

2005 Mississippi Curriculum Framework

Postsecondary Gerontology Technology

(Program CIP: 19.0702 – Gerontology)

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Workplace Skills for the 21st Century Secretary’s Commission on Achieving Necessary Skills

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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. 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.

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Program Description

The Gerontology Technology curriculum is a two-year Associate of Applied Science degree program of study designed to provide the community with well-trained individuals who have an in-depth understanding of the aging process and its physical, mental, and psychosocial implications as well as the skills to apply this knowledge to a diverse elderly population through the process of referral, advocacy, and problem solving. This program is designed to meet the standards and requirements for careers in gerontology. The curriculum references the Standards and Guidelines for Gerontology Programs. Students completing this program should be able to find employment in jobs such as an aging specialist in a variety of aging settings.

Suggested Course Sequence* Gerontology Technology

Baseline Competencies for Gerontology**

FIRST YEAR

3 sch Social Gerontology (GER 1113)	3 sch Written Communications Elective
3 sch Social/Behavioral Science Elective***	3 sch Human Services for the Elderly (GER 1223)
3 sch Introduction to Sociology (SOC 2113)	3 sch Social Work with the Elderly (GER 1323)
3 sch Introduction to Computer Concepts (CSC 1113)	3 sch Human Growth & Development (EPY 2533)
3-4 sch Body Structure & Function (PNV 1213) or Anatomy & Physiology (BIO 2514)	3 sch Math/Science Elective
	<hr style="width: 10%; margin: 0 auto;"/>
	15 sch
<hr style="width: 10%; margin: 0 auto;"/>	
15-16 sch	

SECOND YEAR

3 sch Social Policy and Aging (GER 2433)	6 sch Activities Programming for the Elderly II (GER 2546)
6 sch Activities Programming for Elderly I (GER 2536)	3 sch Aging and Mental Health (GER 2643)
1 sch Seminar I (GER 2131)	3 sch Aging and Physical Health (GER 2743)
3 sch Practicum I (GER 2233)	1 sch Seminar II (GER 2141)
3 sch Oral Communications Elective	3 sch Practicum II (GER 2243)
	3 sch Humanities/Fine Arts Elective
	<hr style="width: 10%; margin: 0 auto;"/>
	19 sch

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

** Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

*** It is recommended that General Psychology I (PSY 1513) be taken for the Social/Behavioral Science Elective.

Gerontology Technology Courses

Course Name: Social Gerontology

Course Abbreviation: GER 1113

Classification: Vocational-Technical Core

Description: This course is an introduction to the field of aging. It includes the scope of Social Gerontology, the demography of aging, an overview of the history of aging in America, basic aspects of individual aging, aging in everyday life, aging and the societal relationship, and aging in the future. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives	
1.	Describe the demography of aging and the effects on American society. <ol style="list-style-type: none"> a. Explain measuring age structure (e.g., life expectancy). b. Explain population aging (e.g., increased technology, advanced medical care, etc.). c. Explain population processes and the older adult (e.g., fertility, mortality, migration).
2.	Explain the influences of social and historical changes on the aging population. <ol style="list-style-type: none"> a. Explain the shift in ideas as related to the change of older adults as a social category. b. Describe the influence of historical periods on the older population (e.g., wars, traditional families, women in the workforce, retirement, care of the young, age discrimination, etc.). c. Explain the social changes brought about by federal legislation for the older population.
3.	Explain social theories of aging and discuss attitudes and beliefs about aging. <ol style="list-style-type: none"> a. Describe the theories of social gerontology: disengagement, activity, and life course. b. Compare and contrast the premises of each theory with beliefs and attitudes about aging from his/her own perspective. c. Compare and contrast the beliefs and attitudes about aging in at least two different cultures (e.g., Western and Asian). d. Describe the impact of gender roles on theories of social gerontology.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER1 Students should gain knowledge and apply that knowledge in the area of sociology of aging or social aspects of aging.

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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

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

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

Suggested References

- Atcheley, R., & Baraush, A. (2004). *Social forces and aging: An introduction to social gerontology* (10th ed.). Belmont, CA: Wadsworth & Thomson.
- Erber, J. (2005). *Aging and older adulthood*. Belmont, CA: Wadsworth.
- Hooyman, N. R., & Kiyak, H. A. (2002). *Social gerontology: A multidisciplinary perspective* (6th ed.). Boston: Allyn & Bacon.

Quadagno, J. (2005). *Aging and the life course: An introduction to social gerontology* (3rd ed.). Boston: McGraw Hill.

