

UTAustin Syllabus as of 1/6/2013 by [Bob.Metcalf@UTexas.edu](mailto:Bob.Metcalf@UTexas.edu) and [Joshua.Baer@Austin.UTexas.edu](mailto:Joshua.Baer@Austin.UTexas.edu)

Kept at LonghornStartup.com, copies under various uniques on UTAustin Blackboard.

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Longhorn Startup Seminar (LSS): Interdisciplinary Entrepreneurship Lectures  
Longhorn Startup Lab (LSL): Interdisciplinary Entrepreneurship Practicum  
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“Longhorn Startup Lab (LSL)” was formerly “1 Semester Startup (1SS).” After three semesters, 1SS has been renamed to fit in a longer list of offerings under the Longhorn Startup rubric/brand. These include Longhorn Startup Seminar, Longhorn Startup Demo Day, Longhorn Startup Incubator, and Longhorn Startup Studio.

**Longhorn Startup Seminar (LSS)** is intended for UT Austin undergraduates who are interested in entrepreneurship or who are participating in Longhorn Startup Lab.

**Longhorn Startup Lab (LSL)** is intended for UT Austin undergraduates with ongoing startup teams.

**Longhorn Startup Camp (LSC)** is located at 1616 Guadalupe on the 7<sup>th</sup> floor.

### Meeting Times

LSL Team Meetings – Tuesday 6pm-7pm at LSC

LSL Instructor Meetings – Thursday 6pm-7pm in ECJ 1.202

LSS Lectures – Thursday 7pm-9pm in ECJ 1.202

Various special events will be scheduled on weekends and other days.

No classes 3/12 or 3/14 due to Spring Break.

### Course Numbers

#### *Open Registration*

CS178 (53533) = Longhorn Startup Seminar (CNS/CS)

ES177 = Longhorn Startup Seminar (Cockrell/ECE)

#### *Requires Instructor Approval*

Apply from [LonghornStartup.com](http://LonghornStartup.com)

CS378 (53585) = Longhorn Startup Lab (CNS/CS)

EE377E (16700) = Longhorn Startup Lab (Cockrell/ECE)

ES377E (12937) = Longhorn Startup Lab (Cockrell)

MAN337 (04620) = Longhorn Startup Lab (McCombs/MAN)

EE364E (16625) = Longhorn Startup Lab (Cockrell/ECE Senior Project 1/2)  
EE464S (16640) = Longhorn Startup Lab (Cockrell/ECE Senior Project 2/2)  
*Requires ECE technical advisor, team of 4+ engineers, prerequisites.*  
*Plus technical meetings, Tuesdays & Thursdays 12:30-5:00pm, in ENS 220.*

After admission to LSL by the instructors, you should confirm in advance with your school and/or department academic advisors that you will receive proper credit for taking LSL, once or twice, writing flag, and ICE credit in the Bridging Disciplines Program.

## **Motivation**

Our motto at The University of Texas at Austin is: What Starts Here Changes the World. Among the most effective ways of changing the world is with innovative startups.

Among the 25+ courses at UTAustin that teach entrepreneurship, Longhorn Startup Lab (LSL) is an interdisciplinary practicum for undergraduates on startup teams. We aim to advance these Longhorn Startups by teaching fundamentals of startup formation, but mostly by connecting the teams into networks of real world resources: outside speakers, startup mentors, and professional investors. We aim to give our students practice in operating the machinery of Free Enterprise.

## **Instructors**

The inaugural instructors of LSL were Joshua Baer (Computer Science), Johnny Butler (Business/Entrepreneurship), and Bob Metcalfe (Engineering and Business). Our aim was to welcome students from across the schools of UTAustin onto multidisciplinary startup teams.

The LSL instructors this semester are:

**Joshua Baer** is a Specialist in Computer Science (CS). He is the Director of Capital Factory, has founded successful tech startups by bootstrapping and with investments, and is one of the most active angel investors in Austin. Email: [Joshua.Baer@Austin.UTexas.edu](mailto:Joshua.Baer@Austin.UTexas.edu).

