15.453: Finance Lab
2021 Syllabus

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- The Finance Lab is an Action Learning course open to all MIT students who have the appropriate finance background (e.g. 15.401, 15.402, 15.S12), and who have the permission of the instructors.
- The course offers a full-time immersive experience during IAP; in addition, students will make presentations to the class during the first half of the spring term (MW, 5:30 – 7 pm EST), and must attend at least 5 of the twice-weekly presentation sessions (including their own presentation). Also, some preparation is required in December prior to the official beginning of the course.
- The course carries 6 credits during IAP, and 3 credits during H3. The credits are bundled: you must take all 9 i.e. IAP plus H3.
- The entire course is focused on working in a team on a finance research question posed by an external sponsor, delivering a nuanced set of answers to the sponsor, and reporting one's findings back to the class.
- Due to Covid-19, the course will be conducted entirely online. Students are required to work full time on their projects during IAP (6 credits), and may not engage in any kind of internship or other job. If you are located in the same city as the sponsor, please do NOT request to visit their offices. As part of the course, you will have regular calls with the sponsors.

Sign-up Procedures

In addition to the usual registration procedures, this course has its own sign-up process:
- Project descriptions will be provided to interested students on November 2.
- Class meetings will be held on November 2 and 3 to discuss projects and answer questions.
- After attending an introductory meeting, students will fill out a survey expressing project preferences; this is due by November 7 at Midnight. Please note the following very important points:

  - *The survey is how one signs up for the course; if you don't fill out the survey, you will not get a project assignment.*
  - *Please rank your top 5 projects in order of preference. If you rank less than 5 projects, you will receive lower priority in project assignment.*

- *By filling out this survey, you commit yourself to taking the course and to accepting any project you expressed a preference for.* (Please note that we will not assign anyone to a project they don't want – in the unlikely scenario where it is not possible to assign a student to one of their preferred projects, the student would be relieved of the commitment to take the course.)
- Project assignments will be made by Nov 25.

The Finance Lab as an Advisory Engagement

In many ways Fin-Lab projects are like advisory engagements, and your sponsor is like a client, and it will therefore be helpful for students to have a framework for thinking about advisory work. Therefore, each student must attend an hour long session, which will review the similarities and differences between the Lab and advisory work, and discuss best practices for treating your sponsor like a client. We will also discuss research methodology, data and software resources, and technical knowledge required. These will be scheduled multiple times.

Course Requirements and Grading

Participation in Fin-Lab requires:
- A serious commitment to one's client and one's team
- Bringing to bear all of one's professional resources to solve a problem for the client
- Distilling the project's lessons into a short story which can be understood by others

We don't have a way to directly assess a student's commitment so we do this by proxy: approximately one-half of each student's grade is attributable to "participation items," that is, items for which you get 100% credit by simply completing them. There will be three evaluated items: your final classroom presentation, a "poster board" which can be used in the final presentation and other presentation opportunities, and your deliverable to the client. Finally, although we expect to use discretion rarely if at all, we reserve the right to take into account additional information if we believe strictly following the formula would result in an injustice. Students must have their video switched on at all times during faculty teaching sessions and meetings with the TA and sponsors, also when attending class. All participation grades are contingent on participating with video switched on.

The course cannot be taken p/d/f, you must take the course for a letter grade, no exceptions allowed.

Social Media: The course materials and interactions cannot be shared in any form on social media. This includes posting photographs of sponsors, presentations or slides on Facebook, Twitter, Instagram, Whatsapp, WeChat, Telegram etc. Violations of the privacy code will lead to adverse consequences for the course as well as our students.

	Individual grades	Group grades
Participation items		
Fin-Lab as Adv. Engagement (Nov/Dec)	5	
First team meeting in December with TA	5	
First email to sponsor on time		5
Email cleared by TA		5
Attend day 1 team meeting on Jan 4	5	
Attend ongoing team meetings in January	15	
Attend at least 5 classes in H3	20	
Dry run of presentation		5
Subtotal	**50**	**15**

Evaluated items		
Presentation		10
Poster		5
Sponsor deliverable		10
Subtotal		**25**
Instructor discretion	**10**	
Total	**60**	**40**

Schedule

Dates	Activity
Nov 2	• Project descriptions available
Nov 2, 3	• Meetings to discuss course and projects.
Nov 3-7	• Students submit project preferences and self- assessment of skills. • Students should not submit preferences and skills unless they intend to take the course. The team structure and commitment to an external client makes it difficult to accommodate withdrawals.
Nov 25	• Students receive project assignments and learn who their team members and TA are.
Nov 30 & Dec 1	• Students attend Advisory Engagement and Research Methodology sessions Monday or Tuesday 7:00 – 8:00 PM. Sign up via Sloangroups required.
Early Dec	• Organizational meeting w/ team and mentor (mandatory) • Initial introductory email to sponsor followed by Zoom/phone call.
Dec and beginning of Jan	• Optional background reading and other preparatory work
Jan 4 – Jan 29	• IAP – full time work on the project remotely. • A few teams complete their work during IAP, but unlikely this year due to online nature of course.
Feb 17 – Mar 31	• Complete deliverable to sponsor if not completed during IAP • Class will meet Mon and Wed, 5:30 – 7 pm for team presentations; students must attend at least 5 classes during this time, i.e. 4 class sessions in addition to their own team's presentation.
March 31	• Last day of class; online poster session with sponsors after class. • Attendance at the poster session required for presenting and networking

Action Learning Philosophy

"In theory there is no difference between theory and practice. In practice there is."   Yogi Berra

Action Learning is often project-based, but in this course it is much more than that. In this class (as in many others at MIT Sloan), Action Learning involves solving a problem for an external client who may not have framed the problem to exactly fit what has been learned in class. This provides an opportunity for students to apply skills they learned in one context to a different context. Learning how to "bridge the gap" between theory and practice to solve a real problem is an important objective of the course. Such learning is maximized by having an active process of reflecting on what was learned and communicating that learning to others in the class.

Mentors and Guidance

Each team will have:
- A primary mentor, which in most cases will be one of the TAs; the primary mentors will stay in close contact with the teams, will assess whether teams are on track, will provide guidance to the team, and will serve as portals to a broad set of resources available to the teams.
- Access to the entire instructional staff, consisting of Professor Rao, Prof. Vartak and the 4 teaching assistants. We also have a coding TA for the course.

In addition, some teams will be introduced to industry mentors. Some industry mentors are seasoned financial professionals, while others are recent Sloan alumni. Introductions are made strategically, based on the desire of a team to be introduced, on the instructors' judgment that the mentor can help the team, and on the mentors' interests.

Computer Programming Skills Diagnostic Test: A diagnostic self-test in Python or R will be made available to students in December once projects are assigned. Students assigned to projects that involve programming should take the test, to identify areas of strength and areas that may need further study before they embark on their projects.

Potential for Travel and Associated Expenses → Not Applicable for 2021 Lab, which will be conducted entirely remotely.