Mississippi Valley State University
Department of Engineering Technology
College of Professional Studies

Course Syllabus

ET-343L Microprocessors Lab

Lab: Friday: 10:00 – 11:50
Science and Technology Bldg, Classroom: 1112
Credit Hours: 1

Mr. Lemorris Strong – Assistant Professor
Office Phone: 254-3409
Email Address lemorris.strong@mvsu.edu
Office Hours: As posted

Pre-requisite: ET-242L Digital Electronics Lab (or concurrent)

COURSE DESCRIPTION: The Lab activities track the course lecture to provide a mean for students to gain hands-on experience in Microprocessors and Microcomputer through projects and equipment demonstration. Students will work individually and collectively to complete projects and assignments.

EXPECTED STUDENT LEARNING OUTCOMES: Upon the completion of this course, the student will be able   to, either orally or in writing, and with minimum use of outside references;

1. Use the number systems and codes to solve problems.
2. Understand the function and operation of a digital circuits
3. .Understand and describe the organization and operation of the memory devices.
4. Explain the function and purpose of computer
5. Define, and understand the microcomputer structure and the sequence operation of the microprocessor.
6. Must have a basic understanding of input/output and the requirements and limitations of interfacing digital circuit
7. Explain the principles of operation and program a 68HC11 microprocessor to execute all possible operations the microprocessor was design for, using Assembly Language and C-Programming language.

REQUIRED TEXT: *None*

TEACHING METHOD: Two (2) hours of laboratory weekly

EXPECTATIONS: This course of study has been prepared to inform you about the lab requirements, contents, teaching methods, evaluation process and requirements for students. You are expected to read the information carefully so that you understand what is expected of you and the lab requirements that must be met to successfully complete the course. You will be held responsible and accountable for knowing the schedule of class meeting and examinations. It is recommended that you read and study all assigned materials. If you do not understand the material, you should promptly consult your instructor.

GRADE STANDARDS AND WEIGHTS FOR LAB: All projects must be submitted for grading by the due date. Assignments that are not typed must be neatly written on lineless paper. The lab project is worth 50 points per assignments. Mid-term and Final score are 100 points

ASSESSMENT SHEET

Schedule	Means of Assessment	Points	Points
Week 2	identify project - began progress report	50	
Week 3	order materials - update progress report	50	
Week 4	received materials - update progress report	50	
Week 5	Instructor check point – review progress report – material & strategy	100	
Week 5	start proto type - update progress report	50	
Week 6	identify any problems - update progress report	50	
Week 7	Med Term - Instructor reviews progress report and status of project	100	
Week 8	Correct any finding - continue project - Update progress report	50	
Week 9	Progress check point 1 verify proto type will work - if not troubleshoot fault	50	
Week 10	Progress check point2 – Repeat process until the problem is corrected	50	
Week 11	Progress check point 3 - continue proto type - update progress report	50	
Week 12	Create poster board for project	50	
Week 13	Project completed - present to class	50	
Week 14	Final Exams – turn in progress report - display project and poster board for inspection	150	
	Final Grade	900	

*See grading standard

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Grading system: A = 91 – 100   or   810 - 900
B = 81 - 90   or   710 - 800
C = 71 - 80   or   610 - 700
D = 61 - 70   or   510 - 600
F = 61 - Below

INCENTIVE: On time twenty (20) class days consecutive and receive two (2) points toward your mid-term and final. All typed assignments will receive two (2) points towards the assignment. Assignment turned in on time will receive two (2) points toward the assignment.

LAB PROJECTS: Lab projects are assigned as define in text book or by the instructor.

FEES: A fee may be required base upon the lab assignment

REFERENCES

1. *The Mechanical Universe and Beyond,* videotape: on reserve at the Library
2. *Circuit Tutor,* software: available on AT computers
3. The CD contained in the back of your class book
4. You Tube, (youtube.com) Electronics Programs

CLASS POLICES: The following Lab policies are in effect throughout this course to ensure that a positive and equitable learning environment exists for all lab members. Failure to follow these class policies may result in sanctions per the student handbook. Policies for lab include:

Attendance: **Students are expected to attend Lab**. Any absentees will have a negative effect upon your final lab grade. Students are responsible for and accountable for all information and all modifications to lab assignments. If a student misses a lab, he or she is responsible for the material missed – <u>even if a valid excuse is presented</u>.