The United States Administration on Aging. (n.d.). Retrieved November 8, 2004, from <http://www.aoa.gov>

The University of Hawaii Center on Aging. (2003). *Growing old in a new age instructional series* [Videotape]. (Available from Annenberg/ CBD, 1301 Pennsylvania Avenue NW, #302, Washington, DC 20004)

Course Name: Human Services for the Elderly

Course Abbreviation: GER 1223

Classification: Vocational-Technical Core

Description: This course provides the student with in-depth knowledge of community resources for older adults. The delivery and use of community resources will be explored along with issues of confidentiality, values, and ethics. (3 sch: 3 hr. lecture)

Prerequisite: Social Gerontology (GER 1113)

Competencies and Suggested Objectives	
1. Describe the community resources available to older adults.	<ul style="list-style-type: none"> a. Explain formal and informal interaction as related to service use. b. Discuss home care services, long term care services, transportation services, senior centers, nutrition and meal programs, health care and wellness, adult day, health programs, case management, legal problems and services.
2. Explore the legal aspects and issues of confidentiality in working with older adults.	<ul style="list-style-type: none"> a. Describe situations with legal implications. b. Discuss the Patient’s Bill of Rights. c. Explore issues related to confidentiality.
3. Explore principles of professional values and ethics.	<ul style="list-style-type: none"> a. Discuss standards of professional conduct. b. Discuss ethical dilemmas confronted when working with older adults. c. Explore the value systems of older adults as related to use of services.
4. Discuss principles of the case management approach of service delivery for older adults.	<ul style="list-style-type: none"> a. Identify the steps, characteristics, and requirements of the case management approach to services delivery. b. Explore the team concept and its roles, responsibilities, and functions within the case management approach to the delivery of services.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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.

Postsecondary Gerontology Technology

- 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.
- 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.
- 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
- T5 Technology research tools

Suggested References

- American Association of Retired People.* (2004). Retrieved November 8, 2004, from <http://www.aarp.org>
- Gelfand, D. (1999). *The aging network: Programs and services* (5th ed.). New York: Springer.
- The United States Administration on Aging.* (n.d.). Retrieved November 8, 2004, from <http://www.aoa.gov>
- Wacker, R. R., Roberto, K. A., & Piper, L. E. (2002). *Community resources for older adults: Programs and services in an era of change* (2nd ed.). Thousand Oaks, CA: Pine Forge.

Course Name: Social Work with the Elderly

Course Abbreviation: GER 1323

Classification: Vocational-Technical Core

Description: This course provides a basic framework for entry-level practice with older adults. The Stages of the General Method as related to older adults will be presented and applied. The course will also examine issues of professional values, ethics, and human diversity. (3 sch: 1 hr. lecture, 4 hr. lab)

Prerequisite: Social Gerontology (GER 1113)

Competencies and Suggested Objectives	
1.	Explore the context of social work practice with older adults. <ol style="list-style-type: none"> a. Discuss home based, community based, and long-term care based service settings. b. Explore personal and professional issues in work with older adults. c. Demonstrate understanding of effective social work practice with older adults.
2.	Examine human diversity, values, and ethical principles in work with older adults. <ol style="list-style-type: none"> a. Recognize ethical dilemmas confronted in working with older adults. b. Analyze myths and stereotypes regarding older adults. c. Discuss issues of human diversity, multiculturalism, social pluralism, and socio-demographic variability. d. Demonstrate an understanding of values, ethics, and human diversity.
3.	Examine the Social Work Practice Principles (Casework Principles) used in working with older adults. <ol style="list-style-type: none"> a. Define individualization, purposeful expression of feelings, controlled emotional involvement, acceptance, non-judgmental attitude, client self-determination, and confidentiality. b. Demonstrate understanding of social work principles in working with older adults.
4.	Explore the Stages of the General Method of Social Work Practice (the Engagement Stage, the Data Collection, the Assessment Stage, the Intervention Stage, the Evaluation Stage, and the Termination Stage), and apply these in working with older adults. <ol style="list-style-type: none"> a. Discuss engagement as related to work with older adults. <ol style="list-style-type: none"> (1) Define problem, feelings, and goals. (2) Explore interviewing skills necessary for work with older adults. (3) Explore Social Work (SW) practice skills. (4) Explore human diversity. b. Apply and demonstrate the Engagement Stage with an older adult. c. Discuss the Data Collection Stage as related to work with older adults. <ol style="list-style-type: none"> (1) Define problems, person, and environment. (2) Explore interviewing skills. (3) Explore SW practice skills (e.g., confidentiality, etc.). (4) Explore recording structures and forms. (5) Explore human diversity. d. Apply and demonstrate the Data Collection Stage with an older adult, and complete

- two forms of recording for the Data Collection Stage.
- e. Discuss the Assessment Stage as related to work with older adults.
 - (1) Define assessment and discuss the assessment statement, problem prioritization, and contracted plan (care plan).
 - (2) Explore interviewing skills.
 - (3) Explore SW practice skills.
 - (4) Explore human diversity.
 - f. Apply and demonstrate the Assessment Stage with an older adult.
 - g. Explore the Intervention Stage of the General Method as it relates to work with older adults.
 - (1) Define intervention.
 - (2) Delineate the four major interventions: direct intervention, information and referral, case management, and teamwork.
 - (3) Discuss interviewing skills.
 - (4) Discuss SW practice skills.
 - (5) Explore human diversity.
 - h. Apply and demonstrate the Case Management Approach with an older adult.
 - i. Explore the Evaluation Stage of the General Method as it relates to work with older adults.
 - (1) Explore goal analysis, contract review, and contract reformulation.
 - (2) Recognize evaluation as a planning, monitoring, and implementation tool.
 - (3) Discuss SW practice skills.
 - (4) Explore human diversity.
 - j. Apply and demonstrate the Evaluation Stage of the General Method with an older adult.
 - k. Explore the Termination Stage of the General Method as it relates to work with older adults.
 - (1) Define termination.
 - (2) Recognize the appropriateness of termination.
 - (3) Discuss SW practice skills.
 - (4) Explore human diversity.
 - l. Apply and demonstrate the Termination Stage with an older adult.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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.
- 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
- T5 Technology research tools

