Syllabus: ACE Mentor Program of SE MI, Program Year 2020-21

ACE Program Requirements
1. Current high school student in Michigan
2. Registration on ACE website
3. Student and parent/guardian completion with signatures on permission and release forms on ACE website
4. Dual enrollment at LTU
5. WiFi or hotspot available for every Session and to complete assignments

Course Coordinator
Jasmine L. Sisson, PE
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Team Leaders
Teffera Kowalske
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Maria Alvaro

Instructors
TBD

Semester Schedule
Semester Start January 20, 2021
Course Sessions Mondays and Wednesdays 6:30 pm to 8:00 pm
All Projects due May 3, 2021
Project Presentations/Judging May 5, 2021
Awards Announcement May 12, 2021
Scholarship Announcement May 26, 2021

Dual Enrollment
All students will be required to dual enroll at LTU to be eligible for associated benefits:
   a. Dual Enrollment Credits
   b. LTU laptops (on loan for the program and must be returned at completion) and Design Software
   c. LTU email and Access to LTU sharing and class platforms

New students that successfully complete the program will receive three credits that can be used at any Michigan college or university (except the University of Michigan). Returning students that successfully completed the 2019-20 program will receive an additional one credit, for a total of three credits.

Seniors will be eligible to apply for ACE scholarships or external scholarships.
Canvas: Online course management
The course syllabus, course calendar, assignments, additional readings and images, grades, and other documents will be posted on the course Canvas site. Students are responsible for monitoring the site on a regular basis and for keeping up with coursework.

Cell Phone Usage
Your instructors regard the cell phone, its camera, and applications to be useful tools in the pursuit of basic design skills and understandings. For these reasons, you may be asked to use them for course activities during the Sessions. We ask that you limit non-course use of your technological devices to a minimum during the Sessions.

Laptop Camera Usage
Participation is worth 10% of the course grade. In order to verify participation, ACE will require that your laptop camera be on during the Sessions.

Course Description
The mission of ACE Mentor program is to engage, excite and enlighten high school students to pursue careers in architecture, engineering and construction through mentoring and to support their continued advancement in the industry. It is a free, award-winning, afterschool program designed to attract high school students into pursuing careers in the Architecture, Construction and Engineering industry, including skilled trades.

Course Content
Students will work in teams with students guided through a mock design project by their architect, engineer, and construction management mentors. Mentors will guide the students as they work towards a final project, introducing them to the careers, industry vocabulary, and various roles companies play in the construction industry.

Course Objectives
The overall focus is the exposure to design disciplines and working as a member of a design team. It involves working beyond one’s personal desires and sense of individual expression in order to engage context, culture, environment and users.

1. Students will be aware of the role of various disciplines in project design.
2. Students will understand and acquire conceptual skills relevant to design processes.
3. Students will understand the fundamental principles of design.
4. Students will be familiar with reading and developing construction plans.
5. Students will understand basic design vocabulary.
6. Students will be introduced to and become more proficient in the use of various media and tools employed in the design professions.

Required Texts
All references will be provided on Canvas and available as required.
Course Sessions, Workshops and Assignments

Week 01  
Study topic  
January 20
Introduction

Week 02  
Study topic  
January 25 / 27
Drafting/Revit

Week 03  
Study topics  
February 1 / 3
Architecture

Week 04  
Study topics  
February 8 / 10
Landscape Architecture

Week 05  
Study topics  
February 15 / 17
Site/Civil

Weeks 06  
Study topic  
March 1 / 3
Geotechnical

Week 07  
Study topic  
March 8 / 10
Structural

Week 08  
Study topic  
March 15 / 17
Mechanical/Plumbing/HVAC

Week 09  
Study topic  
March 22 / 24
Electrical

Week 10  
Study topic  
March 29 / 31
Estimating

Weeks 11  
Study topic  
April 5 / 7
Construction/Skilled Trades

Week 12  
Study topic  
April 12 / 14
Presentation

May 3
Project Deliverables Due
May 5
**Presentations/Judging**

May 12
**Project Awards Announced**

May 14
**Scholarship Applications Due**

May 26
**Scholarship Awards Announced**

**Weekly Work Structure**
The course will be structured as a lab/workshop and focused on the discussion, understanding, and acquisition of very specific design skills based on conceptual strategies and formal principles delineated in the Course Content section of this document, above. The typical week will be organized as follows:

**Monday**
- Introduction of weekly Topic and Assignment where applicable.
- Lecture and discussion: 45-60 minutes
- Team Work on Assignment or Project: up to 30 minutes

**Wednesday**
- Review of previous Assignment, when applicable: 15 minutes.
- General questions and discussion of the ongoing Assignment: 15 minutes
- Team Work on Assignment or Project: 60 minutes

**Submittal**
- Assignments are due on Monday by the beginning of class and are to be submitted on the class Google Drive. All submissions will be digital.

