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|  | ENTREPRENEURIAL  ENGINEERING DESIGN STUDIO |
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| 2017-18 | EGE 2123 STUDENT HANDBOOK |
|  | This handbook was drafted to provide students in the sophomore studio course with guidelines and expectations for working in the studio environment. For most, this will be your first real studio experience. The studio experience encourages peer-to-peer learning, dialogue, innovation, and immersion in the design process; in short, learning by doing.  ACKNOWLEDGMENT  With much gratitude, we acknowledge that the creation and content of this Student Handbook is based upon the Student Companion, a handbook provided to students in the College of Architecture and Design (September 2015; Steven Rost, Chair of Department of Art & Design; James Stevens, Chair of Department of Architecture). |
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Last revised: 10/30/2017

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### 

Entrepreneurial Engineering Design Studio

EGE 2123 STUDENT HANDBOOK

# 1.0 STUDIO: What is it?

The Entrepreneurial Engineering Design Studio is a course that was designed to foster an entrepreneurial mindset in students through a team-based, multidisciplinary, engineering design studio experience. This studio environment de-emphasizes lectures and emphasizes hands-on, team activities. In addition, while some work will be done outside of class time, the majority of the work is done during the scheduled class meeting time (2.5 hours, 2 times a week). The studio setting is ideal for the collaborative nature of the course, providing a sense of community among students and instructors in which respect for one another, a sharing of ideas and collaboration are paramount. The collaborative environment, intended to echo the best aspects of the professional office, is a setting in which the emphasis is on teamwork.

# 2.0 STUDENT RIGHTS AND RESPONSIBILITIES

The rights and responsibilities below are based on the LTU Studio Culture Summit (2012) comprised of student leaders and faculty in the College of Architecture and Design where the studio culture pervades throughout their curriculum (i.e., we asked the experts).

1. The RIGHT to collaborative creative inquiry.

The RESPONSIBILITY to respect the work of others - written, spoken, and created.

The RESPONSIBILITY to routinely share the engagement of the creative process.

1. The RIGHT to be intellectually challenged.

The RESPONSIBILITY to initiate and pursue resources in order to support and expand inquiry.

The RESPONSIBILITY to engage and respect the objectives, outcomes, and deliverables of the course.

1. The RIGHT to use a safe and secure learning environment.

The RESPONSIBILITY to abide by the safety codes established by LTU.

The RESPONSIBILITY to respect others and their space.

1. The RIGHT to access necessary technology, training, and support.

The RESPONSIBILITY to respect and secure the technology provided.

The RESPONSIBILITY to work with faculty and staff to actively pursue needed technology, training, and support.

1. The RIGHT to a respectful, open, and professional creative dialogue.

The RESPONSIBILITY to be open to diverse perspectives and maintain sensitivity to others’ cultural diversity.

The RESPONSIBILITY to conduct oneself in a professional and collegial manner.

1. The RIGHT to learn through experimentation, risk-taking, and failure.

The RESPONSIBILITY to produce and share knowledge gained through experimentation and failure.

The RESPONSIBILITY to manage time associated with experimentation and risk-taking in order to demonstrate achievement of course objectives.

1. The RIGHT to the efficient, relevant, and productive use of time.

The RESPONSIBILITY to be on time and respect the time scheduled for meetings and courses.

The RESPONSIBILITY to actively engage in course content.

1. The RIGHT to be heard and respected.

The RESPONSIBILITY to listen carefully and communicate respectfully.

The RESPONSIBILITY to have respect for different points of view.

# 3.0 STUDIO CODE OF CONDUCT

The University establishes specific rules and regulations regarding on-campus behavior. The rules address issues of academic misconduct and criminal and civil violations. Please refer to the University’s Student Code of Conduct for documentation of these policies, definitions, and procedures at:

<http://www.ltu.edu/myltu/code-conduct.asp>

Thissupplementary studio code of conduct is to serve as a guideline for our studio community as we emphasize the importance of students’ responsibilities and of respecting the rights of others. As a member of the studio community, you are expected to abide by the code and assist others in doing the same. If you see instances where the code is being ignored, it is your responsibility to let the instructors know about it.