Punctuality: Every student is expected to practice professional time management skills and report to lab on time.

Professional Language/Respect: Professional language, conduct, and respect for peers, the instructor, and the learning process are a basic requirement. This is a "G" rated course

Disruptive Behavior: Effective learning environments require the attention and positive contribution of both student and teacher. Sidebar or loud conversations, jokes, laughter, pranks, etc., between and among students in the classroom while class is in session are disruptive to the learning environment. Students disrupting the class/learning environment in such a manner are subject to grading penalties.

Others Attending Lab: Those who are not registered for the course are not permitted to attend. This includes, but is not limited to, boyfriends/girlfriends, children, siblings, spouses, etc.

Electronic Devices: Cell phones, IPads, IPods, etc. will not be used in class and should be turned OFF **BEFORE** you enter the classroom. Electronic device use will result in **immediate expulsion** from the lab.

Computer: Doing class computer usage has to be approval by the Instructor

Make-up Work: <u>No make-ups assignments are available</u>. **Assignment due dates are announced well in advance and are FIRM. There are no exceptions for athletic travel or other pre-planned absences. Students are encouraged to complete assignments EARLY and to submit them PRIOR TO THE DEADLINE.** Assignments will only be accepted as called for by the instructor, on or prior to the due date. **<u>No make-ups will be given for missed assignments or examinations</u>. An excuse from the Office of Student Affairs <u>DOES NOT EXCUSE the student from work or assignments missed during the absence</u>!**

Honor Code: Any work submitted is expected to be yours. Dishonesty (cheating) in any form will not be tolerated. Cheating will result in the student(s) involved being immediately dismissed from the class and receiving a grade of "F" for the course. Cheating includes submitting someone else's

work as your own or allowing someone else to submit your work as theirs. Cheating will be determined at the sole discretion of the instructor.

Other: All other student conduct policies are in full effect as explained in the Mississippi Valley State University Undergraduate Catalog.

DRESS POLICY; *There is no MVSU dress policy, however in this lab there will be* <u>*NO*</u> *pants sagging,* <u>*NO*</u> *hats, hoods, or any other headgear worn (females are allowed to* wear *hats). If this dress policy is violated you will be asked to leave the class room with a loss of 20 points. Only an excuse from the Department Head will allow you to return.*

Accommodating Special Needs Students: Students with learning or physical disabilities admitted to this class will be expected to perform the same level of work at the same proficiency as students without disabilities. However, where necessary, alternative methods will be used to accommodate any learning or physical condition if it is made known to the instructor in advance. No student will be turned away from this class because of a disabling condition.

Mississippi Valley State University is committed to providing reasonable accommodations for students with a documented disability. If you feel you are eligible to receive accommodations for a covered disability (medical, physical, psychiatric, learning, vision, hearing, etc.) and would like to request it for this course, you must be registered with the Services for Students with Disabilities (SSD) program administered by University College. It is recommended that you visit the Disabilities Office located inside the EMAP Computer Lab in the Technical Education (IT) Building to register for the program at the beginning of each semester. If you are determined to be eligible after your confidential consultation, you will be provided with a Memo of Accommodations that must be submitted to each of your instructors.

For more information or to schedule an appointment, please contact Mr. Billy Benson, Jr. via phone or email at 662-254-3005 or billy.benson@mvsu.edu.

Withdrawals and Incompletes: A syllabus constitutes a contract between the student and the course instructor. Participation in this course indicates your acceptance of its teaching focus, requirements, and policies. Please review the syllabus and the course requirements as soon as possible. If you believe that the nature of this course does not meet your interests, needs or expectations, if you are not prepared for the amount of work involved or if you anticipate that the class meetings, assignment deadlines or abiding by the course policies will constitute an unacceptable hardship for you, you should drop the class by the drop/add deadline**. Incompletes will not be offered in this course.**