Suggested References

- McInnis-Dittrich, K. (2005). *Social work with elders: A biopsychological approach to assessment and intervention* (2nd ed.). Boston: Allyn & Bacon.
- Murphy, B., & Dillon, C. (1998). *Interviewing in action: Process and practice*. Pacific Grove, CA: Brooks & Cole.
- Schneider, R., Kropt, N., & Kisor, A. (2000). *Gerontological social work* (2nd ed.). Belmont, CA: Brooks & Cole.
- Sevel, J., Cummins, L., & Madrigal, C. (2005). *Social work skills demonstrated: Beginning direct practice CD-ROM with student manual* (2nd ed.). Needham Heights, MA: Allyn & Bacon.

Course Name: Seminar I

Course Abbreviation: GER 2131

Classification: Vocational-Technical Core

Description: Seminar I is a forum for Gerontology students to explore ideas and experiences related to the Gerontology Practicum. The course allows students to develop skills in critical thinking, problem solving, reading and locating information, and the analysis of information. Students will be encouraged to use written and oral communication skills through research and the exploration of current issues related to practice and the field of aging. (1 sch: 1 hr. lecture)

Prerequisite: All first year Gerontology coursework

Competencies and Suggested Objectives
1. Examine the need for practicum. <ol style="list-style-type: none"> a. Explore the history, current standards, and types of practicum. b. Explore preparation and use of supervision in practicum c. Examine the integration of classroom learning and practicum.
2. Discuss the integration of the student within a social service agency. <ol style="list-style-type: none"> a. Examine the selection process and qualifications of agency and supervisor for practicum. b. Discuss performance evaluation of the student by the agency and the supervisor.
3. Explore procedures for starting practicum. <ol style="list-style-type: none"> a. Explore preparation interview and orientation process for practicum. b. Examine educational preparation for practicum.
4. Explore the role of the student in practicum. <ol style="list-style-type: none"> a. Examine the role of student as a student/practitioner. b. Examine student/staff, student/agency, and student/supervisor relationships. c. Explore evaluation process.
5. Examine the client system as related to service delivery. <ol style="list-style-type: none"> a. Identify client system and client expectations. b. Discuss delivery of service. c. Discuss problem behavior with client systems. d. Examine cultural differences. e. Discuss macro-practice.
6. Examine everyday concerns related to practicum. <ol style="list-style-type: none"> a. Discuss issues that affect everyday practice. b. Discuss problem areas that affect change. c. Explain self-disclosure. d. Examine current agency issues. e. Discuss managed care.
7. Examine legal and ethical issues that affect practice. <ol style="list-style-type: none"> a. Examine legal issues, professional ethics, confidentiality, and ethical dilemmas that occur in practice. b. Examine liability in practicum.

8. Discuss aging publications by the Association of Gerontology in Higher Education (AGHE) as it relates to current trends in aging.
 - a. Discuss the mission of AGHE.
 - b. Review literature published by AGHE as it relates to aging.
 - c. Use the Internet in interpreting current trends in aging.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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

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- T5 Technology research tools

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Suggested References

- Fanlight Productions. (1995). *Professional choices: Ethics at work* [Videotape]. (Available from Fanlight Productions, <http://www.fanlight.com>)
- Murphy, B., & Dillone, C. (1998). *Interviewing in actual process and practice*. Pacific Grove, CA: Brooks & Cole.
- Ruyse, D., Dhooper, S., & Rompt, L. E. (2003). *Field instruction: A guide for social work students* (4th ed.). Boston: Allyn & Bacon.
- Sevel, J., Cummins, L., & Madrigal, C. (2005). *Social work skills demonstrated: Beginning direct practice CD-ROM with student manual* (2nd ed.). Needham Heights, MA: Allyn & Bacon.
- Timberlake, E. M., Farber, M. Z., & Sabatino, C. A. (2002). *The general method of social work practice: McMahon's generalist perspective* (4th ed.). Boston: Allyn & Bacon.

Course Name: Seminar II

Course Abbreviation: GER 2141

Classification: Vocational-Technical Core

Description: Continuation of Seminar I with emphasis on research assignments referencing AGHE publications. (1 sch: 2 hr. lab)

Prerequisite: Seminar I (GER 2131)

Competencies and Suggested Objectives	
1.	Develop a research paper on aging. <ul style="list-style-type: none"> a. Utilize the Internet to identify AGHE publications related to a particular topic. b. Identify a field of aging that is of interest. c. Utilize the Internet to obtain three articles as references on topic of research. d. Develop a research paper.
2.	Present the research findings. <ul style="list-style-type: none"> a. Present a review of the research. b. Discuss the implications for practice.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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

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.

