



Syllabus – Instrumentation - Spring 2019

Instructor Information

Instructor : Sazar A. Ali

HCC Email : sazar.ali@hccs.edu

Office Hours : Monday, Wednesday, Thursday 5 PM to 6 PM

Office Location : Science and Engineering Building, Room 100

Office Phone Number : 713-718-2137

Office Fax Number : 713-718-5760

Course Information

Name: PTAC 1332 Instrumentation (Lecture / Laboratory)

Class Number and time:

1- 11889 Saturday (08:00 AM – 01:00 PM)

Credit: 3 hours

Class Location: Room 208

Prerequisite: PTAC 1302 and PTAC 1308

Program Student Learning Objectives (PSLOs)

Upon graduation, students will be able to describe:

1. Industrial Instrumentation
2. Industrial Equipment and Systems
3. Process Safety and Quality
4. Process Operation and Troubleshooting

Workforce Education Course Manual (WECM) Course Description

Study of the instruments and control systems used in the process industry including terminology, process variables, symbology, control loops, and basic troubleshooting.



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Workforce Education Course Manual (WECM) End-of-Course Outcomes

Explain the function of the various instruments used in the process industry; diagram the process control elements in a control loop; and utilize terms and symbols in instrumentation; and interpret process flow diagram and piping and instrumentation drawing.

NAPTA Course Learning Outcomes

1. Using knowledge of symbols, process diagrams and instrumentation, sketch a simple process diagram, including control loops.
2. Describe the various process variables (flow, level, pressure, temperature, analytical, etc.) found in a plant and explain how instruments are used to sense, measure and transmit this information to the control system.
3. Identify the types of control loops (simple and complex) and explain their operation.
4. Identify the components of a closed control loop (primary element, transmitter, controller, transducer, final element) and explain their interrelationships.
5. Identify typical instrument malfunctions found in control loops and explain how they may affect a process (cause and effect).

North America Process Technology Alliance (NAPTA)

Process Technology program at Houston Community College Northeast is an associate member of North America Process Technology Alliance (NAPTA) <http://test.naptaonline.org/index.php> . Process Technology program at HCC-NE complies with NAPTA recommended course outcomes http://test.naptaonline.org/app/learning/topics_objectives.

Textbook Information

Instrumentation

By: Center for the Advancement of Process Technology – CAPT

ISBN: 0-13-700413-3

Pearson Publishing Company

Attendance and Withdrawal Policies

Students are expected to attend all the theory lectures, participate in tests or quizzes and perform their assignments, home-work and laboratory tasks (if applicable) or when necessary. **Any student, who is absent more than 12.5% of the class and lab combined, will be told to withdraw from the course.** See the student handbook, Course Schedule, or Catalog for details.



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Drops and withdrawals are the student's responsibility. (The instructor will not be responsible for drops or withdrawals).

Based on the State Funding rules for spring and fall semesters attending to the class for the first two sessions are mandatory. For summer semesters all students must attend to the class for the first day. Students who don't follow these rules will automatically be dropped from the course.

Instructor and Students Responsibilities

Instructor:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and make up
- Provide the course outline and class calendar which will include a description of any special projects or assignments
- Arrange to meet with individual students as required

Students:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with instructor
- Read and comprehend the textbook
- Complete the required assignments and all exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Attain at least 60 pts (60%) to pass the course
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)



Assignments, Exams, and Activities

In class Activities and discussions

In class activities include either activities that are assigned to perform in the classroom or it may be assigned to be prepared at home and discussed in the classroom.

Home Work Assignments

- Home Work Assignments (HWAs) are assigned from the first session and may continue during the semester. Each assignment will be explained by instructor during the PowerPoint Presentation and students will have access to this PowerPoint slides through their emails and /or CANVAS.

Tests

There will be **Two** tests during the semester.

Make-up policy

- NO make-up test will be allowed. But, the instructor reserves the right to make it up depending on the circumstances.

Course Calendar

The following plan table is the estimation of the class weekly work:

Week	Topic/What's due
1	Chapter 1
2	Chapters 2 and 3
3	Chapters 4 and 6
4	Test I (Chapters 2-6)
5	Chapters 8 + 9 + 10
6	Chapters 8 + 9 + 10
7	Chapter 12



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8	Chapter 12
9	Test II (Chapters 8,9,10)
10	Chapter 13
11	Chapter 13

Grading Distribution

- Test I: 20% Chapters 2-6
- Test II: 20% Chapters 8-10
- HW: 30%
- Lab Work: 30%

Grading Policy

- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = 0 - 59%

Syllabus Modifications

The instructor reserves the right to modify the syllabus, course requirements, assignments, homework, grading procedures and any other related policies as changes take place during the semester. However, proper verbal notice will be given to students in the class.

Instructor's Practices and Procedures

- In order to better participate and understand materials in class the students should read the chapter(s) before each session. They should also watch the video(s) pertaining to the chapter(s) as directed by the instructor.
- The instructor is available for student consultation, support, and help according to the rules and regulations during the office hours and/or appointments via instructor's official email. Also, communications for hybrid class activities, homework assignments, and announcements will be done via LMS (CANVAS).



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- HCC is a college institute and **professional behavior** is expected while on campus between the students and instructor and/or between the students themselves.
- All the HCC rules and regulations will be applied in the semester, and for all courses/classes.
- Any Student’s attempt to cheat or actual cheating alone or with another student will be given ZERO and dismissed from the class. Additionally, a report will be written against they/them and submitted to the appropriate HCC officials, and all the other related HCC rules will be applied.
- The quizzes and exams during the semester will be done by canvas.
- Students must use pen through the examination sheets [tests or quizzes] and pencil for scantron sheet only (easy to erase), and both should be delivered to the instructor
- Some of the home-work and the assignments should be submitted in printing [use Times New Roman, 12 pt. font size, and single space] according to the form distributed by instructor. Sometimes handwriting will be required, and both the home-work and the assignments will be evaluated and graded by the instructor.
- Students must respect the class time, instructor, and other students. **Do not be late more than 15 minutes for the class and tests.**
- **If you arrive late for a test, you will not be allowed to take that test, especially if one student has already finished the test and left the classroom. So, please be in the class at least 10 minutes before the test.**
- **Using any electronic devices [cell phone, I Phone, etc.] will not permitted during the tests for any reason and all the students must TURN OFF these devices before entering the class, and keep them in their bag or pocket during the test.**



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HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> in it you will find information about the following:

Academic Information	Incomplete Grades
Academic Support	International Student Services
Attendance, Repeating Courses, and Withdrawal	Health Awareness
Career Planning and Job Search	Libraries/Bookstore
Childcare	Police Services & Campus Safety
disability Support Services	Student Life at HCC
Electronic Devices	Student Rights and Responsibilities
Equal Educational Opportunity	Student Services
Financial Aid TV (FATV)	Testing
General Student Complaints	Transfer Planning
Grade of FX	Veteran Services

EGLS³

The EGLS³ (Evaluation for Greater Learning Student Survey System) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the fall and spring semesters. EGLS3 surveys are not offered during the summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.



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Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

Disability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:



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David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of



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the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

Department Chair Contact Information

Department Chair Name: Hosein Tahvilian

Department Chair Email address: hosein.tahvillian@hccs.edu

Department Chair Office phone number: 713-718-2135

Syllabus Reading Agreement

I have read this syllabus and I am aware of its content.

Student's Name:

Student's Signature:

Date: