

# Occupational Safety & Health Technology Mississippi Curriculum Framework

(Program CIP: 15.0701 Occupational Safety and Health Technology/Technician)

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Division of Workforce, Career, and Technical Education  
3825 Ridgewood Road  
Jackson, MS 39211  
Phone: 601-432-6155  
Email: [curriculum@mccb.edu](mailto:curriculum@mccb.edu)

## FACULTY WRITING TEAM MEMBERS

Michael Flowers, Southwest Mississippi Community College

## ADMINISTRATOR WRITING TEAM MEMBERS

Jeremy Smith, Southwest Mississippi Community College

## BUSINESS AND INDUSTRY CONTRIBUTING MEMBERS

Mike Coleman, Denbury Resources, Jackson, MS area\*

Jake Gazzo, Auto Zone, New Orleans, LA\*

Sabrina Williams, Department of Labor – Occupational Safety and Health Administration, Jackson, MS

**\*Denotes an industry member who attended the writing team meeting.**

## OFFICE OF CURRICULUM AND INSTRUCTION TEAM MEMBERS

Krystal Berry, Curriculum Specialist, Mississippi Community College Board

Angela Bryan, Director of Curriculum and Instruction, Mississippi Community College Board

Dr. Rachel DeVaughan, Curriculum Specialist, Mississippi Community College Board

The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

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# ADOPTION OF NATIONAL CERTIFICATION STANDARDS

With the Occupational Safety and Health Act of 1970, Congress created the Occupational Safety and Health Administration (OSHA) to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance. OSHA is part of the United States Department of Labor. The administrator for OSHA is the Assistant Secretary of Labor for Occupational Safety and Health. OSHA's administrator answers to the Secretary of Labor, who is a member of the cabinet of the President of the United States.

Through the program, students will prepare for and complete the OSHA 30-hour outreach courses in General Industry and Construction Industry. The 30-hour outreach courses provide a greater depth and variety of training on an expanded list of topics associated with workplace hazards in each industry. The key emphases of the programs are provided below.

**30-Hour General Industry.** This training program is intended to provide a variety of training to workers with some safety responsibility. Training emphasizes hazard identification, avoidance, control and prevention, not OSHA standards. The minimum topic requirements for the OSHA 30 certification may include:

- Introduction to OSHA
- Managing Safety and Health - may include Injury and Illness Prevention Programs, job site inspections, incident prevention programs, management commitment and employee involvement, worksite analysis, hazard prevention and control, incident investigations, how to conduct safety meetings, and supervisory communication
- Walking and Working Surfaces, including fall protection
- Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection
- Electrical
- Personal Protective Equipment (PPE)
- Materials Handling
- Hazard Communication

Optional training may focus on:

- Hazardous Materials (Flammable and Combustible Liquids, Spray Finishing, Compressed Gases, Dipping and Coating Operations)
- Permit-Required Confined Spaces
- Lockout / Tagout
- Machine Guarding
- Welding, Cutting, and Brazing
- Introduction to Industrial Hygiene
- Blood-borne Pathogens
- Ergonomics
- Fall Protection
- Safety and Health Programs
- Powered Industrial Vehicles

**30-Hour Construction Industry.** This training program is intended to provide a variety of training for workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in the construction industry. The program also provides information regarding workers' rights, employer responsibilities, and how to file a complaint. The minimum topic requirements for OSHA 30 certification may include:

- Introduction to OSHA
- Managing Safety and Health
- OSHA Focus Four Hazards: Falls, Electrocution, Struck By, and Caught-In or Between
- Personal Protective Equipment
- Health Hazards in Construction
- Stairways and Ladders

Optional training may focus on:

- Concrete and Masonry Construction
- Ergonomics
- Excavations
- Fire Protection and Prevention
- Materials Handling, Storage, Use and Disposal
- Motor Vehicles, Mechanized Equipment and Marine Operations; Rollover Protective Structures and Overhead Powered Industrial Vehicles
- Safety and Health Programs
- Scaffolds
- Steel Erection
- Tools – Hand and Power
- Welding and Cutting