With respect to the STUDENT RIGHTS AND RESPONSIBILITIES outlined in section 2.0 of this handbook, we ask that students, staff, and instructors conduct themselves courteously, ethically, and professionally, in accordance with the following principles:

1. Respect for others
2. Consideration for the building, the studio, and its furnishings
3. Care when using any of the college’s equipment, including laptops
4. Honesty and integrity

### Respect For Others

Education is a collaborative process and everyone in the university community should be afforded respect. As you work toward your goal of attaining your degree, it is important to respect the rights of those who are helping you achieve your goal – including fellow students, instructors, staff, and custodians, who are all deserving of your consideration. To that end, the following behaviors are unacceptable.

##### Sexual Harassment

University and federal and state laws prohibit any behavior which creates an uncomfortable or untenable atmosphere for men or women in our community. As respecting the rights of others is important, any irresponsible behavior, inappropriate comments or activities, which adversely affect others, cannot be tolerated. Please refer to the LTU Student Handbook for more information.

##### Racial, Ethnic, Gender, or Religious Discrimination

The academic environment is enhanced and enriched by the diversity of individuals from a variety of cultures, countries, and backgrounds. Every student has the right to pursue an education without harassment or discrimination of any kind. Racial, ethnic, gender, or religious slurs, religious evangelizing, intolerant attitudes, and offensive jokes will not be tolerated. Please refer to the LTU Student Handbook for more information.

##### Consideration for the Taubman Complex, the Studio, and its Furnishings

The A. Alfred Taubman Engineering, Architecture, + Life Sciences Complex (TESLA) was designed “to provide a collaborative, high-tech, learning environment for emerging technologies”. The essence of that collaborative learning environment is our Engineering Design Studio. It is therefore in our best interest to take care of the building and its contents as if they were our own.

* Studio tables and chairs are to be treated properly and with care. Due to the ‘hands-on’ nature of this course, there is often the need to move and reconfigure the tables in the classroom. We ask that you take care when moving the studio furniture.
* There is to be no cutting directly on the tabletops (or chairs). You may make use of a thick piece of cardboard (we have plenty) to protect the surface.
* Mounting anything on the walls of the studio is strictly prohibited.
* Spray adhesives and paint of any kind are not to be used in the studios. Please ask instructors where the designated areas are located if you need to use these substances.
* If you are using any glue or tape in the studios, please ensure that any residue is wiped from the tabletops when you are done.
* Do not dispose of any plaster, concrete, paint, or glue in the studio sinks.
* Power tools (of any kind) such as power saws, routers, band saws, Dremel tools, welding or soldering tools or anything that creates a flame are not permitted in the studios.
* We provide a wide variety of cutting and fastening devices as well as a variety of materials to use in prototype construction in the studio. Please get the approval of the instructors when bringing any other materials into the studio.

##### Laptops, Blackboard, and 3D Printers

Assignments in this course take many forms due to the “hands-on” nature of the course. Lawrence Tech provides laptop computers and a full suite of up-to-date software to assure that all students are well prepared and have full-time access to educational resources. The Help Desk provides computer assistance and on-the-spot exchange, advice, and repairs should any issues arise. For information and hours of operation visit the eHelp link on the LTU website. (http://www.ltu.edu/ehelp/).

Never leave your laptop unattended. It is your responsibility to **backup your work** (flash drives are cheap and have large storage capacity). Loss of a computer or a computer crash are NOT valid excuses for late or incomplete work.

##### Blackboard and Grade Center

Blackboard is a valuable web-based learning management tool. Use of Blackboard in this course will take many forms.

* All email communications will be through Blackboard. Email in Blackboard must be set up with your LTU email address.
* Much of the course content including course calendars, course syllabus, weekly in-class Powerpoint slides, and course assignments will be posted weekly in Blackboard.
* All course assignment grades will be recorded in Blackboard Grade Center in a timely manner so students can monitor their performance.
* In the course you will work in a group throughout the semester. Blackboard has collaborative group tools - including discussion, email, chat, and file exchange - similar to Google drive.
* Some of the course content may be delivered as an eLearning Blackboard module. Students will be responsible for completing the required elements of the eLearning module in the required timeframe (details to be covered in class as needed).
* Some out-of-class reading assignments will have online tests administered in Blackboard.

As the type of assignments varies in the course, it is the responsibility of the student to thoroughly **read and understand the requirements and due date** of the given assignment (whether individual or team) and the form of submission (email, Blackboard, printout) for assessment. Be certain to ask instructors for clarification if anything is unclear. ***Late submissions will be penalized and/or not accepted at the discretion of the instructor.***

**Rapid prototyping and 3D printing** is a tool of innovation that your team may decide to employ in building your team’s prototype. Resources for 3D printing are available in the Studio and the Metal Fab Lab (E11) for a nominal fee, as well as at the ACRC in the UTLC buildiing.