Postsecondary Gerontology Technology

- 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
- T5 Technology research tools

Suggested References

- Fanlight Productions. (1995). *Professional choices: Ethics at work* [Videotape]. (Available from Fanlight Productions, <http://www.fanlight.com>)
- Murphy, B., & Dillone, C. (1998). *Interviewing in actual process and practice*. Pacific Grove, CA: Brooks and Cole.
- Ruyse, D., Dhooper, S., & Rompt, L. E. (2003). *Field instruction: A guide for social work students* (4th ed.). Boston: Allyn and Bacon.
- Sevel, J., Cummins, L., & Madrigal, C. (2005). *Social work skills demonstrated: Beginning direct practice CD-ROM with student manual* (2nd ed.). Needham Heights, MA: Allyn & Bacon.
- Timberlake, E. M., Farber, M. Z., & Sabatino, C. A. (2002). *The general method of social work practice: McMahon's generalist perspective* (4th ed.). Boston: Allyn & Bacon.

Course Name: Practicum I

Course Abbreviation: GER 2233

Classification: Vocational-Technical Core

Description: This practicum will permit gerontology students to apply learned concepts and to gain experience in a professional setting with actual client/worker interaction. (3 sch: 9 hr. clinical)

Prerequisite: All first year Gerontology coursework

Competencies and Suggested Objectives	
1. Demonstrate professionalism.	<ul style="list-style-type: none"> a. Demonstrate professional growth. b. Network with other service providers. c. Participate in professional development activities. d. Demonstrate a professional appearance.
2. Demonstrate communication skills in client-worker relationships.	<ul style="list-style-type: none"> a. Demonstrate therapeutic communication skills. b. Utilize effective social work skills.
3. Demonstrate data collection and assessment.	<ul style="list-style-type: none"> a. Obtain information from appropriate sources. b. Access functional levels of older adults.
4. Demonstrate intervention skills.	<ul style="list-style-type: none"> a. Develop a treatment plan. b. Implement a treatment plan. c. Utilize resources available to carry out the treatment plan. d. Evaluate the effectiveness of the treatment plan.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER5 Students should participate in a credit practicum experience.

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.
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
T5 Technology research tools

Suggested References

The New York Academy of Medicine. (n.d.). *Geriatric practicum partnership program*. Retrieved November 8, 2004, from <http://socialwork.nyam.org/resources/>

Course Name: Practicum II

Course Abbreviation: GER 2243

Classification: Vocational-Technical Core

Description: This is a continuation of Practicum I with emphasis on data collection, assessment, and intervention (3 sch: 9 hr. clinical)

Prerequisite: Practicum I (GER 2233)

Competencies and Suggested Objectives	
1. Practice profession at an entry level in the practice setting.	<ul style="list-style-type: none"> a. Demonstrate professional growth. b. Network with other service providers. c. Participate in professional development activities. d. Demonstrate a professional appearance.
2. Practice communication skills in client-worker relationships.	<ul style="list-style-type: none"> a. Demonstrate therapeutic communication skills. b. Utilize effective social work skills.
3. Practice data collection and assessment.	<ul style="list-style-type: none"> a. Obtain information from appropriate sources. b. Access functional levels of older adults.
4. Practice intervention skills.	<ul style="list-style-type: none"> a. Develop a treatment plan. b. Implement a treatment plan. c. Utilize resources available to carry out the treatment plan. d. Evaluate the effectiveness of the treatment plan.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER5 Students should participate in a credit practicum experience.

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.
- 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
- T5 Technology research tools

Suggested References

The New York Academy of Medicine. (n.d.). *Geriatric practicum partnership program*. Retrieved November 8, 2004, from <http://socialwork.nyam.org/resources/>

Course Name: Social Policy and Aging

Course Abbreviation: GER 2433

Classification: Vocational-Technical Core

Description: This course offers the student an overview of aging social policy issues and the major programs impacting the older adults in America. This course includes the policy process, aging policy development, social support programs on behalf of older adults, the legislative process, and the future of aging social policy. (3 sch: 3 hr. lecture)

Prerequisite: Introduction to Sociology (SOC 2113) and all first year Gerontology coursework

Competencies and Suggested Objectives	
1.	Explore the historical background of aging policy development. <ol style="list-style-type: none"> Discuss the origin of aging social policy. Discuss the policy agenda of the Older Americans Act, Medicare, Medicaid, Supplemental Security Income, Social Service Block Grants, and the Food Stamp program. Describe the strategies of the Aging Network. Examine interest and advisory groups (e.g., White House Conference on Aging and AARP).
2.	Discuss economic and social support policies/programs on behalf of older Americans. <ol style="list-style-type: none"> Examine Social Security and its principles, health care policies, long-term care policies and reform trends. Examine employment, retirement policies, housing, and the evolution of retirement communities. Discuss future trends in state and national economic and social support policies and programs.
3.	Describe the legislative funding process for social policy and aging. <ol style="list-style-type: none"> Discuss the funding processes for existing service systems, such as federal, state, state-match, local funding, and local in-kind. Discuss public versus private partnership trends and resource development.
4.	Examine issues foraging social policy development for the future. <ol style="list-style-type: none"> Discuss trends in social policy involving older adults, including increased life expectancy, demographic wave, increased service demands, and gender differences. Discuss the body of values upon which social policy is to be based such as changing societal values and changing personal values (e.g., independences, personal security, diversity, quality of life, and dignity).

