

College of Engineering and Architecture
COURSE SYLLABUS

1. Course number and name

EECE416 Microcomputer Design

2. Credits and contact hours

3 credits and 3 hours per week (TR: 5:10 – 6:30 pm)

3. Instructor name

Dr. Charles Kim (202-806-4821; ckim@howard.edu; 3014 LKD)

4. Text book, title, author, and year

Text: Assembly Language for x86 Processors, Kip Irvine, 6th Ed, Prentice Hall.

Ref.: Essentials of 80x86 Assembly Language, Richard Detmer, Johns & Bartlet, 2012.

5. Specific course information

- a. brief description of the content of the course: The course examines microprocessor and support architectures, hardware and software system design, assembly language coding, and microcontroller applications.
- b. prerequisites or co-requisites: EECE212 Fundamentals of Digital Systems
- c. indicate whether a required, elective, or selected elective course in the program: A required course for Computer Engineering program and an elective course for Electrical Engineering program.

6. Specific goals for the course

- a. specific outcomes of instruction: The student will be able to understand the Intel microcomputer architectures and to write assembly language codes for basic operation of computing.
- b. ABET student outcomes addressed by the course: (e) A knowledge of contemporary issues; (k) An ability to use techniques, skills, and modern engineering tools necessary for engineering practice.

7. Brief list of topics to be covered

- a. Overview of Digital Computer Systems and Computer History
- b. Computer Architecture Overview
- c. Bus Architecture of Computer Systems
- d. Intel x86 Architecture
- e. Assembly Language Fundamentals
- f. Procedures
- g. Conditional Processing
- h. Microcontrollers

8. **Howard University Statement on ADA Policies and Procedures**

Howard University is committed to providing an educational environment that is accessible to all students. In accordance with this policy, students in need of accommodations due to a disability should contact the Dean of Student Services for verification and determination of reasonable accommodations as soon as possible. Note: Accommodations are not retroactive. The Office of Student Services is located in Suite 725 of the Howard Center and may be reached at (202) 238-2420.

9. **Howard University Statement on Interpersonal Violence**

Howard University takes sexual assault, dating violence, domestic violence, stalking and sexual harassment seriously. If a student reveals that he or she needs assistance with any of these issues, all Responsible Employees, which includes faculty, are required to share this information with the University Title IX Office (806-2550) or a student can be referred for confidential services to the Interpersonal Violence Prevention Program (IVPP) (238-2382) or University Counseling Services (806-6870). For more information about these services, please go to www.CampusSafetyFixs.howard.edu

<https://www2.howard.edu/title-ix>

Syllabus Addendum for all CEA Courses

The following understandings, expectations, and requirements shall apply to all classes that are offered by the *College of Engineering and Architecture*, effective fall 2016. These are the expectations that the students can have from their professors, and the expectations that the professors will have from each student taking her/his class. These are intended promote the success of our students here at Howard, and after graduation.

Students expect that their professors will:

1. Care about the success of each student, and promote mutual respect.
2. Come to every class, and on time.
3. Keep abreast of the technical field she/he is teaching.
4. Explain how the subject being taught is broadly connected to the field and possibly to other courses.
5. Keep abreast of, and adapt to, evolving teaching approaches.
6. Have office hours for each class, and be present at these times.
7. Coordinate any travel with his/her Department Chairs.

Students who feel that a professor fails in the above expectations may confidentially express his concerns in the Comments box in the Office of Student Services in the L. K. Downing Building, Room 1114, or email Dr. Rhoulac Smith, Director of Student Services, at trhoulac@howard.edu. Your communication must be respectful, professional, and truthful.

Professors expect that their Students will:

(Failing to comply will result in appropriate penalties. In certain cases these penalties are expressly defined below.)

1. Take a professional approach to all class activities and interactions. Show that you take the class seriously and come to class prepared.
2. **Absenteeism:** Come to every class.
 - 2% penalty from total class grade for every unexcused absence
3. **Lateness:** Not come to class after it begins.
 - 1% penalty from total class grade for every instance of infraction
4. **Leaving Early:** Not leave class before it ends.
 - 1% penalty from total class grade for every instance of infraction
5. **Disruption:** Avoid entering and leaving the classroom during instruction.
6. **Eating:** No eating in class.
 - 1% penalty from total class grade for every instance of infraction.
7. **Electronics:** No use of laptop, cell phone, iPad, headphones or other electronic equipment that are not explicitly requested to be used by the Professor.
 - 1% penalty from total class grade for every unexcused absence
8. **Cheating:** Any form of cheating, including plagiarism, in an exam or assignment shall automatically result in a zero-grade for all involved, for that exam or assignment.
9. **Communication:** Communication, oral or written, with the Professor, including email, in all matters concerning the course, shall be done professionally; that is, as it would be done with a potential employer. (e.g., respectful, include your full name, clearly articulate the objective of the communication concisely)