* Files containing 3D models to be printed should be submitted for printing on a flash drive.
* Only instructors and technicians are to submit jobs for printing to the respective 3D printers.
* Students are not permitted to remove their 3D parts from the 3D printers, only instructors/technicians.
* See the COURSE RESOURCES section for more information on Rapid Prototyping resources both on- and off-campus.

**Lockers** are available for project storage in the studio. Students will be required to replace any lock that is damaged or misplaced.

***Students identified as responsible for damage to any studio property will be assessed the cost of repairs.***

##### Honesty and Integrity

LTU’s established disciplinary procedures will be used in any instance of those caught cheating or claiming the work of others as their own. This includes copying from another person’s homework, unauthorized accessing of computer files, passing off the work of others as one’s own, and copying the drawings and designs of others and claiming them as original.

In the context of the team-submitted work, there will often be sharing of the team-generated work between the members. If in doubt, please ask your instructor. For more informations, please refer to the Lawrence Technological University Academic Honor code online at:

<http://www.ltu.edu/myltu/honor-code.asp>

# 4.0 COURSE POLICIES

### Grievance Policy and Grade Disputes

At times, students feel the need to express their frustrations and require an avenue to air their complaints and to address their concerns. As this is a General Engineering course that does not belong to any one department, but to the College of Engineering, here we will establish a policy to voice your concerns.

##### Procedure

As regards to both grievances and grade disputes, we strive for the resolution of differences at the source, if possible, as it is the instructor and student that have the most knowledge of the situation.

Students who wish to dispute their grades have one (1) semester to address the issue, in accordance with LTU policy - see Student Action Procedure online at:

<http://www.ltu.edu/myltu/action-procedure.asp>

In the case of grade disputes:

1. We direct the student, whenever possible, to first contact the instructor.
2. If the student and instructor cannot resolve the dispute, the student may contact the Director of the Studio for Entrepreneurial Engineering Design . It is the responsibility of the student to provide all relevant documentation to support their claim including email correspondence, course assignments, course syllabus, and any other documentation.
3. If the dispute cannot be resolved by the student, the instructor, or the director, the chair of the student’s department may then be contacted and presented with all materials relevant to the dispute.
4. In accordance with LTU policy, if the student is not satisfied with the disposition of a grievance, the student may then pursue the matter with the Dean of the College of Engineering.
5. Finally, if that resolution is not what the student hopes to achieve, the last and FINAL course of action is to speak with the Provost. The ruling of the Provost is FINAL and no longer disputable by the student.

Grade changes resulting from this process are to be filed by the instructor with a standard Change of Grade form. Non-grade related grievances should be documented in the form of a letter describing the grievance and its resolution. The letter is to be retained in the student’s file. For more information, please refer to the General Policies online at:

<http://www.ltu.edu/registrars_office/general-policies.asp>.

### Attendance

Due to the hands-on nature of the studio learning environment, the course content cannot be easily or completely packaged to be retrieved for review; furthermore, course and team discussions cannot be easily recreated. Only class attendance positions the student to participate fully in course/team activities and to realize their full potential for success in the course.

Regular course attendance and participation benefits the student by providing the optimum path to fulfilling the course learning objectives and specific skills.

##### Attendance Policy

It is the policy of the Entrepreneurial Engineering Design Studio that students are expected to attend all class sessions, to be in class on time, prepared, with work completed, and ready to participate in class/team activities.

If a student is absent from class or late to arrive, for any reason, it is the **responsibility of the student to collect all course content that may have been missed, to catch up with course/team progress, and to submit work on time.**

In a given semester, every student is permitted two absences for any reason and with no requirement for documentation, but with the provision that the student is still responsible for any class work or activity on missed days. ***More than two absences is grounds for failure at the discretion of the instructor. If you have extenuating circumstances, speak with the instructor promptly.***

##### Late Arrival, Late Work, Absence, Attendance & Participation

* **Making Up Late Work** Penalties on work submitted after the established due date are at the instructor’s discretion. **No work may be submitted for credit more than seven days after the established due date**.
* **Arriving Late to Class** Students who arrive 20 minutes late or leave 20 minutes early will be considered to have been absent from that course meeting.
* **Repeated Absences from Class** ***More than two absences is grounds for failure at the discretion of the instructor. If you have extenuating circumstances, speak with the instructor promptly.*** If the registrar’s date for dropping with a grade of W has not passed, the student will have the option to withdraw (W) from the course. This policy takes effect at the first scheduled class meeting of the semester, regardless of when a student registers for the course or initiates attendance.
* **Class Attendance and Participation** Instructors, at their discretion, may institute a class policy for students to earn a portion of their final course grade for participation in class activities. The evaluation of participation may include attendance criteria. All criteria for the evaluation of student academic performance, including participation, will be detailed in the course syllabus.