**Bob Metcalfe** has 23+ years of successful experience in science, engineering, high-tech entrepreneurship, and venture capital. He is UTAustin Professor of Innovation and Murchison Fellow of Free Enterprise, directing the Innovation Center in the Cockrell School of Engineering. He is also Professor of Electrical and Computer Engineering in the Cockrell School of Engineering and Professor of Information Management in the McCombs School of Business. Email: [Bob.Metcalfe@UTexas.edu](mailto:Bob.Metcalfe@UTexas.edu).

**Ben Dyer** is an Entrepreneur in Residence at UT's Cockrell School of Engineering. He is a serial entrepreneur in software, interactive media, banking, mobile payments technologies, and venture capital. He is best known as the founding CEO of Peachtree Software. He is a member of the Georgia Technology Hall of Fame but now resides in Austin, Texas. He remains on the board of the Georgia Tech Research Corporation and has considerable experience in technology transfer from university research. Email: [ben.dyer@utexas.edu](mailto:ben.dyer@utexas.edu).

Associates

**Ian Manire**, Austin Technology Incubator Associate  
LSL Mentor Wrangler.  
Email: [manireilkn@yahoo.com](mailto:manireilkn@yahoo.com).  
Assistants

**Brittani Crook**, PhD student in Communication  
Teaching Assistant.  
Email: [brittani@utexas.edu](mailto:brittani@utexas.edu)

## **Undergraduate Catalog Course Descriptions**

**Longhorn Startup Seminar.** Interdisciplinary entrepreneurship lecture series for students interested in entrepreneurship and teams of students taking the Longhorn Startup Lab. Learn from successful entrepreneurs and see presentations by the Longhorn Startup Lab. Speakers change each semester so the course can be taken multiple times.

**Longhorn Startup Lab.** Interdisciplinary entrepreneurship practicum for teams of students starting companies. Skill development and mentoring in startup formation, teamwork, technology development, market validation, marketing, sales, operations, human resources, program management, intellectual property, and entrepreneurial finance. Emphasis on written and oral presentation of startup activities. Four class hours per week with additional team meetings to be arranged with any team faculty advisors and startup mentors.

### **Prerequisites**

LSS and LSL have no prerequisites.

Startup teams (not individuals) may apply at <http://LonghornStartup.com>. The instructors will consider startup applications and accept up to about 10 well-formed teams. Registration of students will only be allowed after team acceptance.

LSL may be taken twice with instructor permission.

### **Writing Flag**

This course carries the Writing Flag. Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor to help you improve your writing. You will also have the opportunity to revise one or more assignments, and to read and discuss your peers' work. You should therefore expect a substantial portion of your grade to come from your written work.

### **Faculty Technical Advisors**

The ideal LSL team comes with one or more faculty advisors, expert in the startup team's technology. An unwritten goal of LSL is to draw more professors into the entrepreneurial processes of UTexas and the Austin startup community.

LSL has been approved for senior project credit in Electrical and Computer Engineering, but only if the team has an ECE professor advising and at least four engineers.

### **Team Startup Mentors**

Because LSL is a practicum, we aim to recruit about two dozen experienced, successful, articulate, and committed entrepreneurs from the Austin startup community to serve as LSL team mentors. Each team must have one or more mentors from the LSL roster of mentors. These mentors will provide ongoing practical advice to LSL startup teams and help connect them to networks of outside resources. Mentors will be introduced to teams in various ways including a “speed dating” event early in the semester.

### **Other Teaching, Speaker, and Mentoring Resources**

There is a wide array of entrepreneurship teaching resources available on the Internet. These include written course materials and videos from the McCombs School of Business, MIT Open Courseware, and the Stanford Technology Ventures Program, to name only three of the best of many. The instructors will be using some of these materials for preparation assignments. Guest lecturers will also be invited, such as former Tivoli CEO Frank Moss, Dell Founder-CEO Michael Dell, National Instruments Founder-CEO Dr. James Truchard, Bazaarvoice Founder/CEO Brett Hurt, and Astrotech CEO Tom Pickens.

