



IPOP 2460 Intro to Instrumentation section name section credit hours

Credits

Syllabus

Course Information

Meeting times and location: section meeting_times section location

Catalog description: Covers the varied instruments and instrument systems used in the process industry. This includes process variables, elements and instruments of pressure, level, flow, temperature and analytical devices, control loops, controllers, final control elements, Process Flow diagrams, piping and Instrumentation Diagrams and Instrumentation troubleshooting.

Prerequisites: course prereqs

Terms offered: Fall and Spring

Section-specific Course Description:

Course Level Objectives

1. Define different terms associated with instrumentation categories and types
2. Identify and define the major process variables controlled in the process industry, as well as their units of measure and how to convert from one unit of measure to another
3. Explain the relationships between common process variables
4. Identify how pressure, temperature, level, flow and concentration are measured
5. Identify the instruments that comprise a control loop and describe their functions
6. Identify different control philosophies and principles used in controlling process variables as well as define terms associated with these control philosophies.
7. Interpret a Process and Instrumentation Diagram

Required Texts and/or Materials



Instrumentation

9780137004133

CAPT (Organization), Center for the Advancement of Process
Technology

2009-04-21

Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

Technical Support

Technical support is available through the San Juan College Help Desk 24/7/365. The help desk can be reached at 505-566-3266 or by creating a ticket at [San Juan College Help Desk](#).

For tickets and password reset: [San Juan College Help Desk](#)

For Canvas support information: [Canvas Support](#)

Accessibility/Privacy Policies for all Technology Tools Used

[Accessibility/Privacy Policies for all Technology Tools Used](#)

Course Requirements

Students will do the following activities:

1. Class Attendance - 25%

Much of the learning occurs in the process lab setting and cannot be made up by reading the textbook. Therefore, class attendance and participation are essential to your learning and attendance will be taken. IF YOU HAVE MORE THAN 4 ABSENCES, YOU MAY

AUTOMATICALLY FAIL THE CLASS. Class attendance is 25% of the grade, included in this is punctuality and class participation. Points will be taken off for tardiness, leaving early and not participating in class activities.

2. Chapter Review Quizzes - 10%

After each chapter in the textbook, a "Chapter Review" quiz in CANVAS will be administered.

3. Sectional Exams - 15%

After a certain amount of material is covered, a sectional exam will be administered through

CANVAS. These tests cover material in your textbook, Chapter Review quizzes and possible

Plant & Lab exercises you've completed.

4. Plant and Lab - 25%

Skill Checks are performance checks to assist you in learning new skills and knowledge. A number of the skill checks have self-evaluations (answers) that will be given to you once you have completed the Skill Check.

5. Computer Based Training (CBTs) - 15%

Follow the schedule in the Calendar of the Course Guide or the computer based training record. After completing the given CBT, you will be required to complete the POST TEST. CBT videos, booklets and Post Test will all be administered through CANVAS. All CBT's must be completed by March 7, 2018 or a grade of zero may be given. CBT post tests are used to determine your grade for this portion of the class.

6. Final Exam - 10%

The final exam will be comprehensive covering all the material presented in this class

7. Make-Up Test Policy

A penalty can be assessed for taking tests late if the instructor wasn't given prior notification.

8. Students must wear clear safety glasses and hard-toed shoes when working in the Process and Water Labs.

9. Portfolio

Students will be required to maintain a portfolio throughout the IPOP program. The portfolio will consist of a notebook containing key lessons or skills completed while going through the program. These lessons or skills include: PFD drawings of the modules, hands-on competencies requiring you to start-up, shut-down and take a set of readings for the modules, hands-on performance of certain analytical test done in the water lab and other key assignments. In order to progress to the next semester, you must successfully pass the items required for the present semester based on a Pass/Fail evaluation of each item. Students are required to maintain the portfolio, turning them in at the end of each semester for review and given back to you at the start of the next semester.

COVID Safe Practices for Being on Campus

Masks / cloth face coverings must be worn while on campus in accordance with the New Mexico public health order. If you feel that you cannot wear a mask due to health complications, please contact Disabilities Services:

disabilityservices@sanjuancollege.edu or call (505) 566-3271. Hand sanitizer stations are at all building entrances, please "wash in, wash out"--clean your hands when you enter and before you leave. Classrooms and labs have been arranged to allow for social distancing; please respect your classmates and instructors by staying 6 feet away from everyone. You will be expected to disinfect your table or area prior to class and after class, cleaning products will be provided for this purpose. Check with your instructor for specific policies for their course. Please do not congregate in hallways or common areas, instead utilize our beautiful outside spaces and weather to visit with your friends and colleagues from a safe distance.

