**ENGT 2320**

**Process Operations Technical IV Syllabus**

**Course Description:** Students will demonstrate their process and technical knowledge by completing a Capstone Project with an ICC industry partner. They will utilize their skills to analyze the operational and maintenance issues, create possible solutions, and analyze the feasibility of the proposed solutions and execute the complete Capstone Project. Students will utilize multiple industrial forms of communication and documentation for research, design, propose, and execute their capstone project.

**Fundamental Goals & Outcomes:**

* ***Safety***
  + ***Students shall comply with all safety rules and operational/procedural protocols when working at the industrial partner facility, ICC laboratory or with our other process simulators and demonstrators.***
* *Communications*
  + Students will communicate all written and verbal work in an organized and professional manner.
* *Critical Thinking*
  + Students will utilize the documented requirements of the capstone project to collect and analyze data in an organized manner to develop viable solutions to complete the capstone project successfully.
  + Students will develop and analyze possible solutions for the capstone project by identifying the benefits and issues of each solution.
  + Students will analyze and develop project schedules, costs, and justification for the implementation of the selected capstone project solution.
  + Upon agreement with the industry partner, students will proceed with the selected solution and document progress through the completion of the project.
* *Technology*
  + Students will learn and operate various current technologies utilized in the process industry.

**Course scope and what the student can expect:**

* Stringent enforcement of safety rules and operational/procedural protocols.
* The course will consist of a variety of meeting, research assignments, hands-on assignments/tasks that will demonstrate the students’ ability to utilize various research and communication technology tools common to the industry.
* Students will demonstrate their ability to develop, analyze, propose and justify viable solutions to a problem/project.
* The project work will potentially include working in the classroom or laboratory and onsite at an industry partner’s facility.

**Performance expected of the student:**

* Student’s strict compliance with safety and operational/procedural protocols.
* Embrace the expectations of the program and the industry partners’ performance expectations.
* Embrace organized statement, data gathering, analyzation, and logical reasoning with reasoned argument to propose viable solutions to a problem.
* Be fully engaged in my learning and on time every day.
* Self-identify and utilize learning resources inside and outside of class to meet project and learning goals.
* Embrace that continuous learning is intrinsic to one’s future career success.

**Extra help available:**

If you experience difficulties in this class, please notify us as soon as possible. If needed, we can work through the Academic Support Center to provide additional help (at no cost to the student).

**Academic Integrity:**

This program adheres to and will enforce the ICC Academic Integrity Policies.

http://www.itascacc.edu/academics/college-policies/academic-integrity

**Grading commitment:**

We commit to providing a mid-semester assessment and final grade within one week of returning loaned research tools and final submittal of deliverables.

**Grading and Deliverables:**

All deliverables are due on time; unexcused late submittals will receive a grade of ***0%***

Final course grading for Exams, Quizzes, Assignments, etc. will be based on the accumulated individual scores as a percentage of the course total available points.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Deliverable** | **Score** | **Available** | | **Percentage** |
| Safety, Health & Protocol Compliance | Pass | | Expulsion | |
| Project Portfolio |  |  | |  |
| Research & Presentation Assignments |  |  | |  |
| Feedback From Industry Partners |  |  | |  |
| Engagement with learning & observations\* |  | +/-20% | |  |
| Instructor Discretionary |  | +/-20% | |  |
| Attendance and Journal |  |  | |  |

\*Engagement & observations include items such as but not limited to: e.g., on time, class participation, attitude, student’s initiative, attendance, quality of work, etc.

Reference document “ENGT-2330 and ENGT-2320 Performance Expectations” document attached.

**Final Grading Policy:**

|  |  |
| --- | --- |
| Final % | Grade |
| >90% | A |
| 80-89.99% | B |
| 70-79.99% | C |
| <70% | F |

**Disability services:**

The college will make reasonable accommodations for persons with documented disabilities. Students should notify the Director of the Disability Services/Office for Students with Disabilities (located in Backes Student Center right next to the Bookstore) and their instructors of any accommodation needs as soon as possible.

Signatures: Student: Date:

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ENGT -2330, ENGT -2320

Technical IV, Professional IV

Performance Expectations

Due to the unusual structure of these courses, it is necessary to stress ICC’s and the industrial partner's expectations of the student.

We are requesting from the industrial partners that they provide us with regular reports on your performance; e.g., safety, timeliness, professionalism, quality of work, etc.

***As part of this project you can expect to be working on your project extensively, this includes either being onsite or working on the project outside of scheduled class time.***

Reminder; a partial list of expectations:

1. Students are reasonable to follow all safety and work rules/procedures of the industrial partner while on the partner’s site.
2. Students are responsible for having and properly using all required PPE.
3. Students are responsible for arriving at class or at the partner’s site on time and be ready to work.
4. ***Students are expected to schedule all nonemergency personal business outside of scheduled class time.***
5. Two unexcused absences will result in unrecoverable 10% reduction in grade; three unexcused absences will result in a course grade of an “F” and the student being dropped from the program.

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_