Connecting LSL startups to the resources they need to advance is an important part of the practicum. The instructors and mentors will be looking to provide these connections. A particular resource to be recruited toward the end of the semester will be professional investors — angels, venture capitalists, strategic partners, and early adopters — who will be invited near the last day of class to “Demo Day” to hear startup presentations, see demos, and consider making investments in LSL’s Longhorn Startups.

There are many other resources for entrepreneurs at UT, around Austin, and beyond. The instructors and mentors will be looking for opportunities to help connect teams with those external resources, among them other courses, recruiting mixers, conferences, entrepreneur networks, startup workshops, startup accelerators (for example, UTAustin’s Austin Technology Incubator (ATI), McComb’s Texas Venture Lab, Dell Social Innovation Challenge, Joshua Baer’s own Capital Factory), and business plan competitions.

### **Practicum Teaching Assistants**

LSL will have one TA for approximately each 30 students organized in approximately 10 teams. The TA(s) will assist instructors in organizing and grading, and will assist instructors and mentors in working with the teams on improving and grading their written and oral communications.

### **Textbooks**

LSL has no textbooks. Among our optional, recommended readings are:

- P. Denning and R. Dunham, *The Innovator’s Way*, MIT Press,, 2010.
- Peter Drucker, *Innovation and Entrepreneurship*, Harper & Row,1985.
- Steven Gary Blank, *The Four Steps to the Epiphany*, 2006.
- E. Ries, *The Lean Startup*, Crown,, 2011.
- Ash Maurya, *Running Lean*, O’Reilly Media, 2012.

R. Dorf, T. Byers, *Technology Ventures: From Ideas to Enterprise*, McGraw Hill, 2008.  
T. Hopkins, *Selling for Dummies*, Wiley, 2011.

## **Longhorn Startup Lab Objectives**

During the course, students will:

1. Learn basics of startup formation.
2. Experience the advancement of your own startup.
3. Receive mentoring from successful, articulate, and committed entrepreneurs.
4. Get connected to resources needed for the advancement of your startup.

At the conclusion of the Longhorn Startup Lab, students will be able to:

1. Use the Lean Startup Canvas to validate market of startup ideas and
2. Define implementation of a minimum viable product (MVP).
3. Pitch their startups in writing in a sentence, minute, and six minutes.
4. Write chapters of a business plan.
5. Sell business plans orally in short form to audiences of customers and/or investors.
6. Form a startup corporation and establish its ownership and governance.
7. Operate a startup using regular meetings and written personal updates.
8. Contribute in a team to plan, lead, organize, control technical product development.
9. Project financials to avoid running out of cash (fume) and to drive toward breakeven.

How Will Longhorn Startup Feel?

Here are some of the questions we hope to help you answer. How do you validate your big idea for meeting a market need? What does it mean for a startup to “pivot?” How big does your idea have to be to attract your time and any outside investment? Will there be any competition? How do you sell the idea to people you need on the team? Whom can you trust? Will you hire or recruit your team? Will everybody be paid the same? Will anybody leave your company at any point? Are brothers-in-law good candidates for CFO? What is a CFO? Who will be CEO? How should you build your board of directors to govern your company? How much on-the-job training can you afford? Does your startup need a culture? Is honesty the best policy? Will there be parties? Should you have a President’s Club? How does the team change over time? How best to organize and manage your company as it grows? Will you need adult supervision, people who know how to manage things? Will you eventually have to cave in and hire some salespeople? What is the difference between marketing and sales? How do you plan for the monies you’ll need? What does a financial planning spreadsheet look like, with such elements as units, costs, prices, overhead, headcounts, expenses, cash, debt, capital equipment, receivables, and payables. How do you name your startup? How do you get traction with investors, if you need any? How much is your startup worth at various times? How many rounds of finance might you need and how to structure them? How do you develop a go-to-market strategy with an initial product? How do you develop and test that first product? Yes, test? How do you position your startup and market it? How do you rename your company? How to find customers and sell to them? How do you structure partnerships? How do you support and get follow-on orders from customers? How do you decide on your second product? What changes as you get bigger? Are you still having fun? How do you get liquidity for your shareholders, including employees with stock options? How much of THE

SOCIAL NETWORK should you believe and use to guide your startup? IPO or M&A or what? How do you become serial? Will you come back and be one of our mentors after your third IPO? If LSL works for you, will you someday donate a building to UTAustin? Stuff like that.

