Technology

BE59 Impact on Society
Achievement Standard: Assess the impact of information technology on society.

BE60 Computer Architecture
Achievement Standard: Describe current and emerging computer architecture; configure, install, and upgrade hardware; diagnose and repair hardware problems.

BE61 Operating Systems, Environments, and Utilities
Achievement Standard: Identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems, environments, and utilities.

BE62 Information Technology and Major Business Functions
Achievement Standard: Describe the information technology components of major business functions and explain their interrelationships.

BE63 Application Software
Achievement Standard: Identify, evaluate, select, install, use, upgrade, and customize application software; diagnose and solve problems resulting from an application software's installation and use.

BE64 Input Technologies
Achievement Standard: Use input technologies appropriately to enter and manipulate text and data.

BE65 Information Retrieval
Achievement Standard: Gather, evaluate, use, and cite information from information technology sources.

BE66 Database Management Systems
Achievement Standard: Use, plan, develop, and maintain database management systems.

BE67 Programming and Application Development
Achievement Standard: Design, develop, test, and implement programs.

BE68 Systems Analysis and Design
Achievement Standard: Analyze and design information systems using appropriate development tools.

BE69 Communications and Networking Infrastructures
Achievement Standard: Develop the skills to design, deploy, and administer networks and communications systems.

BE70 Network Applications
Achievement Standard: Use, evaluate, and deploy communications and networking applications.

BE71 Information Technology Planning and Acquisition
Achievement Standard: Plan the selection and acquisition of information technologies.

BE72 Technical Support and Training
Achievement Standard: Develop the technical and interpersonal skills and knowledge to support the user community.

BE73 Risk Management
Achievement Standard: Design and implement risk management policies and procedures for information technology.

BE74 Privacy and Ethics
Achievement Standard: Describe, analyze, develop, and follow policies for managing privacy and ethical issues in organizations and in a technology-based society.

BE75 Information Technology Careers
Achievement Standard: Describe positions and career paths in information technology.

International Business

BE76 Foundations of International Business
Achievement Standard: Explain the role of international business; analyze how it impacts business at all levels (including the local, state, national, and international levels).

BE77 The Global Business Environment
Achievement Standard: Describe the interrelatedness of the social, cultural, political, legal, and economic factors that shape and impact the international business environment.

BE78 International Business Communication
Achievement Standard: Apply communication strategies necessary and appropriate for effective and profitable international business relations.

BE79 Global Business Ethics
Achievement Standard: Describe the environmental factors that define what is considered ethical business behavior in a global business environment.
BE80 Organizational Structures for International Business Activities
Achievement Standard: Identify forms of business ownership and entrepreneurial opportunities available in international business.
BE81 International Trade Relations
Achievement Standard: Relate balance of trade concepts to the import/export process.
BE82 International Management
Achievement Standard: Analyze special challenges in operations and human resource management in international business.
BE83 International Marketing
Achievement Standard: Apply marketing concepts to international business situations.
BE84 International Finance
Achievement Standard: Explain the concepts, role, and importance of international finance and risk management.

Management

BE85 Management Functions
Achievement Standard: Analyze the management functions and their implementation and integration within the business environment.
BE86 Management Theories
Achievement Standard: Analyze management theories and their application within the business environment.
BE87 Business Organization
Achievement Standard: Analyze the organization of a business.
BE89 Personal Management Skills
Achievement Standard: Develop personal management skills to function effectively and efficiently in a business environment.
BE90 Ethics And Social Responsibility
Achievement Standard: Examine the role of ethics and social responsibility in decision making.
BE91 Human Resource Management
Achievement Standard: Describe human resource functions and their importance to an organization's successful operation.
BE92 Organized Labor
Achievement Standard: Describe the role of organized labor and its influence on government and business.
BE93 Technology and Information Management
Achievement Standard: Utilize information and technology tools to conduct business effectively and efficiently.
BE94 Industry Analysis
Achievement Standard: Analyze a business organization's competitive position within the industry.

