



SYLLABUS
EST 2650C Industrial Networking
August 2011

Gulf Coast State College

Technology Division

Computer Integrated Manufacturing

Instructor: Lars Marmsater

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Class resources: <http://www.marmsater.org/EST2650C>

Course Description:

EST-2650C Industrial Networking

Pre-requisite : EST-2542C Programmable Logic Controllers

This Class covers Industrial TCP/IP, Ethernet/IP, DeviceNet, and Control Net, for interfacing PLCs, remotely located I/O modules, drives, and other industrial devices. Other networks such as Allen-Bradley Data Highway Plus, Modbus RTU, and DF-1 will be discussed as applied to PLC and industrial control applications. The Allen-Bradley PC applications RSLinx, RSLogix500, RSLogix5000, and RSNetworks for DeviceNet will be used. Network configurations for data collection into Human Machine Interfaces, such as RSView and Microsoft Excel will be covered.

Course Schedule:

This is a 3 credit hour course. We meet this semester on 15 Monday evenings from 6:00 to 9:00 pm in room T108. Office hours are 9:00 to 9:30 pm in room T108. First session is Monday, August 22. Lectures, discussions and labs are combined for flexibility. If needed, catch-up opportunities will be made available.

Lab Assignments:

Lab assignments come in five categories:

- 1 introductory lecture and lab including reading assignments
- 3 labs on industrial EtherNet and the Micrologix and Controllogix PLC, all mandatory
- 3 labs on DeviceNet and Ethernet/IP, all mandatory
- 2 labs on serial communications, at least one must be completed
- 4 elective labs on system integration, at least three must be completed.

Test, Quizzes & Grades:

There will be written midterm and final tests. Tests are graded 0 – 100 points. Successfully completed lab assignments will contribute considerably to the final grade. Each lab assignment has a defined set of pass requirements. Alternative labs are encouraged, but must be approved by the instructor. The final grade is calculated as follows:

$$\text{POINTS} = 0.15 * \text{Midterm} + 0.25 * \text{Final} + 0.6 * \text{Labs}/8$$

Grade Scale:

Grade Scale:	A =	90 to 100
	B =	80 to 89
	C =	70 to 79
	D =	60 to 69
	F =	59 and below

Textbook:

Teach Yourself TCP/IP in 24 hours by Joe Casad
4th edition, Sams Publishing co. ISBN 978-0-672-32996-8

Web Resources:

<http://www.marmsater.org/EST2650C>
Complete outline, lab and reading assignments
This site is typically updated weekly.