System of higher education at US/MIT

Graduate school
- *What is it about?*

How to make the most of your experience?
- *What constitutes the experience?*

Academics and student-professor relationship at MIT

Opportunities and experiential aspects
US and MIT System of Higher Education

- MIT’s motto **Mens et Manus**
- Latin for "Mind and Hand."
- Ideals of MIT's founders - education for practical application!
- Official Seal
  - a scholar and a laborer
  - union of knowledge and the mechanical arts
  - volumes "Science and Arts"
US and MIT System of Higher Education

- Making things happen - not handed/defined for you nice and easy!
- RTFM!
Be-er vs. Do-er
US and MIT System of Higher Education

Education as a means to prepare for your career in the real world

Book Learning

Experiential Learning
Graduate school is about impressions? ideas? expectations? questions?
Graduate school is about:

- Work versus studies?
- Largely not about grades or exams
- Learning
- Knowledge
- Independence
- Directed explorations
- Critical thinking
- Communication skills
- Professionalism
The MIT Experience
Exams – qualifiers

Courses
- collaborative, fun, intense and rigorous

MS-PhD transitioning
Student Professor Relationships

Advisor – mentor, teacher or boss?
Choosing an advisor and cultivating mentors

- Talk to graduate students before joining a lab
- Communicate
- Expectations

http://www.phdcomics.com/comics/archive.php
Opportunities

- You all want to go out of MIT and do meaningful great things.
- Think of graduate school as a playground where you can experiment, explore, and practice doing those things.
Experiences - Research Environments

- Hospitals
- International collaborators
- Companies
- Startups
- Labs and centers
Experiences – Your Research Ideas

- Pursuing your own idea for research
- May fail but worth a risk if you do parallel projects!
- Create collaborations that do not exist – faculty very open to these opportunities
Conferences or networking as means to expand your perspective and get exposure

First year – go to conferences – even if at your own cost – will help you learn about your field

Through graduate school – network with professionals within and outside your field!

Go to theses defenses, read widely! Sign up for email alerts for publication notices
This is an opportunity for you to start your own class and teach it!
“OCW expresses MIT's goal of advancing education around the world through a global community in which knowledge and ideas are shared openly for the benefit of all.”

— Susan Hockfield
2,122 Syllabi & reading lists

17,531 lecture notes

9,460 assignments

980 exams

705 projects

$3.7 M US annual budget
In addition to several case competitions on campus and in Boston, the MIT Consulting Club often sets up students with startups and companies which need free lancing consultants!

Many graduate students consult for companies through research or class connections they might make!
Experiences - Entrepreneurship

Several business competitions for startups, various startup boot-camps

Martin Trust Center for MIT Entrepreneurship

VMS’s mission is uniquely inclusive, with its corps of experienced volunteer mentors offering services without charge to the entire MIT community, from students and staff to faculty and alumni. By freely sharing their knowledge and insights, MIT Venture Mentoring Service mentors make a very important teaching contribution while helping start-up business ventures learn the roadmap to success.

L. Rafael Reif, Provost, Massachusetts Institute of Technology
Many graduate students write policy briefs and intern for policy organizations in US and other countries

http://dc.mit.edu/

http://web.mit.edu/spi/
Experiences - International Development

D-Lab: Development through Dialogue, Design & Dissemination: http://d-lab.mit.edu/

**Academics**

D-Lab offers sixteen different courses at the intersection of technology innovation and international development, exploring areas such as development, design, or social entrepreneurship. D-Lab embraces MIT's education principle, *mens et manus*, providing project-based learning with real-world impact in all its courses.

**Research**

D-Lab maintains several lines of research open including emissions testing of charcoal made of agricultural waste, medical devices for global health through the Innovations in International Health group, and the Technology Evaluation and Verification project. D-Lab also participates in the Undergraduate Research Opportunities Program.

**Implementation**

We explore the role of technology creation in development through village-level interventions that seek to empower people to solve their own problems. Current implementation efforts are centered around Creative Capacity Building, the International Development Design Summit, and class-related fieldwork.
Experiences - International Development

Imagine joining a team of engineers at BMW in Munich. Designing a Japanese robot. Testing solar panels in Israel. Or tackling a research problem at the Curie Institute. MISTI makes it possible—and it’s unlike anything else at MIT.
Experiences - International Development

MISTI Opportunities in India

MIT-India & India-Initiatives

http://web.mit.edu/misti/mit-india/

http://web.mit.edu/india/
http://india.media.mit.edu/
Other Exciting Experiences

- People and human factors are key to that – lots of smart and interesting people on this campus!
- Boston and New England and USA
How to maximize your experience?

- Try new things

- Get out of your comfort zone – from making friends to what you undertake for research – choose things that are not you!
  - Meet different people
  - Hear different perspectives openly
  - Do interdisciplinary research

- Get involved!

- Challenge yourself
How to maximize your experience?

Learn what you wish to learn and what you want to do

Develop skills to help you do what you want to do

Constantly evaluate
- what you are doing
- how you are doing it
- what more you want to do
- Whether you are liking the skills you want to learn
MIT Educational Experience

- Driven by student passion and initiative
  - What do you think is cool?
  - Personal understanding drives your experience!

- Real world and practical relevance

- Range of opportunities will expand your imagination!