If you have been in contact with anyone who has tested positive for COVID-19, has symptoms, or is waiting on test results, contact your instructor and DO NOT come to class. If you have tested positive, have symptoms or are waiting on test results, contact

your instructor and DO NOT come to class. Your health care provider or the assigned contact tracer will let you know when it is safe for you to be around others.

Student Support

Student Services and Support

The Student Support webpage provides information on counseling, tutoring, technical support, and many other support services available to San Juan College students.

[Student Support](#)

Academic Support

Academic Support webpage provides information on academic advising, the library, Testing Center, and the honors program.

[Academic Support](#)

Participation and Attendance Policy

Much of the learning occurs in the process lab setting and cannot be made up by reading the textbook. Therefore, class attendance and participation are essential to your learning and attendance will be taken. IF YOU HAVE MORE THAN 4 ABSENCES, YOU MAY AUTOMATICALLY FAIL THE CLASS. Class attendance is 25% of the grade, included in this is punctuality and class participation. Points will be taken off for tardiness, leaving early and not participating in class activities.

Other Classroom Policies and Expectations

Students will abide by all SJC Rules and Regulations, Safety, Health & Environmental practices used at this facility. Cell phones, computers and other electronic devices should remain off unless used in part of the Hands-On Training. No foul language, obscene clothing or unsafe acts or class disruptions.

Students must complete this course with 76% or higher to progress to the next class.

Canvas Participation and Expectations

Instructor will issue guidelines.

Instructor Response Time

Instructor will respond within 24 hours.

Course Time Commitment

Students will spend approximately 6-9 hours per week outside of class to complete their homework assignments and testing required of them.

Grading

Grading Scale:

ABCD

93 - 100 %
85-92
76-84
69-75
68 or below

To determine final grades use the calculations above along with the table below...

Category

Weight

Attendance	25
Plant & Lab Skill Checks	25
CBT Post Tests	15
Quizzes, Written Assignments	10
Sectional Exams	15
Final Exam	10

example of grade calculation

Category Current Average Weight Points

Chapter quizzes	95 x	.25	23.75
CBT Post Tests	89 x	.25	22.25
Sectional Exams	85 x	.25	21.25
Final Exam	100 (assumed) x	.25	25
Your Grade			92.25

Key Dates to Remember

[Full Academic Calendar](#)

Course Schedule

Instructor will post schedule each semester.

College Policies

The following information also applies to your work in this class. If you have special needs for campus emergency situations, please inform me immediately.

1. **Academic Accommodations - American with Disabilities Act (ADA)**

If you believe you need academic accommodations due to physical or learning disabilities, you are encouraged to inform them as soon as possible. The coordinator can work with you in verifying your disabilities and developing accommodation strategies. Please go to [Disability Services Office](#), click the button for "Request for Services" and complete all the steps.

You can also contact the college's disability coordinator in the Advising/Counseling Center at 566-3271 or disabilityservices@sanjuancollege.edu. More information is available on the website listed above.

2. **The Family Educational Rights and Privacy Act (FERPA)**

Your personal information and grade are confidential. Aside from routine reporting to the college required for this course, I will not share such information with anyone unless I have your permission.

3. **Academic Honesty Rules**

San Juan College expects all students to adhere to the [Academic Honesty Rules](#) as posted online. These are the official guidelines for all classes at San Juan College (July 2006).

4. **Student Conduct Statement**

College is preparation for professional opportunities, and professional conduct is expected in courses, including online classes, as well as any written communications, and interactions with members of the college community. As part of our learning community, students are expected to interact and communicate in a mature, respectful, thoughtful, and supportive manner. Students who demonstrate disrespectful, hostile, belittling, bullying or other disruptive behavior will be subject to potential consequences and possible dismissal from the college. The college will take appropriate action when students demonstrate threatening behavior (to others or self). Students should refer to the Code of Conduct in the Student Handbook for additional information.