BE95 Financial Decision Making
Achievement Standard: Analyze financial data influenced by internal and external factors in order to make short-term and long-term decisions.
BE96 Operations Management
Achievement Standard: Apply operations management principles and procedures to the design of an operations plan.
BE97 Global Perspective
Achievement Standard: Examine the issues of managing in the global environment.

Marketing

BE98 Foundations of Marketing
Achievement Standard: Recognize the customer-oriented nature of marketing and analyze the impact of marketing activities on the individual, business, and society.
BE99 Consumers and Their Behavior
Achievement Standard: Analyze the characteristics, motivations, and behaviors of consumers.
BE100 External Factors
Achievement Standard: Analyze the influence of external factors on marketing.
BE101 The Marketing Mix
Achievement Standard: Analyze the elements of the marketing mix, their interrelationships, and how they are used in the marketing process.
BE102 Marketing Research
Achievement Standard: Analyze the role of marketing research in decision making.
BE103 The Marketing Plan
Achievement Standard: Describe the elements, design, and purposes of a marketing plan.

Registered Health Information Administrator (RHIA) Competency Statements [2]

Healthcare Data

HI1 Data Structure, Content, and Use
- Verify timeliness, completeness, accuracy, and appropriateness of data and data sources (e.g., patient care, management, billing reports, and/or databases).
- Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings, and discharge status.
- Assist in the facility's billing process.
- Validate coding accuracy using clinical information found in the health record.

HI2 Clinical Classification Systems – ICD-9-CM Coding
- Assign diagnosis/procedure codes using ICD-9-CM.

HI3 Clinical Classification Systems – CPT Coding
- Assign procedure codes using CPT/HCPCS.

Health Information Analysis

HI4 Healthcare Statistics and Research
- Abstract records for department indices/databases/registries.
- Collect data for quality management, utilization management, risk management, and other patient care related studies.
- Calculate and interpret healthcare statistics.
- Present data in verbal and written forms.

HI5 Clinical Quality Assessment and Performance Improvement
- Participate in facility-wide quality management program.
- Analyze clinical data to identify trends.

Healthcare Environment

HI6 Healthcare Delivery Systems
- Interpret and apply laws, accreditation, licensure and certification standards; monitor changes; and communicate information-related changes to others in the facility.
- Understand the role of various providers and disciplines throughout the continuum of healthcare services.

HI7 Legal and Ethical Issues
- Release patient-specific data to authorized users.
- Request patient-specific information from other sources.
- Summarize patient encounter data for release to authorized users.
- Develop policies and procedures to protect unauthorized access to patient records.

[2] American Health Information Management Association. (2004). *Registered health information administrator*. Retrieved June 10, 2004, from http://www.ahima.org/certification/competency.rhia.cfm

- Assist in developing facility-wide confidentiality policies.

HI8 Healthcare Information Requirements and Standards

- Assist in developing health record documentation guidelines.
- Perform quantitative analysis of health records to evaluate compliance with regulations and standards.
- Perform qualitative analysis of health records to evaluate compliance.
- Assist in preparing the facility of an accreditation, licensing, and/or certification survey.
- Develop and demonstrate HIM service compliance with relevant regulations and accreditation standards.
- Ensure facility-wide adherence to health information services' compliance with regulatory requirements (e.g., ICD-9-CM Cooperating parties coding guidelines, HCFA Compliance Plan, Correct Coding Initiative).

Information Technology and Systems

HI9 Information Technology

- Use common software packages (e.g., spreadsheets, databases, word processing, graphics, presentation, statistical, e-mail).
- Use electronic or imaging technology to store medical records.
- Query facility-wide databases to retrieve information.
- Generate reports from various databases.
- Protect data integrity and validity using software or hardware technology.
- Enforce confidentiality and security measures to protect electronic information.
- Identify common software problems.
- Design data quality controls and edits.
- Participate in development of strategic and operational plans for facility-wide information systems.

HI0 Health Information Systems

- Collect and report data on incomplete records and timeliness of record completion.
- Maintain filing and retrieval systems for paper-based patient records.
- Maintain integrity of master patient/client index.
- Maintain integrity of patient numbering and filing systems.
- Design forms, computer input screens, and other health record documentation tools.
- Evaluate software packages to determine that they meet user needs.