STANDARDS

Standards and Guidelines for Gerontology Programs

GER1 Students should gain knowledge and apply that knowledge in the area of sociology of aging or social aspects of aging.

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

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.
- 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

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

Suggested References

- Brown, D. K. (1997). *An introduction to public policy: An aging perspective*. Lanham, MD: University Press of America.
- Horejsi C., & Garthwait, C. (2002). *The social work practicum: A guide and workbook for students* (2nd ed.). Boston: Allyn & Bacon.

Kuff, T., & Park, R. (1999). *Aging public policy: Bonding the generations* (2nd ed.). Amityville, NY: Baywood.

Moody, H. (2002). *Aging: Concepts and controversies* (4th ed.). Thousand Oaks, CA: Pine Forge.

Scharlach, A., & Lenard, K. (1997). *Controversial issues on aging*. Boston: Allyn & Bacon.

The United States Administration on Aging. (n.d.). Retrieved November 8, 2004, from <http://www.aoa.gov>

Course Name: Activities Programming for the Elderly I

Course Abbreviation: GER 2536

Classification: Vocational-Technical Core

Description: This course will provide the student with a practical and theoretical framework from which to develop and manage a comprehensive program of activities for older adults. This is the first half of the Modular Education Program for Activity Professionals, Part I as described by the National Certification Council for Activity Professionals. This course will provide an overview of the activity profession and an exploration of human development in the later years. (6 sch: 4 hr. lecture, 4 hr. lab)

Prerequisite: All first year Gerontology coursework

Competencies and Suggested Objectives	
1.	Develop an understanding of the activity profession. <ol style="list-style-type: none"> a. Research the historical background of the activity profession. b. Present research findings. c. Discuss state and federal regulations. d. Discuss the Standards of Practice and Code of Ethics of the National Association of Activity Professionals (NAAP). e. Identify existing models of care. f. Debate quality of life issues. g. Explain the value of support systems.
2.	Develop an understanding of human development in the later adult years. <ol style="list-style-type: none"> a. Examine the aging process in the later adult years. b. Research the physical and biological aspects of aging. c. Examine the psychosocial aspects of aging. d. Discuss the spiritual aspects of aging. e. Discuss the universal needs of the elderly. f. Explore the impact of illness and dysfunction on normal aging. g. Examine medication use in the elderly.

STANDARDS

Standards and Guidelines for Gerontology Programs

- GER1 Students should gain knowledge and apply that knowledge in the area of sociology of aging or social aspects of aging.
- GER2 Students should gain knowledge and apply that knowledge in the area of psychology of aging or mental health aspects of aging.
- GER3 Students should gain knowledge and apply that knowledge in the area of biology/physiology/health aspects of aging.
- GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

GER5 Students should participate in a credit practicum experience.

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.
- M6 Explore concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.

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.
- 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
- T5 Technology research tools

Suggested References

Burlingame, J., Blaschko, T., & Shalko, T. K. (Eds.). (2001). *Idyll Arbor's therapy dictionary* (2nd ed.). Ravendale, WA: Idyll Arbor.

Burlingame, J., & Blaschko, T. (2002). *Assessment tools for recreational therapy and related fields* (3rd ed.). Ravendale, WA: Idyll Arbor.

Hall, B., & Nulta, M. (2000). *Care planning cookbook for activities and recreation* (3rd ed.). San Diego, CA: Recreation Therapy Consultants.

Lanza, S. (1997). *Essentials for the activity professional in long term care*. Albany, NY: Delmar.

Martini, E., Weeks, M., & Wirth, P. (2002). *Long term care* (4th ed.). Ravendale, WA: Idyll Arbor.

Pearl, A., & Barrett, P. (1997). *A life worth living: Practical strategies for reducing depression in older adults*. Baltimore: Health Profession.

Course Name: Activities Programming for the Elderly II

Course Abbreviation: GER 2546

Classification: Vocational-Technical Core

Description: This course will provide the student with a practical and theoretical framework from which to develop and manage a comprehensive program of activities for older adults. This is the second half of the Modular Education Program for Activity Professionals, Part I as described by the National Certification Council for Activity Professionals. Included in this course are the standards of practice, practitioner's behavior, activity care planning for a quality of life, and methods of service delivery in the activity profession. (6 sch: 4 hr. lecture, 4 hr. lab)

Prerequisite: Activities Programming for the Elderly I (GER 2536) and all first year Gerontology coursework

Competencies and Suggested Objectives	
1.	Demonstrate professional activity practitioners' behavior. <ol style="list-style-type: none"> a. Explain the code of ethics of the activity professional. b. Discuss personal characteristics of an activity professional. c. Discuss practitioners' health. d. Practice instructional methods used when working with older adults.
2.	Develop an individualized activity care plan. <ol style="list-style-type: none"> a. Utilize MDS screening process to assess a patient. b. Participate in an interdisciplinary meeting. c. Develop a multidisciplinary plan of care for an individual.
3.	Explain methods of service delivery in the activity profession. <ol style="list-style-type: none"> a. Explain the program scope. b. Explain the types of programs. c. Discuss activity program management. d. Explain the levels of service. e. Identify different resources available for service delivery. f. Explain different treatment modalities. g. Demonstrate treatment modalities.

