

**SAM HOUSTON STATE UNIVERSITY**  
**COLLEGE OF ARTS AND SCIENCES**  
**DEPARTMENT OF AGRICULTURAL AND INDUSTRIAL SCIENCES**  
**TECHNOLOGY PROGRAM**

**COURSE DESCRIPTION**  
**LABORATORY MANAGEMENT**  
**I.E. 491**

**SPRING 2008**

## **COURSE DESCRIPTION**

DEPARTMENT: Technology

COURSE NUMBER/TITLE: I. E. 491 - Laboratory Management

INSTRUCTOR: Dr. Nedom C. Muns

TEXT: Handouts and Lecture

LOCATION: Thomason Building 217

OFFICE: Thomason 203

OFFICE HOURS: 11:00 a.m. – 1:00 p.m. TTH  
4:00 p.m. – 6:00 p.m. MW  
Or as needed.

PHONE: 936-295-8323 Home  
936-294-1191  
936-294-1190

### **Course Description**

This course is designed to assist trade and industrial and health occupations education laboratory teachers in properly organizing and managing learning situations in the classroom or laboratory. The elimination of sex bias will be emphasized. The course includes: planning and organizing instructional facilities for effective learning; establishing record keeping systems; establishing systems to account for tools, equipment, materials, and supplies; utilizing organization, rotation, and progress charts; principles of class management, including directing, controlling, and supervising learning activities; and development of organizational, management, and safety plans to ensure acquisition of essential skills, knowledge, and desirable attitudes by students.

### **STANDARDS MATRIX:**

<b>Objectives/Learning Outcomes</b>	<b>Activities (* indicates field-based activity)</b>	<b>Performance Assessment</b>	<b>Standards:</b>
			<ul style="list-style-type: none"> <li>• <u>State Standards</u></li> <li>• <i>Specialty Organization Standards (ITEA)</i></li> </ul>
The Student will develop a system of student management.	Lecture Hand-Outs Class Discussion	<ul style="list-style-type: none"> <li>• written assignments</li> <li>• exam</li> </ul>	<u>7.2k.7.3k.7.1s.</u> <u>7.2s.7.6s.7.27s</u>
The student will develop a system for record keeping	Lecture Hand-Outs Class Discussion	<ul style="list-style-type: none"> <li>• written assignments</li> <li>• exam</li> </ul>	<u>7.3k, 7.4k, 7.2s, 7.6s,</u> <u>7.16s, 7.17s</u>
The Student will develop a plan for teaching safety	Lecture Hand-Outs Class Discussion Visual Aids	Written Assignments Exams	<u>7.13k.7.14k.7.15k.</u> <u>7.16k. 7.17k. 7.18k.</u> <u>7.12s. 7.13s. 7.14s.</u> <u>7.15s. 7.16s. 7.17s.</u> <u>7.18s 7.19s 7.20s</u>
The student will be able to establish a plan for repair, maintenance and purchase of tools and materials.	Lecture Hand-Outs Class Discussion	Written Assignments Exams	<u>7.7k. 7.8k,</u> <u>7.9k.7.10k, 7.11k.</u> <u>7.12k, 7.1k. 7.5k,</u> <u>7.6k, 7.8s, 7.9s,</u> <u>7.10s, 7.11s, 7.7s,</u> <u>7.6s, 7.7s</u>
The student will be able to develop a youth development program	Lecture Class Discussion Handouts Visual Aids	Written Assignments Exams	<u>7.19k, 7.22k, 7.21s,</u> <u>7.27s, 7.29s, 7.30s</u>

Web address for state standards: <http://www.sbec.state.tx.us>

### **Course Objectives**

Upon successful completion of this course, the instructor will be able to:

1. Develop a system of student management.
2. Develop a system of supervised learning experiences that will ensure effective student use of time.
3. Develop a system of record keeping.
4. Develop a plan for teaching safety.
5. Arrange layout of shop/lab to simulate an occupational environment.
6. Establish a system for repair, maintenance, and replacement of tools and equipment (purchasing, budgeting, projection).

7. Develop a plan to organize and implement youth leadership development activities as an integral part of the instructional program.