Among the personal skills we plan to teach are how to be healthy, speak, write, sell, and plan in the startup context. OK, here is the answer at the back of the book: listening.

At the end of LSL, we aim to have your startup profitable, ready to raise money, defunct, or worth you taking a second semester of LSL to continue your startup's development.

## **Course Requirements and Policies**

Admission to Longhorn Startup Seminar is open to all students.

Admission to Longhorn Startup Lab is by permission of the instructors. Preference will be given to seniors with well-rounded startup teams that win commitment of at least one mentor from the LSL mentor roster.

All teams of LSL will convene on Thursday evenings. All team members are required to attend and participate in all practicum evenings. Failure to attend or participate lowers your grade and reduces your ability to contribute effectively to the team. During these evenings, the instructors and their guest lecturers will convey concepts, frameworks, principles, and techniques for starting companies – how better to use the machinery of Free Enterprise. Team members will be graded by their team members, by mentors, by TAs, and by instructors on their participation and contributions.

The normal format of a LSL class is 6-6:50pm update, 7:00pm-9pm lecture. On evenings when there are very famous guest speakers, the evening may be reception, talk, and discussion instead. In some cases, we will open LSL talks to UT's wider entrepreneurial community, usually under the auspices of the student-run Technology Entrepreneurship Society (TES) and Longhorn Entrepreneurship Agency (LEA).

Teams are expected to meet between practicums, including at least 1 hour per week with mentor(s). Tuesday evenings from 6-7pm are reserved for that. Other times are encouraged.

Each team member will write a weekly 1-page "progress and priorities update" and distribute as email to team members, with copies to faculty advisors, startup mentors, TAs, and instructors. The purposes of these updates are reporting and collaboration. They will communicate what the team member accomplished last week and what their priorities are for next week in advancing the startup. The writing in these updates will each week be graded by the Communications TA.

There will also be weekly assignments related to the lecture topic including watching videos, reading assignments, and exercises that will be submitted and graded.

At that first Thursday evening meeting of LSL, Bob Metcalfe will give an introductory and inspiring (he hopes) talk. Following that, each student will give a 60-second “elevator pitch” introducing themselves to the class — outlining their background, skills, and interests, something interesting about themselves, in 60 seconds flat. These pitches will be captured on video and uploaded for comments by the instructors, TAs, and students. We look forward to doing this again toward the end of the semester and enjoying the improvements.

Each team will demonstrate their product or service, perhaps only in prototype form, during Demo Day, usually the last day of class. This will be a graded presentation for the team with participation by all. There will be a rehearsal of the Demo Day pitch scheduled two weeks before Demo Day.

Each team will write and present an initial and final version of their business plans, the latter of which will be the final practicum presentation at Demo Day. An acceptable plan can be written out with charts and graphs and/or submitted as a PowerPoint deck with informative and well-written slide notes. All team members will collaborate in the preparation of these written and presented plans. The plans will be graded for writing, speaking, and content. Team members will receive a team grade on these.

Each team member will prepare a written chapter to back up the Demo Day presentation. First drafts of these chapters will be due following the creation of an outline and allocation of assignments by the team. These chapters are to be 10+ pages in length. These chapters will be revised based on feedback from team members, instructors, and the Communications TA, who will critique and grade them at least twice, draft and, after revision, final.

## **Ownership**

Various kinds of ownership are important machinery of Free Enterprise. Equity ownership of corporations formed by LSL startup teams is an important matter to be confronted by the teams with guidance from their startup mentors and LSL instructors. Any agreements as to ownership of an LSL startup must be in writing – no oral promises real or imagined are allowed. UTexas will not own LSL startups by virtue of their participation in the class. The instructors will not own or be in any way compensated by LSL startups during their participation in LSL. LSL mentors will not take ownership in or be employed by LSL startups during LSL. Investors other than these may be sought at various times by LSL startups, with the unconflicted advice of mentors and instructors.