**Evaluation of Student Work and Grading**

**Evaluation of Work: Assignments and Workshops**
Assignments and Team Work Session will be graded as described below.

**Assignments:** There will be eight (8) assignments. Each assignment will be evaluated and graded with a rubric that indicates areas of strengths and weaknesses of the submitted work. The rubric will indicate the number of points earned for each specific aspect of the assignment. Each Assignment will be valued at 5 points. The total number of points possible for all Assignments is 40 points. Assignments are worth 40% of the total semester grade.

**Grade Summary for the Course**
- 40% Presentation and Project Deliverables (40 points)
- 40% Assignments (40 points)
- 10% Class Participation (10 points)
- 5% Attendance (5 points)
- 5% Team Participation (5 points)
Points for the Assignments will be compiled and converted to a letter grade according to the LTU standard 100 percentage scale shown below. Satisfactory completion of this class/program will be earned if equal to or greater than 73 points are earned.

The Lawrence Technological University Standard Grading System

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Points Earned</th>
<th>Percentage</th>
<th>Evaluation</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>96-100</td>
<td>Excellent</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>A -</td>
<td>90-95</td>
<td>Very Good</td>
<td>3.7</td>
<td></td>
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<tr>
<td>B +</td>
<td>87-89</td>
<td></td>
<td>3.3</td>
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<tr>
<td>B</td>
<td>83-86</td>
<td>Good</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>B -</td>
<td>80-82</td>
<td></td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>C +</td>
<td>77-79</td>
<td>Satisfactory</td>
<td>2.3</td>
<td></td>
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<tr>
<td>C</td>
<td>73-76</td>
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<td>2.0</td>
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<tr>
<td>C -</td>
<td>70-72</td>
<td></td>
<td>1.7</td>
<td></td>
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<tr>
<td>D +</td>
<td>67-69</td>
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<td>D</td>
<td>63-66</td>
<td></td>
<td>0.7</td>
<td></td>
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<tr>
<td>D -</td>
<td>60-62</td>
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<td></td>
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<tr>
<td>F</td>
<td>&lt; 60</td>
<td>Fail</td>
<td>0.0</td>
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</table>

Please refer to *The Student Companion*, online, for a discussion of the Meaning of Grades.

Late Work
Work is due at the beginning of the class period unless other arrangements have been made in advance with the Course Coordinator. One full point will be subtracted from each assignment for each day a project is turned in late. See the text on late work and absences, below.

Course Grading Policy
Attendance
Students are expected to attend all class sessions, to be in class on time, prepared, with work completed, and ready to participate in class activities. If a student is absent from class or late to arrive, for any reason, it is the responsibility of that student to collect all course content that may have been missed, to catch up with course progress, and to submit work on time.

In any given semester, every student in every class will be permitted at least one absence in courses that meet once each week and two absences in courses that meet twice each week, for any reason and with no requirement for documentation, but with the provision that students are still responsible for any class work or activity on missed days.

Late Arrival, Late Work, Absence, Attendance, Participation
Making Up Late Work
No work may be submitted for credit more than five days after the original due date and time. The only exceptions to this provision are described in the provisions for Incomplete (“I”) grades, below. Please refer to the “Late Work” section above.

Arriving Late to Class
Students who arrive twenty or more minutes late will be considered to have missed that course session.

Absence from Class
If a student misses more than six sessions, the student will fail the course, and receive a grade of F/Fail.

Class Attendance and Participation
Students earn a portion of the final class grade for participation in class activities. The evaluation of participation includes attendance criteria.

Exception: Incomplete Grades
The only exception to these procedures is for verifiable hardship situations, including medical circumstances, other situations acceptable to the instructor, but clearly beyond the control of an individual student, in which case the student may submit to the instructor documentation indicating that due to these circumstances work could not be completed on time. Please refer to the section 6.0, Grades and the subsection on “I” or incomplete grades for complete information. Note that just falling behind in coursework is not a sufficient reason for an “Incomplete” grade. If course attendance is critical to completing the course requirements, then the student needs to register for the course again in a subsequent semester.

Warning of Attendance Deficiencies
The Course Coordinator will warn students by email when students’ attendance is likely to jeopardize class performance. Email warnings will be by@ltu.edu email addresses assigned by the University to students, faculty, and staff. This will take place in three stages.

1. If a student is absent four of the six allowable absences, the Course Coordinator will issue a warning to the student in question. Students are then expected to contact the Course Coordinator to acknowledge the warning.

2. The Course Coordinator will similarly inform students when they reach the maximum allowable absences with a reminder that more such absences will result in a failing grade. Students are again expected to contact the Course Coordinator and acknowledge the warning.

3. Course Coordinator will inform students when they exceed the maximum allowable absences and reach the automatic threshold for a failing grade.