# INDUSTRY JOB PROJECTION DATA

## Occupational Safety and Health

Occupational Safety and Health Technician occupations often require an education level of a bachelor's degree. However, technicians may be required to have only an associate's degree. The Bureau of Labor Statistics reports that there will be a 9.57% increase in job outlook at the regional level and a 14.84% increase at the state level. Median annual income for this occupation is \$54,683.20 at both the regional and state level. A summary of occupational data from the Bureau of Labor Statistics Data Center and the State Workforce Investment Board data is displayed below ([www. http://swib.ms.gov/DataCenter/](http://swib.ms.gov/DataCenter/)):

**Table 1: Education Level**

Program Occupations	Education Level
Occupational Health and Safety Specialists	Bachelor's Degree

**Table 2: Occupational Overview**

	Region	State	United States
2010 Occupational Jobs	230	364	54110
2020 Occupational Jobs	252	418	60100
Total Change	22	54	5990
Total % Change	9.57%	14.84%	11.07%
2010 Median Hourly Earnings	\$26.29	\$26.29	\$31.09
2010 Median Annual Earnings	\$54,683.20	\$54,683.20	\$64,667.20
Annual Openings	2	5	599

**Table 3: Occupational Breakdown**

Description	2010 Jobs	2020 Jobs	Annual Openings	2010 Hourly Earnings	2010 Annual Earnings 2,080 Work Hours
Occupational Health and Safety Specialists	230	252	2	\$26.29	\$54,683.20
<b>TOTAL</b>	<b>230</b>	<b>252</b>	<b>2</b>	<b>\$26.29</b>	<b>\$54,683.20</b>

**Table 4: Occupational Change**

Description	Regional Change	Regional % Change	State % Change	National % Change
Occupational Health and Safety Specialists	22	9.57%	14.84%	11.07%

## ARTICULATION

There are currently no secondary programs that will articulate to the Occupational Safety and Health Technology program of study. Dual credit and local partnerships are encouraged.

## TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment. To use the approved Alternate Assessment for the following programs of study, colleges should provide a Letter of Notification to the Director of Career Technical Education at the MS Community College Board. Please see the following link for further instructions: <http://www.mccb.edu/wkfEdu/CTDefault.aspx>.

CIP Code	Program of Study	
15.0701	Occupational Safety & Health Technology	
Level	Standard Assessment	Alternate Assessment
Career	MS-CPAS-2 Postsecondary Occupational Safety & Health Technology: Year 1	OSHA 30 General Industry
Technical/AAS	MS-CPAS-2 Postsecondary Occupational Safety & Health Technology: Year 2	OSHA 30 Construction Industry

## ONLINE AND BLENDED LEARNING OPPORTUNITIES

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the MS Community College Board.

## INSTRUCTIONAL STRATEGIES

Instructional strategies for faculty members implementing the curriculum can be found through the Office of Curriculum and Instruction's professional development.

## ASSESSMENT STRATEGIES

The Office of Curriculum and Instruction's professional development offer assessment strategies to faculty members implementing the curriculum. Additionally, standards were included in course content when appropriate.



## RESEARCH ABSTRACT

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. In 2010, there were 54,110 occupational safety and health technicians in the United States. That number is expected to increase to 60,100 by 2020. The earnings potential for Occupational Safety and Health Technicians is \$54,683.20 to \$64,667.20.

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.

This curriculum was last validated and approved in 2009. In the spring of 2016, the Office of Curriculum and Instruction (OCI) met faculty and industry members in Summit, MS. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field.

The curriculum framework was revised to better reflect new terminology in the occupational safety and health administration area. The term incident was utilized instead of the term accident due to the manner in which the terminology is used by industry. Student learning objectives were also updated to support the current needs of the industry. Investigative processes and procedures were more strongly emphasized. The usage of social media in a safety culture was brought into the framework. Stronger emphasis was placed on action-based activities, for example, completing mock incident investigations and reporting. Report writing for the OSHA industry was included with particular emphasis on trend analysis reporting and interpretation.