Ownership of intellectual property (IP) by LSL students, their teams, and faculty advisors (if any) is an important matter to be confronted by the teams with guidance from their startup mentors and LSL instructors. In particular, LSL will work with teams on any dealings with the UT Austin Office of Technology Commercialization (OTC). Participation in LSL will not alter whatever the startup’s ownership position is on IP.

## **Submission of Written Assignments\**

Required weekly less-than-one-page progress&priorities updates and revised business plan chapters should be sent by email to team members, startup mentors, faculty advisors, instructors, and the Communications TA. The initial and final business plan presentations should be submitted by email to the teams, faculty

advisors, mentors, instructors, and TAs.

### **Course and Instructor Evaluations**

Evaluations of the course and instructors will be conducted during and especially near the end of the semester.

### **Academic Dishonesty**

The University of Texas Honor Code will be followed regarding academic dishonesty, which will not be tolerated.

### **Students with Disabilities**

UTAustin provides academic accommodations for qualified students with disabilities. For such, call Services for Students with Disabilities (SSD) at 512-471-6259 (voice) or 816-329-3986 (video). Please notify LSL instructors or TAs as quickly as possible if material being presented is not accessible to you.

### **Behavior Concerns Advice Line**

If you are worried about someone associated with LSL who is acting oddly, you may use the Behavior Concerns Advice Line (BCAL) at 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

### **Course Drops**

By state law, the number of course drops for academic reasons is limited to six (6). What does this mean? Best you find out from your academic advisors when thinking about dropping LSL. LSL will not be giving all students As, not even most students, neither can we give assurances about grades much in advance of the end of the course. If you absolutely must get an A, say to get into graduate school, you should probably not risk taking LSL.

### **Use of Email for Official Correspondence**

Students are responsible for keeping the University informed, LSL in particular, as to changes in their email address. Students are expected to check email frequently enough, say daily, to stay current with University-related communications. If you fall out of touch with LSL, you must let us know as soon as possible and take action to reconnect. No news is bad news.

### **Emergency Evacuation Policy**

You are required to evacuate and assemble outside University buildings when a fire alarm is activated or an announcement is made. Please familiarize yourself with all exit doors and get confident that you could exit promptly in an emergency.

### **Helping Team Formation**

About 10 existing interdisciplinary teams of about 5 diverse members will apply and be accepted to the LSL entrepreneurship practicum.

### **Status Reporting**

Teams will regularly report progress&priorities in two ways: by exchanging weekly less-than-one-page individual progress and priorities updates to team members, mentors, and TAs; and orally in weekly meetings with mentors.

Each update will summarize past, present, and future team activities, give details regarding open issues, and provide an overview of individual and team progress. The updates are to be written to and for your team members as a collaboration tool. Regularly communicating your progress and priorities is a startup skill we want you to learn in LSL.

The weekly meeting with mentors will cover open issues raised in the exchanged written updates and discuss your general progress. During these meetings, which should last approximately an hour, the mentor(s) will take the role of your “manager” and give you important feedback.

### **Collaborative Practices and Peer Evaluations**

At any given time during the practicum, all team members should be fully engaged in practicum activities, including preparation of written and oral reports. Tasks should be assigned to team members evenly, but in a way that capitalizes on individual strengths and experience. If your strengths lie in particular project areas (for example, planning, proposing, researching, implementing, managing, coordinating, communicating, researching, and so on), then put your energies into those areas. However, that does not absolve you of responsibilities in other areas, of understanding what’s happening in those areas.

### **Longhorn Startup Seminar Grading.**

LSS is a pass/fail class that is graded based on attendance. Students will also be required to submit a Lean Canvas for a business idea. Students who attend at least 12 lectures and submit a Lean Canvas will receive a passing grade.