STANDARDS

Standards and Guidelines for Gerontology Programs

- GER1 Students should gain knowledge and apply that knowledge in the area of sociology of aging or social aspects of aging.
- GER2 Students should gain knowledge and apply that knowledge in the area of psychology of aging or mental health aspects of aging.
- GER3 Students should gain knowledge and apply that knowledge in the area of biology/physiology/health aspects of aging.

GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.

GER5 Students should participate in a credit practicum experience.

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.
- M6 Explore concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.

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

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

Suggested References

Burlingame, J., Blaschko, T., & Shalko, T. K. (Eds.). (2001). *Idyll Arbor's therapy dictionary* (2nd ed.). Ravendale, WA: Idyll Arbor.

Burlingame, J., & Blaschko, T. (2002). *Assessment tools for recreational therapy and related fields* (3rd ed.). Ravendale, WA: Idyll Arbor.

Hall, B., & Nulta, M. (2000). *Care planning cookbook for activities and recreation* (3rd ed.). San Diego, CA: Recreation Therapy Consultants.

Lanza, S. (1997). *Essentials for the activity professional in long term care*. Albany, NY: Delmar.

Martini, E., Weeks, M., & Wirth, P. (2002). *Long term care* (4th ed.). Ravendale, WA: Idyll Arbor.

Pearl, A., & Barrett, P. (1997). *A life worth living: Practical strategies for reducing depression in older adults*. Baltimore: Health Profession.

Course Name: Aging and Mental Health

Course Abbreviation: GER 2643

Classification: Vocational-Technical Core

Description: This course is an overview of aging and the mental health issues related to older adults. Psychosocial theories will be explored as well as common emotional problems, common psychiatric and cognitive problems experienced by older adults. The course will explore issues related to suicide, death, dying and bereavement. The course will conclude with units exploring the mental health assessment and intervention processes for older adults. (3 sch: 3 hr. lecture)

Prerequisite: All first year Gerontology coursework, first semester of the second year coursework, and General Psychology I (PSY 1513).

Competencies and Suggested Objectives	
1.	Explain basic concepts of mental health for older adults. <ol style="list-style-type: none"> a. Discuss the life cycle and developmental tasks as defined by Erikson. b. Discuss human needs as defined by Maslow. c. Explore areas that may affect personality development.
2.	Explore common emotional problems experienced by older adults. <ol style="list-style-type: none"> a. Discuss the affects on mental health of stress, anxiety, fear, panic, passive, aggressive, assertive behaviors. b. Discuss methods to alleviate common emotional problems (e.g., relaxation and desensitization).
3.	Explore the stage theories of memory. <ol style="list-style-type: none"> a. Discuss memory changes and memory strategies in older adults. b. Discuss age differences found in memory tasks.
4.	Explain the major categories of mental disorders. <ol style="list-style-type: none"> a. Research the classes of cognitive disorders. <ol style="list-style-type: none"> (1) Explore causes/characteristics of Alzheimer and non-Alzheimer related dementias. (2) Compare and contract the clinical presentation of delirium and dementia. b. Explore the common psychiatric disorders for an older adult. <ol style="list-style-type: none"> (1) Explore the types, prevalence, symptoms, presentation in older people as opposed to younger people, social implications, and the implications of misdiagnosis in older adults for the following. <ol style="list-style-type: none"> (a) Depression (b) Late-life depression (c) Anxiety disorder/Agoraphobia (d) Schizophrenia (2) Analyze substance-related disorders including drug and alcohol abuse. (3) Analyze the prevalence of suicide in older adults.

5. Discuss the psychological and physical process of death and dying.
 - a. Research Kubler-Ross's stages of death.
 - b. Define death and the dying process.
 - c. Explore grief, mourning, and bereavement.
 - d. Explore hospice care.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER2 Students should gain knowledge and apply that knowledge in the area of psychology of aging or mental health aspects of aging.

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.
- M6 Explore concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.

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

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

Postsecondary Gerontology Technology

Suggested References

Belsky, J. (1999). *The psychology of aging: Theory research and interventions* (3rd ed.). Pacific Grove, CA: Brooks/cole.

Butler, R., Lewis, M., & Sunderland, T. (1998). *Aging and mental health: Positive and psychological and biomedical approaches* (5th ed.). Boston: Allyn and Bacon.

Cockerham, W. (2003). *Sociology of mental disorder* (6th ed.). Upper Saddle River, NJ: Prentice Hall.

Hoyer, W., & Roudin, P. (2003). *Adult development and aging* (5th ed.). New York: McGraw Hill.