# 5.0 GRADES

### Grading Scale and Grades Policy

Instructors are responsible for providing a clear explanation of all objectives and specific assignment requirements in addition to submission due dates for all course assignments. Instructors are also responsible for issuing grades on all course assignments in written form, both on the course assignments themselves, as well as in Grade Center on Blackboard. They must do so in a timely manner throughout the semester. Students are advised and expected to monitor their grades so they are fully informed as to their performance in the course.

Both individual assignments and team assignments will be given throughout the semester and will be clearly indicated in the assignment requirements. On team assignments, each team member will receive the same assessment grade unless particular team members did not contribute to said assignment due to absence.

As the type of assignments varies in the course, it is the responsibility of the student to thoroughly **read and understand the requirements and due date** of the given assignment and the form of submission (email, Blackboard, e-portfolio element, printout) for assessment. Be certain to ask instructors for clarification if anything is unclear. **Late submissions will be penalized and/or not accepted at the discretion of the instructor.** See**Making Up Late Work** subsection of the **Attendance** section of 4.0 COURSE POLICIES.

##### Academic Grading Policy and Meaning

**A** Outstanding performance relative to course objectives.

**B** Strong performance relative to course objectives.

**C** Demonstrates competency relative to course objectives.

**D** Minimum competency relative to course objectives demonstrated.

**F** Failure to demonstrate attainment of course objectives.

##### Final Course Grade Scale

Letter grades are assigned according to the following grading scale:

A= 95-100 %, A- = 90-94.9 %, B+ = 87-89.9 %, B = 83-86.9 %, B- = 80-82.9 %, C+ = 77-79.9 %, C = 73-76.9 %, C - = 70-72.9 %, D+ = 67-69.9 %, D = 63-66.9 %, D- = 60-62.9 %, F= less than 60%

If a student stops attending class, a grade of WF may be issued - see Registrar’s Office Non-Attendance Policy

<https://my.ltu.edu/webapps/portal/frameset.jsp?tab_tab_group_id=_88_1>

##### Change of Course Grade

Changes of grades are reserved for situations in which:

* a student’s grade was miscalculated
* grades were not calculated in accordance with the grading policies
* misplaced assignment was subsequently found by the instructor
* student handed in an assignment late but was excused

Personal or medical reasons are not considered to be justifications for grade changes.

Requests for grade changes must be submitted by the student to the instructor NO LATER THAN three (3) months to the day after the last class day of the semester in question.

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# 6.0 LTU ACADEMIC RESPONSIBILITIES

### LTU Academic Honor Code

[Download the printable Academic Honor Code](https://www.ltu.edu/cm/attach/b809eccc-6c2e-41df-ac18-b61024ae916e/academic-honor-code.pdf)

In adopting this Academic Honor Code, students of Lawrence Technological University recognize that academic honesty and integrity are fundamental values of the University community. The quality of a Lawrence Technological University education is dependent upon the community acceptance and enforcement of the Academic Honor Code. Students who enroll at Lawrence Technological University commit to holding themselves and their peers to the highest standard of academic integrity. An individual who becomes aware of a violation of the Academic Honor Code has an obligation to report this violation.

Members of the Lawrence Technological University community pledge to hold themselves and their peers to the highest standards of academic honesty and integrity.

##### Student Pledge

The following pledge is required on all academic work submitted by undergraduate students at Lawrence Technological University:

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| --- |
| **"I have neither given nor received unauthorized aid in completing this work, nor have I presented someone else's work as my own."** |
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The pledge should be signed by all students that contributed to the work submitted.