## Longhorn Startup Lab Grading

Activity	Instructors &TA	Mentors	Communication	Peers	Total
Weekly Updates (~12)			10%	5%	15%
Initial Plan Chapter		5%	5%		10%
Final Plan Chapter	5%		10%		15%
Rehearsal Demo Day	5%			5%	10%
Final Demo Day	10%	5%	5%	10%	30%
Participation	10%			10%	20%
Total	30%	10%	30%	30%	100%

### Evaluation of Project Reporting

Teams will prepare both written and oral reports. These will consist of weekly progress and priorities updates and two business plans, initial and final.

The Writing TA and instructors will grade these against professional standards of technical content, writing quality, and project reporting. The Writing TA will grade your reports for appearance, readability, and style and mechanics. The goal here is to give students frequent opportunities to practice and improve their communication skills, which are essential to startup success.

The instructors will grade oral and written reports for depth, comprehensiveness, and accuracy of technical information. Note that you will receive separate grades from these graders and that, overall, approximately 60% of the grade of your assignments is weighted toward technical quality, with approximately 40% weighted toward writing quality.

### Oral Reporting

Oral reporting will occur in parallel team meetings and in two presentations for the semester. Practicum instructors will hear and grade both plan and demo presentations. Mentors will be asked to grade participation communication skills in parallel and out of classroom meetings.

## **Peer Assessment**

To help you assess your performance as a team member, all members will periodically be asked to evaluate each other's performance as team members. The practicum instructors will use these peer assessments to give credit to team members who make outstanding team contributions or to deny credit to students who make little or no contributions.

## **Conduct**

Growing successful startups is much about people. Therefore, conduct in LSL is all-important, and we all have to work hard at it.

For Pete's sake, be on time. It is OK to be early for a meeting, but it is not OK to be late. For good reason, they say that 80% of success is just showing up (on time). So please do not miss classes or meetings. If you do, it will count against you in grading participation – LSL is not a class you can learn by cramming somebody else's notes the night before.

Please let the instructors and TAs know promptly if there is any problem that is preventing you from performing satisfactorily in LSL. Do not delay in reporting your problems, so we can fix them before much damage is done.

## **Date of Final Exam**

There is no final exam. Teams will present their startups at Demo Day, which will occur no later than the last day of class. Demo Day is the finale of LSL. It will be open to the public and we expect there to be hundreds of attendees, including professional investors.

## Schedule of Classes

We plan to bring in guest speakers for much of the seminar content. Because these speakers are not yet committed, this course schedule is subject to change. Keep posted on Twitter at @LonghornStartup and <http://LonghornStartup.com>.

Here is tentative LSS schedule, subject to change:

January 17 – Elevator Pitches by Longhorn Startup Labs students  
January 25 – Lean Startup with Ash Maurya  
January 31 – Founder Stories with Jonathan Coon  
February 7 – Startup Metrics with TBD  
February 14 – Planning with Bob Metcalfe  
February 21 – Founder Stories with Bill Boebel  
February 28 – Marketing and Selling with TBD  
March 7 – SXSW Startup Crawl  
March 14 – Spring Break  
March 21 – Fundraising with Dean Drako  
March 28 - Demo Day Dry Runs  
April 4 – Founder Stories with Gary Hoover  
April 11 – Founder Stories with Noah Kagan  
April 18 – Company Culture with Brett Hurt  
April 25 – Demo Day  
May 2 – Texas Venture Labs Global Competition

## ABET Checklist: Relationship of LSL to Engineering Program Outcomes

The Accreditation Board for Engineering and technology, now known as ABET, offers this checklist for how LSL relates to its accredited program outcomes:

LSL offers opportunity for practice and mentoring especially in these outcome areas:

	a. An ability to apply knowledge of mathematics, science, and engineering.
	b. An ability to design and conduct experiments, as well as to analyze and interpret data.
√	c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
√	d. An ability to function on multidisciplinary teams.
√	e. An ability to identify, formulate, and solve engineering problems.
	f. An understanding of professional and ethical responsibility.
√	g. An ability to communicate effectively.
	h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
	i. Recognition of the need for and an ability to engage in life-long learning.
	j. Knowledge of contemporary issues.
√	k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

END