## REVISION HISTORY

2009 - Research & Curriculum Unit, Mississippi State University

2016 - Office of Curriculum & Instruction, Mississippi Community College Board

## PROGRAM DESCRIPTION

Occupational Safety and Health Technicians, (OSHT) also known as safety and health practitioners or occupational health and safety inspectors, help to prevent harm to workers, property, the environment, and the general public. They promote occupational health and safety within organizations by advising management on how to increase worker productivity in the 21<sup>st</sup> Century Workforce through raising morale and reducing absenteeism, turnover, and equipment downtime while securing savings on insurance premiums, worker's compensation benefits, and litigation expenses. In addition, OSHT assist employers in complying with Occupational Safety and Health Act (OSHA) regulations and standards. Employment opportunities are available at all levels of government agencies and with public and private businesses. Upon completion of the two-year program the student will be awarded the Associate of Applied Science Degree.

## SUGGESTED COURSE SEQUENCE- OCCUPATIONAL SAFETY AND HEALTH TECHNOLOGY

### Accelerated Pathway

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
HST 1113	Introduction to Safety and Health	3	3		45	45		
HST 1213	Governmental Regulatory Agencies	3	3		45	45		
HST 1313	Supervisor Safety	3	3		45	45		
	Instructor Approved Electives	6						
	<b>TOTAL</b>	<b>15</b>						

### Career Certificate Required Courses

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
HST 1113	Introduction to Safety and Health	3	3		45	45		OSHA 30 – General Industry
HST 1213	Governmental Regulatory Agencies	3	3		45	45		
HST 1313	Supervisor Safety	3	3		45	45		
HST 1413	Safety and Health Program Development	3	3		45	45		
HST 1423	Safety and Health Program Management	3	3		45	45		
HST 1513	Loss Control	3	3		45	45		
HST 2223	OSHA I	3	3		45	45		
	Instructor Approved Technical Electives	9						
	<b>TOTAL</b>	<b>30</b>						

### Technical Certificate Required Courses

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
HST 2323	Industrial Safety	3	3		45	45		OSHA 30 – Construction Industry
HST 2433	Safety and Health Communications/Training	3	3		45	45		
HST 2123	Safety and Health Seminar	3	3		45	45		
HST 2233	OSHA II	3	3		45	45		
HST 2523	Safety and Health Auditing	3	3		45	45		
	<b>TOTAL</b>	<b>15</b>						

## GENERAL EDUCATION CORE COURSES – OCCUPATIONAL SAFETY & HEALTH

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement<sup>1</sup> describes the general education core.

Section 2.7.3 In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

### General Education Courses

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
	Humanities/Fine Arts	3	3		45	45		
	Social/Behavioral Science	3	3		45	45		
	Math/Science Elective	3	3		45	45		
	Other academic courses per local community college requirements for AAS degree.	6						
	<b>Total</b>	15						

<sup>1</sup>

Southern Association of Colleges and Schools Commission on Colleges. (2012). *The principles of accreditation: Foundations for quality enhancement*. Retrieved from <http://www.sacscoc.org/pdf/2012PrinciplesOfAccreditation.pdf>

## ELECTIVES – OCCUPATIONAL SAFETY AND HEALTH TECHNOLOGY

			SCH Breakdown				Contact Hour Breakdown		
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical/ Intern	Total Contact Hours	Lecture	Lab	Clinical/ Intern
WBL (1-6)	Work-Based Learning	1-6							
CSC 1113	Computer Concepts	3							
CPT 1113	Fundamentals of Microcomputer Applications	3							
BAD 2413	Legal Environment of Business I	3							
HPR 1213	Personal and Community Health	3							
HPR 2213	Safety and First Aid	3							
	Other Instructor Approved Technical Elective(s)								