8. Develop a public relations program.

ORGANIZATION AND MANAGEMENT OF INSTRUCTIONAL ENVIRONMENT shall include the following essential elements.

The student shall be provided opportunities to:

1. List the duties and responsibilities of the laboratory teacher.
2. Prepare a checklist for opening school.
3. Develop a tool storage, control, and inventory system.
4. Develop a material storage and control system.
5. Write specifications for the purchase of tools, equipment, and materials.
6. Prepare and/or use a competency profile for documenting and monitoring student achievement.
7. Develop a student management and supervision program.
8. Prepare a student class and/or shop responsibility chart.
9. Prepare a student class and/or shop duty rotation chart.
10. Prepare an emergency action plan.
11. Understand teacher liabilities and have knowledge of procedures designed to prevent teacher negligence and liability.
12. Complete an accident report.
13. Understand first aid rules and procedures.
14. Understand how to select jobs for student training.
15. Understand the state and local educational agency's requirements regarding student discipline.
16. Understand the use of and how to organize and maintain an advisory committee.

17. Develop a public relations program.
18. Understand how to prepare and maintain student attendance records and files including contact hour registers.
19. Prepare a travel report in accordance with TEA and local school district policies.
20. Design a floor plan for a new or existing facility to obtain maximum safe utilization of machines, equipment, floor area, and effective conservation of energy.
21. Participate in and have knowledge of approved development activities.
22. Outline the organizational structure for trade and industrial and/or health occupations education.
23. Write a descriptive title, course description, and prerequisites for a trade and industrial and/or health occupations education course.
24. Understand methods utilized for student recruitment and/or selection in the laboratory program.
25. Prepare a plan for closing a laboratory program at the end of the school year.
26. Explain the instructor responsibilities for working with an ARD committee.
27. Have knowledge that a program evaluation, which measures program effectiveness annually, is required.
28. Understand the use of computers for course management and record keeping.
29. Develop a plan to direct meaningful student activities for the first day of class.
30. Understand budgeting and reporting responsibilities.
31. Demonstrate knowledge of materials and procedures required to comply with the Texas Eye Safety Law (21.909 of the Texas Education Code).
32. Understand the need to document safety instruction presented in compliance with safety laws and regulations.
33. Establish a system for repairing and servicing tools and equipment in a vocational laboratory.

## **COURSE OUTLINE**

## I. Introductions

- A. Introductions (Students and Instructor)
- B. Introduction to Course
  - Course Objectives and Outline
  - Course Requirements and Procedures

## II. Instructional Procedures

- A. Functions of a Teacher
- B. Teaching - A New Job
- C. First Day of Classes

## III. Records and Reports

- A. Required Records and Reports
- B. Travel Authorization
- C. Per Diem and Mileage

## IV. Organizational Procedures

- A. Class Organization
- B. Basic Types of Organization
- C. Laboratory Organization Plans
- D. Student Management
- E. Youth Leadership Organization

## V. Laboratory Safety

- A. Accident Sequence
- B. Safety in the Laboratory
- C. Eye Safety
- D. OSHA Regulations

## VI. Advisory Committee

## VII. Laboratory Planning and Improvements

- A. Laboratory Arrangement
- B. OSHA Color Code
- C. Tool Control
- D. Materials and Supplies
- E. Specification Writing
- F. Budget Planning

## VIII. Maintenance Program

## XI. Vocational Industrial Education and Health Occupations in Texas

- A. State Board for Vocational Education
- B. Vocational Industrial Education and Health Occupations
  - Texas Education Agency Office

## Consultant Areas

X. Public Relations

XI. Preparation of Introductory Statement

XII. Student Prerequisites and Recruitment

XIII. Closing the School Year

### **GRADING**

A minimum of three exams and one final will be given. The final exam will have a weighted value of 1/3 on the final grade. The regular exams will have a value of 1/3 and the class assignments will have a value of 1/3 on the final grade. Exams will be written in the matching, multiple choice, completion and essay forms. Material covered in the lecture not in the text book will be covered in the examinations.

### **COURSE EVALUATION:**

Each student will be expected to prepare a written report on a given topic and to prepare short reports related to topics in the course material. Students will be required to collect samples of specified materials from their vocational director or school superintendent and to discuss vocational programs at their respective schools.