Course Name: Aging and Physical Health

Course Abbreviation: GER 2743

Classification: Vocational-Technical Core

Description: This course provides the student with an understanding of the interactive nature of biological and psychosocial processes that occur in aging. Basic instructions of the body systems, age changes in each system, common diseases, and the social and emotional ramifications related to the aging process. Basic information on decline in functioning as well as preventive, wellness, and nutritional issues will be addressed. (3 sch: 3 hr. lecture)

Prerequisite: All first year Gerontology coursework, first semester of the second year coursework, and Body Structures and Function (PNV 1213) or Anatomy & Physiology (BIO 2514)

Competencies and Suggested Objectives	
1. Identify current demographic and sociological trends of the older adult population.	<ul style="list-style-type: none"> a. Explore life expectancy at birth, life span, infant mortality rates, and life expectancy at 65 and 85. b. Explore cultural, racial, and gender differences in longevity. c. Discuss the demographic and social impact of the baby boom cohorts.
2. Explore aging concepts.	<ul style="list-style-type: none"> a. Explain biomarkers of aging (e.g., life stages, chronological aging, functional aging, maturation, maturity, aging, age changes, and age difference). b. Explore aging versus disease. c. Explain life stages and health issues in late life stages.
3. Explain the biological aging theories.	<ul style="list-style-type: none"> a. Explain free radical theory, error theory, preprogrammed theory, immune system theory, and wear and tear theory. b. Define Hayflick's limit. c. Explore theories of life extension.
4. Explore the physiological changes that take place during the aging process.	<ul style="list-style-type: none"> a. Explore the body systems, primary age changes, and common diseases in each system, to include the integumentary system, musculoskeletal system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary system, nervous system, sensory system, endocrine system, and reproductive system.
5. Discuss the efficacy of health promotion and disease prevention measures as applied to the older adult population.	<ul style="list-style-type: none"> a. Describe types of physical exercise including aerobics, strength training, and specific age and condition appropriate exercises. b. Discuss types of mental exercise that can be used with older adults.

6. Explain proper nutrition for the older adult and its significance for good health.
 - a. Research proper nutrition for the elderly and its significance for good health.
 - b. Explain diseases which may result from improper nutrition.
 - c. Discuss the incidence and effects of substance abuse (drug, alcohol, and tobacco) in the older adult.
 - d. Explore drug interactions and the older adult.

STANDARDS

Standards and Guidelines for Gerontology Programs

GER3 Students should gain knowledge and apply that knowledge in the area of biology/physiology/health aspects of aging.

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.
- M6 Explore concepts of statistics and probability in real world situations.
- S1 Explain the Anatomy and Physiology of the human body.
- 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.

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.

National Educational Technology Standards for Students

- T1 Basic operations and concepts

Postsecondary Gerontology Technology

- T2 Social, ethical, and human issues
T5 Technology research tools

Suggested References

Cockerham, W. (2003). *Sociology of mental disorder* (6th ed.). Upper Saddle River, NJ: Prentice Hall.

Erber, J. (2005). *Aging and older adulthood*. Belmont, CA: Wadsworth.

Hoyer, W., & Roudin, P. (2003). *Adult development and aging* (5th ed.). New York: McGraw Hill.

Recommended Tools and Equipment

CAPITALIZED ITEMS

1. Computers (1 per 4 students)
2. Television
3. VCR
4. Printer (1-2 per program)
5. Video equipment (Cam-corder)
6. DVD
7. CD
8. LCD projector

NON-CAPITALIZED ITEMS

1. Activity supplies related to gerontology
2. Videos

Student Competency Profile for Gerontology 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.

Social Gerontology (GER 1113)

- _____ 1. Describe the demography of aging and the effects on American society.
- _____ 2. Explain the influences of social and historical changes on the aging population.
- _____ 3. Explain social theories of aging and discuss attitudes and beliefs about aging.

Human Services for the Elderly (GER 1223)

- _____ 1. Describe the community resources available to older adults.
- _____ 2. Explore the legal aspects and issues of confidentiality in working with older adults.
- _____ 3. Explore principles of professional values and ethics.
- _____ 4. Discuss principles of the case management approach of service delivery for older adults.

Social Work with the Elderly (GER 1323)

- _____ 1. Explore the context of social work practice with older adults.
- _____ 2. Examine human diversity, values, and ethical principles in work with older adults.
- _____ 3. Examine the Social Work Practice Principles (Casework Principles) used in working with older adults.
- _____ 4. Explore the stages of the General Method of Social Work Practice (the Engagement Stage, the Data Collection, the Assessment Stage, the Intervention Stage, the Evaluation Stage, and the Termination Stage), and apply these in working with older adults.

Seminar I (GER 2131)

- _____ 1. Examine the need for practicum.
- _____ 2. Discuss the integration of the student within a social service agency.
- _____ 3. Explore procedures for starting practicum.
- _____ 4. Explore the role of the student in practicum.
- _____ 5. Examine the client system as related to service delivery.
- _____ 6. Examine everyday concerns related to practicum.
- _____ 7. Examine legal and ethical issues that affect practice.

- _____ 8. Discuss aging publications by the Association of Gerontology in Higher Education (AGHE) as it relates to current trends in aging.

Seminar II (GER 2141)

- _____ 1. Develop a research paper on aging.
_____ 2. Present the research findings.

Practicum I (GER 2233)

- _____ 1. Demonstrate professionalism.
_____ 2. Demonstrate communication skills in client-worker relationships.
_____ 3. Demonstrate data collection and assessment.
_____ 4. Demonstrate intervention skills.

