

**ACE Mentor Program
Course Syllabus for Spring 2009**

ACE Mentor Leader:

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Meeting Schedule

Monday, 1/5 – 4/27
Room: AutoCAD Lab
Time: 6:00 pm – 8:00 pm

Program Overview:

This 15 week program is designed to enlighten and increase the awareness of high school students to career opportunities in architecture, construction, and engineering and related areas of the design and construction industry through mentoring.

Course Outline:

Typical class (15 min mentor presentation, 30 minute guest speaker, 1 hour project time, 15 minute informal time)

(Jan 5) Week 1: Program Introduction

ACE mentor Team will give a brief overview of the program to the students and their parents. Students will select a weekly meeting time and coordinate schedules, select a project student team leader, select a design project from a list of potential projects, and begin programming and project research.

(Jan 12) Week 2: Project Conception – programming, site design, budget basics
Guest speaker: architect (Steve Davis)

Guest architect will discuss the process of becoming an architect, the challenges faced, the daily tasks performed, and the career options they have available through their education experiences. ACE mentor team will present a brief “project conception” overview. Students will present programming results, initial project design thoughts and analysis, and research results for the various certification programs required and systems required.

(Jan 12) Wednesday Work Session

(Jan 26) Week 4: Project Delivery – team approach (design build, design-bid-build)
Guest speaker: Civil Engineer / Landscape Architect (Hunter McCardle)

Guest Civil Engineer / Landscape Architect will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. ACE Mentor Team will present a brief “Project delivery” overview. Students will develop site analysis, initial project budget, and final program.

(Feb 2) Week 5: Site Visit / Field Trip

Site visit to project site and project under construction.

(Feb 9) Week 6: Design
Guest speaker: LEED Expert and Civil Engineer

Guest LEED expert will discuss the LEED for Schools program and the importance of holistic design thinking. Students will continue work on design and research. ACE Mentor Team will present a brief “Design” overview. Students will

present project delivery method selected, work on design development, site analysis, and present research results for certification programs, product selections, and design strategies. Students should have a schematic design completed by this point.

(Feb 18) Wednesday Work Session

(Feb 23) Week 8: Construction Documents - blueprint reading, sections, presentation drawings
Guest speaker: contractor (Shea Willis – RE LEE)

Guest General Contractor will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. ACE Mentor Team will present a brief “Construction Documents” overview. Students will finalize their design and begin scheduling and estimating.

(Mar 2) Week 9: Construction – contractor planning, estimating
Guest speaker: MEP designer (Guy Cohen?)

Guest HVAC contractor will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. ACE Mentor Team will continue a brief presentation “construction documents” overview. Students will continue work on final project and begin final presentation format layout.

(Mar 9) Week 10: Construction – bidding, negotiating, purchasing
Guest speaker: structural engineer (Dennis Moler?)

Guest structural engineer will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. ACE Mentor Team will present a brief “Construction” overview. Students will work on final presentation.

(Mar 16) Week 11: Construction – site coordination, scheduling, inspections
Guest speaker: county code official (Jay?)

Guest County code official will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. ACE Mentor Team will continue a brief presentation on “Construction”. Students will work on final presentation.

(Mar 25) Wednesday Work Session

(Mar 30) Week 13: Facility Management
Guest speaker: building owner (Charley?)

Guest Owner will discuss project opportunities, how they select a project team, how they decide to go forward with a project, and how they select a site. ACE mentor team will present a brief “facility management” overview. Students will finalize presentation and work on resume.

(April 6) NO SESSION

(April 13) Week 14: Presentation Preparation
Guest speaker: graphic designer (Drew?)

Guest Graphic Designer will discuss career opportunities, daily challenges faced, daily tasks performed, and the career options they have available through their education experiences. Students will present their final project and decide

what needs to be added and who will do what part. Students should bring resumes for ACE Mentor Team review. ACE Mentor Team will do a brief presentation on college application, scholarship research, and resume writing.

(April 20) Week 15: Presentation Preparation

Guest speaker: public speaking expert

Guest public speaker will discuss how to make a presentation and win over the audience, how to overcome your fears, and how to exude confidence. Students will do a final presentation of their project. ACE Mentor Team will do a resume review and discuss college selection. This will be the final work session for the presentation.

(April 27) Week 16: Celebration and Presentation Event

Attendance Requirement

Attendance at all 15 course sessions is mandatory. If there are extenuating circumstances that prevent you from attending a session, you must contact the student team leader by email prior to class. Student team leader is responsible for letting the ACE Mentor Leader know of any attendance issues.