### **ATTENDANCE**

All students are expected to attend each class. Students will be given handout material on each unit but should be prepared to take notes each day for future study. The students should feel free to ask any questions related to the material covered in the course.

### **STUDENT DISABILITY POLICY**

Students with a disability which affects their academic performance are expected to arrange for a conference with the instructor in order that appropriate strategies can be considered to ensure that participation and achievement opportunities are not impaired."

### **ACADEMIC DISHONESTY**

Include an academic dishonesty statement policy that is, at minimum, compatible with Academic Policy Statement 810213 and the Faculty Handbook

*All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.*

## **CLASSROOM RULES OF CONDUCT**

According to Section 5 of the Student Handbook, students are expected to assist in maintaining a classroom environment that is conducive to learning. Therefore, an instructor's policy regarding classroom disturbances and their penalties must be included on the syllabus.

*Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.*

## **VISITORS IN THE CLASSROOM**

According to the Faculty Handbook a statement regarding the instructor's policy on classroom visitors should be included on the syllabus.

*Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.*

This policy is not intended to discourage the occasional visiting of classes by responsible persons. Obviously, however, the visiting of a particular class should be occasional and not regular, and it should in no way constitute interference with registered members of the class or the educational process.

## **RELIGIOUS HOLIDAYS**

University policy states that a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. Not later than the 15th calendar day after the first day of the semester, or the 7th calendar day after the first day of a summer session, the student must notify the instructor of each scheduled class that he/she would be absent for a religious holy day.

## **BIBLIOGRAPHY**

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#### **BOOKS**

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Dunn, Rita, and Dunn, Kenneth, Practical Approaches to Individualizing Instruction, Parker Publishing Company, Inc., 1971, West Nyack, New York, 1971.

Elder, Carl, Making Value Judgment, Charles E. Merrill Co., Columbus, Ohio, 1972.

Giachino, Joseph H., and Gallington, Course Construction in Industrial Arts and Vocational Education, American Technical Society, Chicago, Illinois 60637, 1967; 3rd Edition, 9th Printing, 1972; 4th Edition, 1977, 355 pages.

Heinrich, H. W., Industrial Accident Prevention, McGraw-Hill Book Co., New York, 1959.

Kigin, Denis J., Teacher Liability in School-Shop Accidents, Prakken Publications, Inc., Ann Arbor, Michigan, latest edition.

Kimbrel, G., and Vineyard, Ben, World of Work, McKnight and McKnight, Bloomington, Illinois, 1970.

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Lewis, James, Jr., Administering the Individualized Instruction Program. Parker Publishing Company, West Nyack, New York, 1971.

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Rose, Home C., The Instructor and His Job, American Technical Society, Chicago, Illinois, 1966.

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Strong, Merle E., Accident Prevent Manual for Training Programs, American Technical Society, Chicago, Illinois.

Weaver, Gilbert G., Shop Organization and Management, Pitman Publishing Corporation, New York, New York, 1959, 183 pages.

Williams, William A., Accident Prevention Manual for Shop Teachers, American Technical Society, Chicago, Illinois, 1963.

## **GUIDES AND HANDBOOKS**

Assignment Committee, Department of Occupational Education and Technology, Texas Education Agency, 201 East 11th Street, Austin, Texas 78701.

Guide for Public Schools in Planning Programs of Occupational Education for In-School Students, Texas Education Agency, latest education.

Handbook for Vocational Industrial Education Shop Teachers, Vocational Industrial Instructional Services, Texas A&M University, College Station, Texas, 1972; 7th Edition, 1977, 147 pages.

Instructors Guide: An Introduction to Shop and Laboratory Teaching, CV AE Department, Secondary and Higher Education, East Texas State University, Commerce, Texas.

Instructors Guide for Pre-employment Coordinated Vocational-Academic Education, Occupational Curriculum Laboratory, Secondary and Higher Education, East Texas State University, Commerce, Texas, 7th Edition, 1977, 113 pages.

Public Relations Guide, Vocational Industrial Instructional Services, Texas A&M University, College Station, Texas, 1972, 100 pages.

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