

Oklahoma State University Institute of Technology
Face-to-Face Common Syllabus
Fall 2017

SEPP 2403 Plant Operations 60191 - SEPP 2403 - 0

This class is designed as transition from a descriptive to an operational characteristic of a Power Plant. The focus is the operations of the Combustion Turbine, Steam Turbine and Generator. This includes the operation of auxiliary equipment associated with that large equipment.
Theory/Lab

Course Purpose:

Is to expand students' knowledge of Boilers and Prime movers.

Type of Course: Theory

Credit Hours: 3;

Class Length: 2nd half Fall 2017

Class Days and Times: MWF 7:30-9:25 Labs TR 7:30-9:25

Prerequisites: None listed.

Instructor Name: Terry Hanzel

Instructor Phone: (918) 293-5148

Office: Bldg 400 Rm 101M

Instructor Email: thanzel@okstate.edu

Contact: My preferred method of contact is email, text, or call. Please allow 24-48 hours to return your correspondence during the normal work week. Cell # is 918-470-4423

Instructor's Office Hours: Posted outside my office. [Cell# 918-470-4423](tel:918-470-4423)

School Name: School of Energy

School Main Phone: 918-293-3812

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts: GPI online training provided by OG&E no purchase necessary.
There will be some PDFs that you will have access to and may want to print them off and place in a notebook.

References: NA

Materials: Access to a computer with our Simtronics Simulator software installed.
Thumb drive, clipboard, notebook (1.5-2" D-ring), index cards,
Department T-shirt or gray OSU T-shirt, Hard Hat, Safety Glasses, safety toe boots, (for site visits, access to digital camera (Phone). Whatever you need to download photos from your camera to a computer.

Uniform/Tools: See Materials list for class for uniform. Suggested but not required tools include 8" Crescent wrench, 12" Channel locks, Straight and Phillips head screwdriver (3-4" shank), tool bag.

Estimated Cost for Materials: \$ 150

Estimated Cost for Uniform/Tools: \$ 110.

Upon completion of the course, students should:

Assessment plan Objectives	Assessment of Objectives
The student should be able to:	
Demonstrate a basic competency of plant oral communication which includes; Plant Orientation, 3-part Communication, and proper radio communication.*	Assignments, Exams
Write a startup and shut down procedure.*	Quizzes, Assignments, Exams
To set up, monitor and adjust plant systems in support of plant production needs. (Position, Temp, Pressure, Flow, and Lubrication). *	Quizzes, Assignments, Exams
Demonstrate a Mastery of safe work practices in the area of work permits and Breaker Operations. *	Quizzes, Assignments, Exams
Develop a basic P&ID taking into account the elements (flow, temp, press, level) of a plant system.*	Quizzes, Assignments, Exams

Aspects of the course objective assessments may be used in the university's assessment of student learning. If applicable, an asterisk (*) above indicates this assignment is used in the university assessment program. The above objects deal directly with the OSUIT Power Plant Master Assessment Plan.

COURSE ACTIVITIES

In this course students will:

(Please list the specific activities in the course)

- Participate in class discussions and activities.
- Participate in class and submit reports for evaluation.
- Complete outside project assignments and submit technical reports for evaluation.
- Integrate internet-searches into research assignments, homework, and reports.
- Participate in individual and group presentations.
- Compile a portfolio of work produced.
- Take examinations and quizzes.

EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS: (NOTE-Please indicate the course specific evaluations. List assignment(s) used in the university's assessment of student learning as separate line items and marked with an asterisk.)

Assignments/Projects	35%
Quizzes	20%
Exams	20%
OGE WB Exams	10%
Final Exam	15%
Total	100%

OSUIT Grading Scale
A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% & below

*The student's grade for this assignment will be used in the university's assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student's course grade.

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

RECOMMENDED STUDENT COMPETENCIES/SKILLS

It will be helpful if the student has basic computer skills (i.e. saving files, downloading files, uploading files, organizing data). A basic understanding of MS Word, PowerPoint, and Excel. Be able to take a clear photo.

AUTHORIZED TOOLS

This is not talking about hand or power tools, but learning tools such as notes, textbooks, or internet access during activities. Will be determined by the instructor for each activity

LATE WORK

- **Planned Quizzes, Research/Homework, Labs/Project, Unit Exams and Final Exam:** Submitting your work early is always acceptable. If you know in advance that you will miss an exam, special arrangements may be possible for hardship circumstances. Make-up exams will be a different exam than the one given on exam day. *No late work will be accepted for full credit.*
- **In-class Quizzes** cannot be made-up.
- **Research/homework** submitted on the due day is considered to be on time. No late submissions are accepted for full credit.

TESTING

You are expected to take exams on the scheduled date. It is up to the instructor if a make-up exam will be given. Make-up exams will be a different exam than the one given on exam day.

OTHER LAB AND CLASSROOM POLICIES

No Show, No Call Policy

If you have a medical or personal problem that necessitates missing class, please contact me. It is the student's responsibility to show up to class prepared for the lesson or activity.

A “No Show, No Call” in the work place will cost you your job and damage your reputation in the industry. Therefore a soft skill that we enforce is that you have to notify the instructor if you are going to miss class. Notification must be made before the class or activity is scheduled to begin. Any “No Show, No Call” will result in a 3 point reduction in your final grade. Repeated “No Show, No Call” is grounds for administrative removal from this class.

The OSUIT Attendance Policy is the expectation of the class and will be followed.

SYLLABUS ATTACHMENT

View the Syllabus Attachment, which contains other important information, by visiting http://osuit.edu/center/student_syllabus_information

Course Schedule of Topics
Topic
Identify Unit Process Equipment, Controls, instrumentation, and flow lines.
Function and operation of unit process equipment and instrumentation.
1-line diagrams for process flows, equipment, and instrumentation.
Process flows throughout the unit.
Process safety issues related to operation of this unit.
Normal operating conditions
Controlling a unit
Normal unit Startup and shutdown
Unit emergency operation procedures
Abnormal situations and return to stability of a unit.
Troubleshooting process.

Topics taught will overlap and the schedule is subject to change at instructor discretion and access to industry resources.