# COURSES

**Course Number and Name:** HST 1113 Introduction to Safety and Health

**Description:** This course is an introduction to general safety and health concepts and terms, historical development, program concepts and terms, legislative overview, worker's compensation, and problem identification.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Explore career opportunities in the occupational safety and health profession.
  - a. Assess the occupational safety and health profession (OSHP) using resources such as the text and computers.
  - b. Analyze the employment outlook for the OSHP.
  - c. Evaluate the benefits of becoming an occupational safety health professional and the benefits of certification.
  - d. Discuss the need for the OSHP to continue professional development to keep current on relevant trends and information within the safety/health industry.
  - e. Compile a brief description of OSHP certifications available to a professional within the field.
2. Understand the historical perspectives of the OSHP.
  - a. Analyze the philosophy and social change of the industrial revolution, U.S safety and health movement, accomplishments, and current issues with the field.
  - b. Summarize the progressive movements of the OSHP to date.
  - c. Evaluate the current issues and problems within the OSHP.
3. Discuss the scope of the safety health and environmental professional position as identified by the American Society of Safety Engineer's (ASSE) job description.
  - a. Identify/appraisal of incident/loss producing conditions and practices and evaluation of the severity of the problem.
  - b. Discuss the development of incident prevention and loss control methods, procedures, and programs.
  - c. Communicate incident and loss control information to those directly involved.
  - d. Measure and evaluate the effectiveness of the incident and loss control system and the needed modifications to achieve optional results.
4. Identify the safety culture/ management system in the 21st Century work place.
  - a. Explore the benefits and problems within the industrial environment.
  - b. Understand the basic roles of management and safety professional in implementing an effective safety culture/management system.
  - c. Analyze safety culture in regards to social media usage.
5. Investigate the Occupational Safety and Health Act 1970 and the Mine Safety and Health Act of 1977.
  - a. Summarize the major provisions of both acts of legislation.

- b. Explore the federal agencies that administer and enforce both major acts of legislation.
  - c. Evaluate a work place scenario citation before it becomes a final agency action.
- 6. Understand the basics of a worker's compensation program.
  - a. Compile the objectives of a worker's compensation program.
  - b. Define the benefits of a worker's compensation program.
  - c. Demonstrate the best practices of administration and management of a worker's compensation program.
- 7. Identify the intent of the Mississippi Emergency Management Agency (MEMA) and the Federal Emergency Management Agency's (FEMA) National Incident Management System (NIMS).

**Course Number and Name:** HST 1213 Governmental Regulatory Agencies

**Description:** This course focuses on Federal government organization, regulatory process, regulations and standards as established by the Occupational Safety and Health Administration, Minerals Management Services, United States Coast Guard, and Environmental Protection Agency.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Define actions found within the Federal Register
  - a. Examine the following actions found within the Federal Register: semiannual agenda, advance notice of proposed rulemaking, proposed rule, and extension of the comment period, comments, notice of public hearing, correction, interim rule/emergency rule, termination of proceedings, and final rule.
  - b. Discuss the relevance of the defined actions listed within the Federal Register.
2. Evaluate the proposed rule changes of governmental regulatory agencies that effect business and industry
  - a. Predict the effect of a proposed rule change on business and industry.
  - b. Summarize the effects of a proposed rule change after reviewing the existing rule section.
  - c. Construct major proposed rule change using predictions and summations as seen in the 21st Century Work Place.
3. Using the current Code of Federal Regulations (CFR), identify and code safety violations common in the 21st Century Work Place.
  - a. List several safety violations that are commonly found.
  - b. Codify the safety violations.
  - c. Discuss the many different categories of safety violations listed and codified.
4. Evaluate the federal executive branch of government's impact on the regulatory process.
  - a. Analyze the presidents' impact on the regulatory process from President Jimmy Carter to present.
  - b. Discuss the federal executive orders on the regulatory process.
  - c. Summarize the effects of each presidential policy on the regulatory process.
5. Discuss the relevance of a semiannual agenda.
  - a. Locate a semiannual agenda.
  - b. Summarize a semiannual agenda.
6. Discuss the relevance of the Administrative Procedure Act in the title V of the U.S. Code.
  - a. Locate the Administrative Procedure Act.
  - b. Summarize the Administrative Procedure Act.
7. Understand the key concepts of the Mississippi Emergency Management Agency (MEMA) and the Federal Emergency Management Agency's (FEMA) National Incident Management System (NIMS).



