# Department of Engineering Technology

## MSET 5930 – Research Problems in Lieu of Thesis
(Sustainability and Lean Construction)

### Section 708 – Spring 2018 Syllabus – Subject to Change

<table>
<thead>
<tr>
<th>INSTRUCTOR</th>
<th>Aloysius (Al) Attah, P.E.</th>
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<tbody>
<tr>
<td>OFFICE</td>
<td>NTDP F115G</td>
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<tr>
<td>PHONE</td>
<td>(940) 565 – 2022</td>
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<tr>
<th>EVALUATION</th>
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<tr>
<td>Attendance</td>
<td>10%</td>
</tr>
<tr>
<td>Weekly Report</td>
<td>30%</td>
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<tr>
<td>Final Report</td>
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<th>OFFICE HOURS</th>
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<tr>
<td>Mon./Wed./Thur.:</td>
<td>10:00am - 11:30am</td>
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<td>Tue.:</td>
<td>1:00 p.m. - 2:30pm</td>
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<td>Or By Appointment</td>
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| E-MAIL:             | aloysius.attah@unt.edu      |

| TOTAL               | 100%                        |

## COURSE OBJECTIVES:

Objective of this course is to provide an opportunity to non-thesis MS students to gain skills in defining engineering technology problem, proposing and implementing a solution, and documenting findings to completing their degree requirement by presenting their findings to Major Professor as a formal report.

The research problem is an opportunity for students to practice effective research strategies. Projects must be related to engineering or engineering technology and approved by the student’s Major Professor. The formulation of the project plan is a collaborative, mentored experience. Successful project plans are those in which students can do the following:

- State a research problem in a chosen area of study and demonstrate the value of the solution to the research problem;
- Apply sound research methods/tools to problems in an area of study and describe the methods/tools effectively;
- Analyze/interpret research data;
- Draw valid conclusions from data and make a convincing case for the contribution of those conclusions in advancing knowledge within that area; and communicate their research clearly and professionally in both written and oral forms appropriate to the field.

At the conclusion of the course, students should be able to:

- explain the meaning of sustainability/lean construction and the different areas in which it is practiced
- discuss the ways in which sustainable/lean construction practices are applied
- analyze a project in terms of sustainability/lean construction and the degree to which it is applied
- determine ways in which a project can be made more sustainable
- complete LEED exams to allow accreditation

## COURSE REQUIREMENTS:

Assignments: In addition to final report, a weekly brief report is required from the students.

**Attendance** – Attendance is mandatory. The students are expected to conduct research in sustainability and lean construction and analyze the data.
Sources of Projects:
1. Funded/Sponsored: any source (industry, federal, private, personal, etc.)
2. Lab development: requires an approval from the department chair. Students can make reasonable requests for laboratory fee funds to purchase equipment, supplies, etc.

REPORT: The student will submit a final report. The report shall include the results of data analysis.

GRADING: Major Professor assigns a final grade to this project course. No incomplete grade is allowed unless unforeseen situations occur that was beyond student’s control. Department chair’s approval is needed before grade of “I” is assigned.

PROJECT TITLE: Sustainability and Lean Construction

PROJECT DESCRIPTION: Define sustainability and lean construction problem, propose and implement a solution, and document findings in a formal report.

RECOMMENDED TEXT BOOK:
The recommended texts/sources below are available in electronic (Kindle or Kindle app) versions on Amazon.com or as print version at many bookstores.

- Scholarly articles on sustainable and lean construction.

DISABILITIES ACCOMMODATION:
The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.

ADDITIONAL POLICIES AND PROCEDURES:
Tardiness: If a student arrives late for a scheduled meeting, the meeting may be scheduled for another day.

Cell Phones: Please remember to turn off phones prior to meeting.

Extra Help: PLEASE DO NOT WAIT UNTIL THE LAST MINUTE. If you are having trouble with this meeting, please come by my office during office hours. I am also available through email aloysius.attah@unt.edu