Organization and Management

HI11 Human Resources Management

- Interview prospective employees.
- Hire new employees.
- Develop and implement new staff orientation and training programs.
- Supervise staff.
- Collect data on employee performance.
- Conduct performance appraisals.

- Counsel, discipline, and terminate staff.
- Perform job analyses.
- Develop job descriptions.
- Conduct in-service education programs on topics related to health information services.
- Develop and support work teams.

HI12 Health Information Services Management

- Monitor staffing levels, turnaround time, productivity and workflow.
- Assign projects and tasks to appropriate staff.
- Develop productivity and control measures.
- Benchmark staff performance data in relation to department/facility performance standards.
- Determine resources (equipment and supplies) to meet workload needs.
- Develop departmental policies and procedures.
- Develop strategic plans, goals, and objectives for area of responsibility and communicate to staff.
- Participate on intra-departmental teams/committees.
- Participate on facility-wide teams/committees responsible for health information services issues.
- Coordinate inter-departmental and/or intra-departmental services.
- Provide consultation, education, and training to users of health information services.
- Prepare budgets with accompanying justification and monitor adherence.
- Evaluate effectiveness of department operations and services.
- Develop quality control/improvement systems for departmental processes and use quality improvement tools and techniques to improve processes.
- Manage special projects.
- Plan and conduct meetings.
- Resolve customer complaints.
- Identify departmental resource requirements, determine cost/benefits, communicate requirements to vendors, and evaluate vendor proposals.
- Assist in redesigning/re-engineering departmental services and operations.
- Prioritize department functions and services.

Appendix B: American Health Information Management Association Standards of Ethical Coding[3]

EC1 Coding professionals are expected to support the importance of accurate, complete, and consistent coding practices for the production of quality healthcare data.

EC2 Coding professionals in all healthcare settings should adhere to the ICD-9-CM (International Classification of Diseases, 9th revision, Clinical Modification) coding conventions, official coding guidelines approved by the Cooperating Parties (AHIMA, AHA, and CMS), the CPT (Current Procedural Terminology) rules established by the American Medical Association, and any other official coding rules and guidelines established for use with mandated standard code sets. Selection and sequencing of diagnoses and procedures must meet the definitions of required data sets for applicable healthcare settings.

EC3 Coding professionals should use their skills, their knowledge of currently mandated coding and classification systems, and official resources to select the appropriate diagnostic and procedural codes.

EC4 Coding professionals should only assign and report codes that are clearly and consistently supported by physician documentation in the health record.

EC5 Coding professionals should only consult physicians for clarification and additional documentation prior to code assignment when there is conflicting or ambiguous data in the health record.

EC6 Coding professionals should not change codes or the narratives of codes on the billing abstract so that meanings are misrepresented. Diagnoses or procedures should not be inappropriately included or excluded because payment or insurance policy coverage requirements will be affected. When individual payer policies conflict with official coding rules and guidelines, these policies should be obtained in writing whenever possible. Reasonable efforts should be made to educate the payer on proper coding practices in order to influence a change in the payer's policy.

EC7 Coding professionals, as members of the healthcare team, should assist and educate physicians and other clinicians by advocating proper documentation practices, further specificity, and resequencing or inclusion of diagnoses or procedures when needed to more accurately reflect the acuity, severity, and the occurrence of events.

EC8 Coding professionals should participate in the development of institutional coding policies and should ensure that coding policies complement, not conflict with, official coding rules and guidelines.

EC9 Coding professionals should maintain and continually enhance their coding skills, as they have a professional responsibility to stay abreast of changes in codes, coding guidelines, and regulations.

EC10 Coding professionals should strive for optimal payment to which the facility is legally entitled, remembering that it is unethical and illegal to maximize payment by means that contradict regulatory guidelines.