**Course Number and Name:** HST 1313 Supervisor Safety

**Description:** This course examines the roles and responsibilities of the first-line supervisor pertaining to safety and health/incident prevention and loss control.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Explain the role of the first-line supervisor in implementing an effective company safety program.
  - a. Compile a list of supervisor's duties.
  - b. Analyze the duties of a first-line supervisor in implementing safety duties and responsibilities.
  - c. Assess the duties of a first-line supervisor via role playing.
  - d. Summarize the roles of an effective first line supervisor in implementing an effective safety program.
2. Identify potential hazards workers may encounter, how to prevent them, and/or what safeguards and personal protective equipment are needed, how to use them, and how to enforce their use.
  - a. Compile a list of potential hazards.
  - b. Apply prevention techniques.
  - c. Analyze the effectiveness of the prevention techniques.
  - d. Evaluate effectiveness of the prevention techniques.
  - e. Summarize the outcome of the evaluation of the prevention techniques.

**Course Number and Name:** HST 1413 Safety and Health Program Development

**Description:** This course focuses on developing the essential components of a company safety and health program.

<b>Hour Breakdown:</b>	Semester Hours	Lecture	Lab	Contact Hours
	3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Research the major components of a company safety and health program.
  - a. Distinguish general safety, company safety, and contractor safety.
  - b. Discuss loss prevention and incident reporting.
  - c. Identify biological agents/pathogens and carcinogens.
  - d. Research procedures related to chemical storage, confined spaces, electrical safety, ergonomics, fire protection, first aid, hazardous waste, hearing conservation, hot work, housekeeping, laboratory safety, lead, lockout/tagout, medical surveillance, process safety management, and respiratory protection.
  - e. Discuss hazard communications/right-to-know program.
2. Organize and write safety and health manuals.
  - a. Organize and write a company safety and health manual.
  - b. Organize and write an employee safety manual.

**Course Number and Name:** HST 1423 Safety and Health Program Management

**Description:** This course focuses on the application of proven management principles and techniques to the management of safety and health and loss control programs.

<b>Hour Breakdown:</b>	Semester Hours	Lecture	Lab	Contact Hours
	3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Explain the key elements of a safety and health management program.
  - a. Discuss responsibility and authority for safety and health management programs.
  - b. Discuss general programs and policies and specific programs required by Occupational Safety and Health Administration (OSHA).
  - c. Describe procedures related to personal protective equipment and preventive maintenance.
  - d. Explain the importance of safety and health committees.
  - e. Discuss methods for setting priorities, training and education, and progressive discipline.
2. Explain the importance of planning, developing, staffing, budgeting, and managing.
  - a. Identify procedures and resources available for planning, developing, staffing, budgeting, and managing.
  - b. Describe medical case management and return to work.
  - c. Discuss job hazard analysis.
3. Understand reactive safety management and pro-active safety management.
  - a. Interpret between reactive and pro-active safety management.
  - b. Discuss incident investigation and injury and illness records and reports.
4. Explain methods used in promoting safety and health to management.
  - a. Discuss why it is important to promote safety and health to management.
  - b. Describe methods to promote safety and health to management.
5. Explain the process necessary to prepare and respond to an OSHA inspection.
  - a. Discuss the role of OSHA.
  - b. Prepare an OSHA visit action plan.
  - c. Evaluate the OSHA visit and citations.

**Course Number and Name:** HST 1513 Loss Control

**Description:** This course examines incident/accident reporting, investigation, cost factors, and remediation factors.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Discuss aspects of safety philosophy.
  - a. Discuss the history of safety philosophy.
  - b. Distinguish accident versus incident, and identify key elements of an accident.
  - c. Explain the importance of publicizing safety efforts.
2. Discuss investigating and reporting.
  - a. Explain the scope of a professional safety position.
  - b. Explain the objectives and components of a hazard control program.
  - c. Use the forms used by a safety professional to comply with OSHA.
  - d. Complete a mock incident investigation
3. Explain important aspects of a Supervisor's Safety Training Program.
  - a. Discuss why safety is important.
  - b. Explain what management expects from supervisors.
  - c. Describe supervisor's responsibility for loss control.
  - d. Explain a typical incident investigation procedure.
  - e. List nine key axioms of safety.
4. Explain aspects related to human relations.
  - a. Discuss social needs.
  - b. Discuss safety incentive programs.
  - c. Discuss supervisor as a leader.
  - d. Discuss incident-prone and safety-prone persons.
  - e. Identify basic aspects of human behavior that affect safety.
5. Discuss Job Safety Analysis (JSA) and Job Instructional Training (JIT) methods of training.
  - a. Discuss how JSA and JIT can be used together.
  - b. Discuss methods of organizing a training program.
6. Discuss various aspects of loss control.
  - a. Discuss aspects of loss control and how they relate to safety.