5. **Student Safety**

Keeping students safe is a priority, and part of that is ensuring that we have the ability to communicate emergency messages – whether for school closures due to weather or for more or urgent situations. Rave is San Juan College’s emergency messaging system. Through your SJC student email, you will automatically receive email messages, however, it is also vital that you receive text messages. In order to receive the messages, you must register in a simple process with [Rave](#). When registering, please make sure that your mobile status is “confirmed.”

The Department of Public Safety is available 24 hours per day. In an emergency, they can be accessed by calling 215-3091 or 566-3333.

In the event of an emergency, a Rave message will be sent, and depending on the situation, you will be instructed to do one of the following:

- Evacuate the building
- Shelter in place (Campus doors are locked, and operations continue as normal. During this situation, no one other than law enforcement is allowed in or out of the campus.)
- Lockdown (Campus doors are locked. All operations cease, and you should take cover in your immediate area. No one other than law enforcement is allowed in or out of the campus.)

6. **Non-Discrimination, Sexual Harassment, and Retaliation.**

San Juan College does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, genetic, veteran’s status, or on the basis of any other category protected under federal, state and local laws. If you have experienced sexual harassment, sexual assault, or any other form of protected class discrimination, we encourage you to make a report. If you report to a faculty member, she/he/they are obligated by policy to share knowledge, notice, and/or reports of harassment, discrimination, and/or retaliation with the Title IX Coordinator. These disclosures include but are not limited to reports of sexual assault, dating/domestic violence, and stalking. You may also make a confidential report to a SJC Counselor. Please refer to San Juan College’s [Title IX](#) site for further details.

San Juan College's Title IX Coordinator is Stacey Allen, Assistant Director of Human Resources/Equity, Diversity, and Inclusion Officer. The office is located at the Educational Services Center Building, 2nd Floor, Human Resources, Room 4243 at (505) 566-3515 or allens@sanjuancollege.edu.

7. **Drop for Non-Attendance and/or Non-Participation**

Class Attendance and Participation Expectation:

Face-to-Face -- Students are expected to attend and participate in class regularly. Any student missing more than 10% of consecutive class time, (For example, in a regular 15-week class that meets twice a week, this equates to the student missing 3 consecutive classes) without consultation with the instructor may be considered as having abandoned the course.

On-line -- Students are expected to participate regularly and submit all course assignments, based on the course guide definition. A student who does not submit any assignments during a consecutive 10% of the course (1.5 weeks of a 15-week semester) without consulting the instructor, may be considered as having abandoned the course. Logging in does not meet the attendance standard.

Competency-Based Education Classes -- Students are expected to have regular and substantive interactions with their instructor and to actively work on course content. A student who has not submitted coursework, nor had substantive interactions with the instructor over a consecutive 10% of the term, without the instructor's prior approval, will be considered to have abandoned the competency progression. Last date of attendance will be recorded as the last date that coursework was submitted or that the student met with the instructor. For on-line learners, logging in does not meet the attendance standard.

8. **Failure to Meet Class Participation Expectation:**

Students who fail to meet participation expectations will have their last date of attendance recorded. This date will be used to recalculate any financial aid received/veteran's benefits received, and the student may be required to repay the institution/government. If the student does not drop the course, an 'X' grade will be recorded. An 'X' grade impacts the grade point average the same as an 'F'.

9. **Grading Policies**

Incomplete: Incomplete Grade Assignment ([Incomplete Grades Information](#))

The grade of I (Incomplete) is given for passing work that could not be completed during the semester because of circumstances beyond the student's control. Ordinarily, the assignment of an I is given by the course instructor at the time final grades are due

In no case is an I grade to be used to avoid assignment of D or F grades for marginal or failing work or to require a student to enroll in the class the next semester because work was not completed on time. Circumstances warranting the issuance of an I grade must be beyond the student's control and must be documented on the appropriate form prior to approval.

I grades can be removed only during the subsequent 16 weeks from the end of term, or within the time limit set by the instructor. Removal of an I is accomplished by completing the work in a manner acceptable to the instructor. Re-enrollment in the course under the repeat option does not remove the prior grade of I. Students should not re-enroll for the course. An I not made up within 16 weeks or within the time limit set by the instructor will change to an F grade thereafter and cannot be changed by work completion.

10. **Grade Appeals**

The policy for grade appeals is in the Academic Catalog. ([Grade Appeal Policy](#))

Student Handbook

The Student Handbook provides information on Student support, student organizations, and San Juan College policies.

[Student Handbook](#)

Program Handbook

Not applicable.