[3] *AHIMA Standards of Ethical Coding*. (1999). Retrieved July 26, 2004, from http://www.ahima.org/infocenter/guidelines/standards.cfm

American Health Information Management Association Certified Coding Associate Competency Statements[4]

CA1 Health Data Content, Requirements, and Standards

This content area addresses competencies related to the content and use of health care data. The content area will also address competencies related to regulations and standards associated with health information management, which are distributed by private and governmental agencies (e.g., CMS, JCAHO, NCQA).

- Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings and discharge status of the patient
- Assist in developing health record documentation guidelines
- Verify timeliness, completeness, accuracy, and appropriateness of data and data sources (e.g., patient care, management, billing reports and/or data bases)
- Abstract records for department indices/data bases/registries
- Request patient-specific information from other sources
- Perform quantitative analysis of health records to evaluate compliance with regulations and standards
- Perform qualitative analysis of health records to evaluate compliance with regulations and standards
- Ensure facility-wide adherence to health information services' regulatory requirements (e.g., HCFA Compliance Plan, Correct Coding Initiative)

CA2 Clinical Classification Reimbursement Methodologies

This content area addresses competencies related to the uses of coded data and reimbursement

- Assign diagnosis/procedure codes using
  a. ICD-9-CM
  b. CPT/HCPCS
- Validate coding accuracy using clinical information found in the health record
- Validate reimbursement classification system assignments
- Collect the data necessary to assign patients to severity of illness categories
- Analyze the facility's patient case-mix and payment rates to assure accurate/appropriate reimbursement
- Maintain departmental and facility-wide coding guidelines
- Assist in the facility's billing process
- Investigate health plan payment denials
- Assist in using coded data for strategic planning/reporting

CA3 Information Technology and Healthcare Delivery

This content area addresses competencies related to global issues in health care and information technology

- Protect data integrity and validity using software or hardware technology
- Query facility-wide databases to retrieve information

[4] American Health Information Management Association. (2004). C*ertified Coding Associate*. Retrieved September 14, 2005, from http://www.ahima.org/certification/competency.cca.asp

- Use common software packages (e.g., spreadsheets, databases, word processing, graphics, presentation, statistical, e-mail)
- Understand the role of various providers and disciplines throughout the continuum of health care services

American Association for Medical Transcription
Exam Specifications for Certified Medical Transcriptionist[5]

Medical Transcription-Related Knowledge
(approximately 50% of entire exam)

MT1 Medical language (approximately 40% of the knowledge section of the exam)
- Meaning and spelling of prefixes, suffixes, combining forms, and root words
- Plural forms of medical terms
- Meaning and spelling of documented medical abbreviations, acronyms, eponyms, homonyms, and synonyms
- Terminology and spelling related to anatomy/physiology, clinical medicine, pharmacology, laboratory medicine, pathology, imaging studies, and other diagnostic studies (e.g., EKG, EEG, EMG, etc.)
- Specialty terminology and spelling. (Approximately 80% of the specialty terminology questions will come from: allergy and immunology, cardiology, emergency medicine, endocrinology, family medicine, gastroenterology, general surgery, hematology/oncology, infectious disease, neurology, obstetrics/gynecology, ophthalmology, orthopedics, otorhinolaryngology, pediatrics, physical medicine and rehabilitation, podiatry, psychiatry/psychology, pulmonary medicine, urology.)
- Specialty terminology and spelling (approximately 20% of the specialty terminology questions will come from: alternative medicine, cardiac surgery, chiropractic, dentistry and oral surgery, dermatology, genetics, geriatrics, neurosurgery, nutrition/dietetics, pain management, plastic surgery, rheumatology, thoracic surgery, vascular medicine, vascular surgery)

MT2 Anatomy and physiology (22%)
- Structure and function of cells and tissues
- Structure and function of organs and systems

MT3 Disease processes (15%)
- Names of common diseases and conditions
- Signs and symptoms of common diseases and conditions
- Diagnosis and treatment of common diseases and conditions

MT4 English language (12%)
- Basic grammar rules
- Punctuation rules
- English usage
- The spelling of English words

MT5 The healthcare record and important medicolegal issues (11%)
- Basic medical report types and the elements of each
- Regulatory requirements (HIPAA, JCAHO, etc.)
- Principles and processes for keeping audit trails

[5] *American Association for Medical Transcription: AAMT Certified Medical Transcriptionist* (CMT). (2004). Retrieved June 10, 2004, from http://www.aamt.org/scriptcontent/examblueprint.cfm?section=certification

- The purpose and content of the healthcare document
- Identify risk management issues

Transcription Performance
(approximately 50% of entire exam)

Approximately 55% of the items in the performance section of the exam will be transcription, 30% editing, and 15% proofreading against the audio.