**Course Number and Name:** HST 2223 OSHA I

**Description:** This course is an investigation of general industry safety and health standards as required by the Occupational Safety and Health Act (OSHA).

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Describe the Occupational Safety and Health Act as it applies to 29 CFR 1910.
  - a. Locate and apply OSHA safety and health standards, policies and procedures as applied to 29 CFR 1910.
  - b. Utilize OSHA standards and regulations to supplement an on-going safety and health program.
  - c. Identify common violations of OSHA standards and propose abatement actions as applied to 29 CFR 1910.
  - d. Describe appropriate abatement procedures for selected safety and health hazards.
  - e. Conduct internal training on OSHA regulations as applied to 29 CFR 1910.

**Course Number and Name:** HST 2323 Industrial Safety

**Description:** This course explores the aspects of safety and health in an industrial setting with emphasis on safety philosophy, incident/accident causation, hazard identification, prevention, safeguarding equipment and people.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

**Description:**

1. Explain how occupational safety has evolved to where it is today through knowledge of its history and growth.
  - a. Identify component aspects of the Occupational Safety and Health Act of 1970.
  - b. Identify component aspects of the Mine Safety and Health Act of 1977.
2. Explain basic program activities necessary to maintain interest in safety.
  - a. Identify and explain key concepts used in controlling office hazards.
  - b. Describe plan-of-action considerations that should be addressed when planning for all types of emergencies.
  - c. Organize a comprehensive hearing conservation program complying with OSHA guidelines.
  - d. Organize a comprehensive respiratory protection program complying with OSHA guidelines.
  - e. Identify types of personal protective equipment needed to supervise employees working under safe and healthful working conditions.
  - f. Identify problem areas usually associated with personnel facilities and industrial sanitation.
3. Identify key occupational health services necessary to provide employees a healthy working environment.
  - a. Explain federal legislation for working with disabilities.
  - b. Explain specific employee responsibilities for affirmative action programs.
  - c. Discuss the employer's side of non-occupational and occupational injuries and Return-to-Work (RTW).
  - d. Identify program liability areas in respect to non-occupational injuries.
  - e. Explain the component parts of a product safety management program.
  - f. Discuss key elements of a vehicle safety program.

**Course Number and Name:** HST 2433 Safety and Health Communications/Training

**Description:** This course will explore the communications/training aspects of safety and health program planning with emphasis on organizing and conducting company orientation programs, safety meetings, safety and health training and technical seminars.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Demonstrate effective safety/health related meetings.
  - a. Explain basic communication terminology and concepts.
  - b. Organize and present safety meetings.
  - c. Lead group discussions and/or small meetings or conferences.
  - d. Explain the five P's and factors that contribute to the success of a safety meeting.
2. Use audiovisual equipment and supplies to prepare and present presentations.
  - a. Discuss the use of visuals/equipment.
  - b. Operate presentation applications to prepare presentations.
  - c. Discuss conference room and training setups.
  - d. Explain productions, marketability, and copyright.
  - e. Deliver presentations with supporting materials.

**Course Number and Name:** HST 2123 Safety and Health Seminar

**Description:** This course analyzes a variety of selected safety and health industry problems under the supervision of the Occupational Safety and Health Technology (OSHA) faculty.

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Research and present a problem or topic of interest related to occupational safety and health.
  - a. Prepare a prospectus for an applied safety and health problem or project.
  - b. Discuss the use of questionnaires and surveys to collect information.
  - c. Gather research data for an applied safety and health problem or project by conducting a survey and using journal articles and books.
  - d. Prepare a written report, including a report outline, for an applied safety and health problem or project.
  - e. Prepare and present an oral report (using presentation applications and supporting materials/equipment) for an applied safety and health problem or project.
  - f. Prepare and submit a portfolio of projects, assignments, articles and other materials required during the program.
  - g. Prepare trend analysis report.