# 7.0 RESOURCES

##### Related Textbooks and Other Published Resources

* Product Design and Development. K.T. Ulrich and S.D. Eppinger. 5th Edition. McGraw-Hill. 2012. ISBN 978-0-07-340477-6
* Designing Engineers: An Introductory Text. McCahan, Anderson, et al. 1st Edition. Wiley. 2015. ISBN 978-0470939499
* Thinkertoys: A Handbook of Creative Thinking Techniques. M. Michalko. 2nd Edition. Ten Speed Press. 2006. ISBN 978-1-58008-773-5
* The Seeds of Innovation: Cultivating the Synergy That Fosters New Ideas. E. Dundon. 1st Edition. Amacom. 2002. ISBN 0-8144-7146-3
* The Five Dysfunctions of a Team: A Leadership Fable. P. Lencioni. 1st Edition. Jossey-Bass. 2002. ISBN 978-0-7879-6075-9
* Functional Design for 3D Printing: Designing 3D Printed Things for Everyday Use. C.Smyth. 2nd Edition. CreateSpace. 2015. ISBN 978-1511572026

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##### Approved Vendor List

When making decisions about the fabrication and materials your team will use in designing your prototypes, the following list of approved websites should be your first source for securing your items:

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| **PRODUCTS** | **VENDOR** | **WEB ADDRESS** |
| Miscellaneous | AMAZON PRIME\*\* | www.amazon.com |
| Electronics, 3D printing supplies | Micro Center | www.microcenter.com |
| Office Supplies | Staples | www.staples.com |
| Plastics, Metal Supplies | McMaster-Carr | www.mcmaster.com |
| Hardware | Home Depot | www.homedepot.com |

To ensure prompt delivery of your building materials, pay special attention on *Amazon* to only those items that are included in the ***Amazon Prime*** category. If the item is not Amazon Prime choose another vendor to secure your items in a timely manner. You don’t want to be sitting around waiting for your components to be delivered while you’re supposed to be building.

ADDITIONAL NOTE ON HOME DEPOT ORDERS: Many teams select wood/lumber as a primary material for structural components. Please note when selecting wood products that the Wood Shop on campus WILL NOT CUT PRESSURE-TREATED WOOD. Do not select pressure-treated lumber unless your team has access to machinery off-campus.

##### College of Engineering Resources

##### NOTE: For calls from cell phones and off-campus phone numbers, please add (248) 204- to the extension shown below.

**NAME OFFICE Phone #**

Dr. Nabil Grace, Dean ……………………….. E98 2556

Dr. Selin Arslan, Associate Dean …………….. E98 2504

Tamara Botzen, Administrative Assistant…. E98 2500

Dr. Badih Jawad, Chair, ME ………………… E34 2553

Sandra Wheeler, Administrative Assistant.... E34 2550

Dr. Elin Jensen, Interim Chair, ECE………….. E217 2067

Reka Dobbins, Administrative Assistant…… E217 2540

Dr. Jerry LeCarpentier, Chair, BME ……….... J353A 2562

Bridgett Bailiff, Administrative Assistant…… J353 2592

Dr. Edmund Yuen, Chair, CE ………………… E22 2545

Kathryn Pretty, Administrative Assistant……. E23 2545

##### On-campus Fabrication Resources

Ray Ziegler, Metal Fab Lab Manager………… E11 2515

George Charbeneau, Woodshop Manager … T130 2831

Jeffrey Evergreen, ACRC Manager …………….. T218 2830

##### University Resources

**OFFICE Phone #**

INFORMATION…….. ……………………….. 1-800-CALL-LTU

Admissions …………………....…………….. C304 3160

Campus Safety .. ………………………...…. BSB 3945

Career Services ....………………………...…. C404 3140

Dean of Students, Kevin Finn ……………… C405 4100

Financial Aid ………………………………..... C304 2280

Help Desk ………………………………….…. C203 2330

Library ……………………………………….... Buell basement 3000

One Stop Center ………………………...…… C304 2280

Registrar …………………....………………… C304 2280

Architecture Computer Resource Center …. UTLC 2828

Academic Achievement Center …………….. C201 4120

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##### Non-University Resources

**Phone #**

Maker Works (<http://maker-works.com/>)

Local maker space 3765 Plaza Dr, Ann Arbor, MI 48108 (734) 222-4911

DASI Solutions (www.dasi-solutions.com)

3D Printing Resource 31 Oakland Ave, Ste 100, Pontiac, MI 48342 (248) 333-2996

TechShop (<http://techshop.ws/ts_detroit.html>)

Local maker space 800 Republic Dr, Allen Park, MI 48101 (313) 583-3831

i3Detroit (<https://www.i3detroit.org/#aboutus>)

Local DIY workshop 1481A Wordsworth St., Ferndale, MI 48220 (248) 556-9995

The Scrap Box (<http://scrapbox.org/2015/>)

A “Creative Recycling Center” 581 State Circle, Ann Arbor, MI (734) 994-0012