MT6 Report types
- The items in the performance section will come primarily from operative reports, procedure notes, consultation reports, discharge summaries, and history & physicals, and secondarily from imaging studies and pathology reports. A small percentage will come from clinic notes, letters, and progress notes.

MT7 Specialty areas
- The material in the performance section comes from a cross section of medical specialties divided approximately equally among four groups:
- Group A: cardiology, endocrinology, gastroenterology, geriatrics, hematology/oncology, hepatology, pulmonary medicine, rheumatology
- Group B: allergy and immunology, alternative medicine, chiropractic, dermatology, emergency medicine, family medicine, genetics, infectious disease, neurology, nutrition/dietetics, otorhinolaryngology, pain management, pediatrics, physical medicine and rehabilitation, podiatry, psychiatry/psychology, vascular
- Group C: general surgery
- Group D: cardiac surgery, dentistry and oral surgery, neurosurgery, obstetrics/gynecology, ophthalmology, orthopedics, plastic surgery, thoracic surgery, urology, vascular surgery

MT8 Interpretability
- Approximately 90% of the dictation in the performance section will be by clear dictators on clear recordings, while the remainder will be by dictators who may be difficult to understand or from recordings that are compromised in some other way.

MT9 Transcription issues covered
- Transcription issues stressed a great deal will be spelling, grammar, punctuation, units of measure, medical symbols, abbreviations, lab data, imaging data, and drug indications and dosages. Also covered will be risk management issues, inconsistencies, and American slang and colloquialisms.

American Health Information Management Association Certified Coding Associate Competency Statements[6]

CA1 Health Data Content, Requirements, and Standards

This content area addresses competencies related to the content and use of health care data. The content area will also address competencies related to regulations and standards associated with health information management, which are distributed by private and governmental agencies (e.g., CMS, JCAHO, NCQA).

- Conduct qualitative analysis to assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings and discharge status of the patient
- Assist in developing health record documentation guidelines
- Verify timeliness, completeness, accuracy, and appropriateness of data and data sources (e.g., patient care, management, billing reports and/or data bases)
- Abstract records for department indices/data bases/registries
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- Assign diagnosis/procedure codes using
  a. ICD-9-CM
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- Validate reimbursement classification system assignments
- Collect the data necessary to assign patients to severity of illness categories
- Analyze the facility's patient case-mix and payment rates to assure accurate/appropriate reimbursement
- Maintain departmental and facility-wide coding guidelines
- Assist in the facility's billing process
- Investigate health plan payment denials
- Assist in using coded data for strategic planning/reporting

CA3 Information Technology and Healthcare Delivery

This content area addresses competencies related to global issues in health care and information technology

- Protect data integrity and validity using software or hardware technology
- Query facility-wide databases to retrieve information

[6] American Health Information Management Association. (2004). C*ertified Coding Associate*. Retrieved June 10, 2004, from http://www.ahima.org/certification/competency.cca.cfm

- Use common software packages (e.g., spreadsheets, databases, word processing, graphics, presentation, statistical, e-mail)
- Understand the role of various providers and disciplines throughout the continuum of health care services

Appendix C: Related Academic Standards

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 organism.
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.

Appendix D: Workplace Skills for the 21st Century[7]

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..

[7] *Secretary's commission on achieving necessary skills*. (1991). Retrieved July 13, 2004, from http://wdr.doleta.gov/SCANS/

Appendix E: National Educational Technology Standards for Students[8]

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.

[8] *ISTE: National educational technology standards (NETS).* (2000). Retrieved July 13, 2004, from http://cnets.iste.org/