



Course Syllabus

Course #: EET 1630 Course Name: Graphic Interfaces I

Division: Engineering and Industrial Technologies

Class Days: Class Time:
Location: Classroom: Laboratory:
Credit Hours: 3 Contact Hours: 4 Lab Hours: 2 Lecture Hours: 2

Instructor: Robert Biddinger Office Location: E215S
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Course Description:

A study of Human Machine Interfaces (HMIs) that connect a graphical Interface screen to a PLC. Students will use RS VIEW to create a graphic interface to PLC programs, creating operator interface terminals, alarm and message systems, and connections to multiple PLCs. Students will also learn to use Microsoft Visio to create wire and ladder diagrams as well as piping diagrams that can be used in operator interfaces.

Prerequisite(s): None

Corequisite(s): EET 244 PLC I

Entry Level Skills and Knowledge: Basic computer skills.

Required Texts, Supplies and Equipment: 256 MB or larger thumb drive.

Grading: Average of four projects.

- 100- 90= A
89 - 80= B
79 - 70= C
69 - 60= D
Below = F

Learning Outcomes:

General Education

1. **Communicate effectively**
2. **Evaluate arguments in a logical fashion**—Competence in analysis and logical argument are explicit learning goals for most general education programs, although these skills go by a variety of names (e.g., critical thinking, analysis, logical thinking, etc.). **Students will be able to demonstrate competence in problem solving in communication, mathematics, and in team settings.**
3. **Employ the methods of inquiry characteristic of natural sciences, social sciences, mathematics, and the arts and humanities;** general education introduces students to methods of inquiry in several fields of study and thereby prepares students to integrate information from different disciplines.

Technical Education:

1. Use Viseo to create basic wiring diagrams, ladder diagrams and piping diagrams.
2. Create library objects and stencils for use in Viseo programs.
3. Use Allen-Bradley RS View program to create operator screen.
4. Create animation on an RS View program page.
5. Convert PLC tag data base for use in RS View program.
6. Create RS View Run Time program.
7. Use RS View Library objects in animation program.
8. Use expressions in Animations
9. Use logical operators in Animations.
10. Create DDE nodes and system tags.
11. Create security pages.
12. Create multilevel security for data entry.

Assessment of Student Learning:

Assessment Project and Measurement in course (if any):

Project 1 Multipage Graphics, Vertical Animation and Object Path Animation.

Project 2 Animation for a Conveyor System

Plan of Work:

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|--------|---|
| Week 1 | Intro to Viseo 2002 Pro, and basic drawing with Viseo,
Lab Drawing 1 |
| Week 2 | Viseo Custom Stencils
Lab Drawing 2 |
| Week 3 | Creating Stencil Library Objects
Lab Drawing 3 |

- Week 4 Intro to RS View
Lab 1 **Logix and Driver Configuration and Tag Databases.**
- Week 5 Basic Graphic Configuration
Lab 2 **Buttons, Numerical Monitor, Numerical Inputs.**
- Week 6 Basic Animation – Horizontal pos., Vertical pos.,
display editor,color changes, labels.
Lab 3. **Multipage Graphics, Animation.**
- Week 7 RS View Run Time, Library Graphics, Animating Library Objects
Project 1 Multipage Graphics, Vertical Animation and Object Path Animation.
- Week 8 Lab 4. **Library Graphics and Run Time.**
Configure DDE Nodes, System Tags, DDE Animation, Animation Techniques
- Week 9 Lab 5 Basic animation
Project 2 Animation for a Conveyor System
- Week 10 Expressions in Animations, Logical Operators in Expressions
Continue to work on projects
- Week 11 Continue to work on projects
- Week 12 Security, **Lab 6 Setting security codes**
Project 3 Data Entry
- Week 13 Continue to work on projects.
- Week 14 Secure Data Entry
Project 4 Multilevel Security
- Week 15 Continue to work on projects.
- Week 16 Final project due.

Course Requirements:

Complete all lab assignments as required
Four(4) projects worth 100 points each.
Project due dates to be announced.

Policies

Course Withdrawing: If for any reason you need to withdraw from this course, be certain that you do so according to College procedure. It is your responsibility to know and follow this procedure. If you simply stop coming to class, without officially withdrawing from the course, your grade is an automatic “F.” Please follow official College procedure for withdrawing from this or any course.

College Academic Policies are located in the College Catalog. A copy of the current catalog may be picked up in any of the division offices or admissions. The list of college policies is also available online at <https://www.terra.edu/register/Collegecat/policies.asp>.

Support Services: The College offers a number of support services to assist in your success in this course and all courses. Among these services are the Writing & Math Center in B105, the Office of Learning Support Services, which coordinates the campus disability services and tutoring programs, the computer labs, and the computers in the atriums.

Any student who feels he/she may need an accommodation based on the documentation of a disability should contact the Office of Learning Support Services privately to discuss his/her specific issues. Please contact the OLSS at (419) 334-8400 X 208 or visit 100 Roy Klay Hall (Building A) to coordinate reasonable accommodations.

If you have a documented disability and are receiving academic accommodations through the Office of Learning Support Services, please schedule a meeting with your instructor in a timely manner so that we may discuss how these services will be arranged.

Tutoring services are available to students beginning the second week of every quarter. Students requesting tutoring services should obtain a tutor request form from the OLSS in 100 Roy Klay Hall (Building A) or online at the Terra website. Please note that instructor verification and acceptance of the Student Learner Agreement is necessary for all tutoring requests. All requests should be submitted to 100 Roy Klay Hall (Building A).