MIT idm
Integrated Design & Management
Matt Kressy
Director
New technologies.

New business paradigms.

Great Products.
We want to create people like this.
People with vision.
People with passion.
People with drive.
Enabled with the skills to change the game.
Mission

Enable the learning and development of extraordinary, innovative leaders that will bring new levels of creativity, vision, and integrity to business and society.
How?
business + engineering + design
Integrated Student Body
Engineering, Design and Business
Passionate
Entrepreneurial
Integrated Faculty
Engineering, Design and Business
Experts and Practitioners of Design Process
Integrated Design Lab (ID Lab)

Dedicated Team Space

Maker Space
Integrated Curriculum

ID Lab
(Integrated Design Lab)

- Team HQ
- Maker Space
- Design Workshops
- Guest Lectures
- User-Centered Research
- Faculty Lectures
IDM Core: ID Lab

Team HQ
- Dedicated Team Space
- Immersive Environment

Maker Space
- Shared with IDC
- 3D Printers
- Machine Tools
- Laser Cutters
- Hand tools

Design Workshops
- How To:
  - Used 3D Printers
  - All Tools
  - CAD
  - Composites
  - Fab Methods

User-Centered Research
- Interviews
- Observation
- Ergonomics
- Needs Capture
- Emotion Capture

Faculty Lectures

Guest Lectures
- Entrepreneurs
- Designers
- Thought Leaders
- Student Lecture Series

ID Lab (Integrated Design Lab)
Located in IDC N-52
Tue & Thu
1pm - 6pm
# ID Lab Daily Schedule

## Topics:
- Opportunity Identification
- User Needs Research
- User Experience
- Product Specifications
- Creative Concept Generation
- Industrial Design
- Concept Selection
- Prototyping Strategy
- PDD Economics
- Environ Sustainability
- Intellectual Property
- Product Architecture
- Design Leadership
- Risk Management

## Topics:
- Hand Tools
- Power tools
- Machine Tools
- 3D Printing
- Composites
- Laminates and Forming
- Sketch Modeling
- Hard Modelling
- CNC
- UI / UX Wireframes
- Thermoforming
- Mold Making & Casting

## Activities:
- Practice product and business development using Lecture topics as process structure.
- Real-time feedback from faculty via Informal design reviews.
- Team building, brainstorming, strategy.
- Engage Users - Perform interviews, observation, needs list, personas, image boards.
- Generate Concepts - Sketching, modelling, rendering, wireframes, storyboard
- Test - Functional, market, business model, selection techniques.
- Formal Design Reviews.

## Guests:
- Entrepreneurs
- Designers
- Engineers
- Practitioners
- Thought Leaders
...a place you want to be
...a place to work together
...a place with continuity
...a place to go deep
...a place to make
...a place to fail (and make more)
...a place to celebrate
...a place to celebrate
ID Lab Projects

Student Generated and Industry Sponsored
- Products (tangible 3D)
- Services (intangible, UI, UX, web)
- Social, Economic and Societal Problems

Projects become thesis with the intent of business launch.

Program Sponsors
- Intimate, ongoing involvement with program
- right of first refusal: Hiring of graduates, investing in businesses
IDM Program Options

13 Month Option: Full-Time On Campus

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<thead>
<tr>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
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<tbody>
<tr>
<td>Orientation</td>
<td>16 Core + 27 Required/Elective</td>
<td>6 Core</td>
<td>16 Core + 27 Required/Elective</td>
<td>Thesis</td>
<td>Degree List</td>
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<tr>
<td>Project 1</td>
<td>3 weeks</td>
<td>Project 2</td>
<td>4 weeks</td>
<td>Project 3</td>
<td>7 weeks</td>
<td>Mfg Project</td>
<td>Project 4</td>
<td>Sales Gala</td>
<td>28 weeks + Thesis</td>
<td>Final Gala &amp; Pitch</td>
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21 Month Option: Commuter, RA/TA, or Full-Time on Campus with Internship

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<tbody>
<tr>
<td>Orientation</td>
<td>16 Core + 12 Required/Elective + RA/TA</td>
<td>6 Core</td>
<td>16 Core + 12 Required/Elective + RA/TA</td>
<td>Internship</td>
<td>Degree List</td>
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# Masters in Engineering and Management

<table>
<thead>
<tr>
<th>Category</th>
<th>Rationale</th>
<th>IDM Core</th>
<th>SDM Core</th>
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<tbody>
<tr>
<td>IDM or SDM Core</td>
<td>38 units</td>
<td>ESD.xxx Integrated Design Lab I</td>
<td>ESD.xxxx Foundations of System Design and Management I (16)</td>
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<tr>
<td>Management Foundations</td>
<td>12† units</td>
<td>15.912 Strategic Management of Innovation and Entrepreneurship (8)</td>
<td>ESD.412 Foundations of System Design and Management II (8)</td>
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<td>Foundation for a management specialty, to be complemented and expanded through elective choices.</td>
<td>15.521 Management Accounting and Control (9)</td>
<td>ESD.413 Foundations of System Design and Management III (16)</td>
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<td>Elective knowledge to build upon your management foundation course(s). Can also be a second management or leadership specialty.</td>
<td>15.761 Introduction to Operations Management (9)</td>
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<tr>
<td>Management and Leadership Electives</td>
<td>15 * units</td>
<td>15.810 Marketing Management (9)</td>
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<td>Provide the basic building blocks for engineering at the system level to prepare for application areas.</td>
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<td>Engineering Foundations</td>
<td>12† units</td>
<td>15.821/822 Listening to the Customer / Strategic Market Measurement (6/6)</td>
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<td>Electives detailing how the basic math and engineering foundations are applied in a variety of application domains.</td>
<td>15.834 Marketing Strategy (9)</td>
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<td>Engineering and Design Electives</td>
<td>15 * units</td>
<td>15.769 Operations Strategy (9)</td>
<td>15.913 Strategies for Sustainable Business (9)</td>
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<td>Workshop Sessions</td>
<td>0 units</td>
<td>16.686 Engineering Risk-Benefit Analysis (12)</td>
<td>15.910/911 Innovation / Entrepreneurial Strategy (8/6)</td>
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<td>Thesis research and writing; normally spread over 2 semesters. Registration requires an approved thesis proposal.</td>
<td>16.476J Statistical Methods in Experimental Design (12)</td>
<td>2.99x Independent Study Design Project (TBA)</td>
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<td>16.863 System Safety Concepts (12)</td>
<td>6.434 Statistics for Engineers and Scientists (12)</td>
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<td>16.355 Concepts in the Engineering of Software (12)</td>
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<td>16.855 Enterprise Architecting &amp; Engineering Software Systems (12)</td>
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<td>1.125 Architecting &amp; Engineering Software Systems (12)</td>
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<td>1.151 Probability and Statistics in Engineering (12)</td>
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Minimum of 92 subject units + 24 thesis units
† 12 or more units of fundamental subjects in both management and engineering
* 30 or more units of elective subjects, must be balanced (≤3) engineering:management

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Admissions

All applicants are required to submit a portfolio of their work.

Finalists for IDM admissions will be required to attend an in-person or phone/video interview.

Admissions Deadlines:

January 9, 2015
March 6, 2015
May 1, 2015