**Course Number and Name:** HST 2233 OSHA II

**Description:** This course will focus on the construction industry safety and health standards as required by the Occupational Safety and Health Act (OSHA).

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Describe the Occupational Safety and Health Act as it applied to 29 CFR 1926.
  - a. Locate and apply Safety and Health Standards, Policies, and Procedures as applied to 29 CFR 1926.
  - b. Utilize OSHA Standards and Regulations to supplement an on-going safety and health program.
  - c. Identify common violations of OSHA Standards and Proposed Abatement Actions as applied to 29 CFR 1926.
  - d. Describe appropriate abatement procedures for selected safety hazards.
  - e. Conduct internal training on OSHA Regulations and applied to 29 CFR 1926.

**Course Number and Name:** HST 2523 Safety and Health Auditing

**Description:** This course will analyze compliance audits essential to safety and health

**Hour Breakdown:**

Semester Hours	Lecture	Lab	Contact Hours
3	3	0	45

**Prerequisite:** Instructor Approved

**Student Learning Objectives:**

1. Discuss safety and health auditing.
  - a. Understand the audit process.
  - b. Create audit/inspection forms from regulations and standards.
  - c. Conduct safety and health audits.
  - d. Recommend corrective action for non-compliance with safety and health regulations and standards.
  - e. Document the audit process.

# RECOMMENDED TOOLS AND EQUIPMENT SAFETY AND HEALTH TECHNOLOGY

## **CAPITALIZED ITEMS**

1. Computers (1 per 2 students)
2. LCD Projector (1 per program)
3. Printer, networked (1 per program)

## **NON-CAPITALIZED ITEMS**

1. Hardhat (1 per student)
2. Safety glasses (1 per student)
3. Safety signs and posters
4. Safety related DVDs or recordings
5. National Fire Prevention Association (NFPA) 70E codes and standards handbook. (1 per library)

# RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. Computer
2. Printer
3. VCR/DVD Player

# CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students
- Classification – Courses may be classified as the following:
  - Career Certificate Required Course – A required course for all students completing a career certificate.
  - Technical Certificate Required Course – A required course for all students completing a technical certificate.
  - Technical Elective – Elective courses that are available for colleges to offer to students.
- Description – A short narrative that includes the major purpose(s) of the course
- 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
- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) 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% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
  - 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 that 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 or revised
  - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
  - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas
- Sequencing of the course within a program is left to the discretion of the local college. 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 all of the required Career Certificate courses, Technical Certificate courses **AND** a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.
- In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework
- Revising or extending the student learning outcomes
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

## Course Crosswalk

### Occupational Health & Safety Technology

*Note: Courses that have been added or changed in the 2016 curriculum are highlighted.*

Existing			Revised		
2010 MS Curriculum Framework			2016 MS Curriculum Framework		
Course Number	Course Title	Hours	Course Number	Course Title	Hours
HST 1113	Introduction to Safety and Health	3	HST 1113	Introduction to Safety and Health	3
HST 1213	Governmental Regulatory Agencies	3	HST 1213	Governmental Regulatory Agencies	3
HST 1313	Supervisor Safety	3	HST 1313	Supervisor Safety	3
HST 1413	Safety and Health Program Development	3	HST 1413	Safety and Health Program Development	3
HST 1423	Safety and Health Program Management	3	HST 1423	Safety and Health Program Management	3
HST 1513	Loss Control	3	HST 1513	Loss Control	3
HST 2223	OSHA I	3	HST 2223	OSHA I	3
HST 2323	Industrial Safety	3	HST 2323	Industrial Safety	3
HST 2433	Safety and Health Communications/Training	3	HST 2433	Safety and Health Communications/Training	3
HST 2123	Safety and Health Seminar	3	HST 2123	Safety and Health Seminar	3
HST 2233	OSHA II	3	HST 2233	OSHA II	3
HST 2523	Safety and Health Auditing	3	HST 2523	Safety and Health Auditing	3