Practicum II (GER 2243)

- _____ 1. Practice profession at an entry level in the practice setting.
_____ 2. Practice communication skills in client-worker relationships.
_____ 3. Practice data collection and assessment.
_____ 4. Practice intervention skills.

Social Policy and Aging (GER 2433)

- _____ 1. Explore the historical background of aging policy development.
_____ 2. Discuss economic and social support policies/programs on behalf of older Americans.
_____ 3. Describe the legislative funding process for social policy and aging.
_____ 4. Examine issues for aging social policy development for the future.

Activities Programming for the Elderly I (GER 2536)

- _____ 1. Develop an understanding of the activity profession.
_____ 2. Develop an understanding of human development in the later adult years.

Activities Programming for the Elderly II (GER 2546)

- _____ 1. Demonstrate professional activity practitioners' behavior.
_____ 2. Develop an individualized activity care plan.
_____ 3. Explain methods of service delivery in the activity profession.

Aging and Mental Health (GER 2643)

- _____ 1. Explain basic concepts of mental health for older adults.
_____ 2. Explore common emotional problems experienced by older adults.
_____ 3. Explore the stage theories of memory.
_____ 4. Explain the major categories of mental disorders.
_____ 5. Discuss the psychological and physical process of death and dying.

Aging and Physical Health (GER 2743)

- _____ 1. Identify current demographic and sociological trends of the older adult population.
- _____ 2. Explore aging concepts.
- _____ 3. Explain the biological aging theories.
- _____ 4. Explore the physiological changes that take place during the aging process.
- _____ 5. Discuss the efficacy of health promotion and disease prevention measures as applied to the older adult population.
- _____ 6. Explain proper nutrition for the older adult and its significance for good health.

Baseline Competencies

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

Course Abbreviation(s): GER 100(3-6), GER 1013, GER 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. Recognize safety procedures and policies.
 - a. Describe basic safety procedures.
 - b. Describe accident prevention methods and disaster plans of the local school district.
 - c. Discuss a safe and clean environment.
 - d. Follow state and facility guidelines, including dress requirements for clinical-type experiences.
2. Discuss education and credentials required for health care careers.
 - a. Discuss educational levels for health careers, including certification, associate degree, bachelor’s degree, master’s degree, and doctoral degree.
 - b. Compare the credentials needed for careers in health care, including certification, registration, and licensure.
3. Discuss professional ethics.
 - a. Explain professional ethics.
 - b. Discuss confidentiality.
 - c. Discuss HIPAA, the Health Insurance Portability and Accountability Act of 1996.

4. Discuss legal responsibility and client's rights.
 - a. Explain torts and legal responsibility.
 - b. Identify ways to promote clients' rights and privacy.
 - c. Discuss the requirement for health care workers to undergo a background check.
5. Explain standard precautions.
 - a. Explain importance of standard precautions in life practices and health care.
 - b. Explain the state and federal government's role in standard precautions.
 - c. Relate standard precautions to the transmission of infectious diseases including HIV, AIDS, HBV, and TB.
6. Utilize standard precautions.
 - a. Demonstrate hand-washing technique.
 - b. Demonstrate donning and removing clean gloves.
7. Perform basic emergency procedures.
 - a. Explain first aid procedures for sudden illness.
 - b. Explain first aid procedures for accidents.
8. Perform advanced emergency procedures.
 - a. Perform CPR.
 - b. Demonstrate first aid for an obstructed airway.
9. Explain medical terminology.
 - a. Spell designated medical terms correctly.
 - b. Demonstrate the use of medical references to spell medical terms correctly.
 - c. Define and divide medical terms into root words, prefixes, and suffixes.
10. Recognize and use medical terminology.
 - a. Interpret the common medical abbreviations and symbols including meanings and uses.
 - b. Demonstrate the use of medical terms and abbreviations in reading, speaking, interpreting, and writing simulated medical records.
11. Interpret basic structure and functions of the sensory systems.
 - a. Label the basic structures of the sensory organs.
 - b. Identify the functions of the sensory organs.

Appendix A: Standards and Guidelines for Gerontology Programs¹

- GER1 Students should gain knowledge and apply that knowledge in the area of sociology of aging or social aspects of aging.
- GER2 Students should gain knowledge and apply that knowledge in the area of psychology of aging or mental health aspects of aging.
- GER3 Students should gain knowledge and apply that knowledge in the area of biology/physiology/health aspects of aging.
- GER4 Students should gain knowledge and apply that knowledge in the area of health and human services programs and policies, with an emphasis on aging.
- GER5 Students should participate in a credit practicum experience.

¹ Douglass, E. B., Atchley, R. C., David, D. D., & Wendt, P. F. (Eds.). (1997). *Standards and guidelines for gerontology programs* (3rd ed.). Washington, DC: Association for Gerontology in Education.

Appendix B: 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 C: Workplace Skills for the 21st Century²

- 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.

² Secretary's commission on achieving necessary skills. (1991). Retrieved July 13, 2004, from <http://wdr.doleta.gov/SCANS/>

Appendix D: National Educational Technology Standards for Students³

- 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.

³ ISTE: *National educational technology standards (NETS)*. (2000). Retrieved July 13, 2004, from <http://cnets.iste.org/>