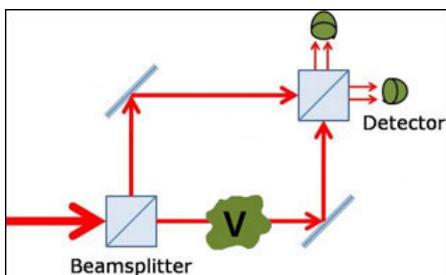




## Current Events in Context: A Quantum Leap for Quantum Physics



Experimental set-up: First we split the beam, then we send one beam through the potential and the other along a free path of the same length, then we interfere the two beams to compare the phase. (Image courtesy of Allan Adams.)

This summer, OCW published two undergraduate courses in Quantum Physics, [8.04 Quantum Physics I](#) and [8.05 Quantum Physics II](#). Both courses have full video lectures with celebrated instructors.

*Quantum Physics I* is taught by Professor Allan Adams and introduces students to the properties of matter and energy at the atomic and subatomic level, where our ordinary expectations about physical phenomena no longer serve as a reliable guide.

"It is not electrons that are messed up," Professor Adams says in the notes to his first lecture. "It is our intuition that is messed up. And this is the goal of *8.04*: we will step beyond the scale of daily experiences to develop an intuition for electrons, atoms, and superposition."

Thanks in part to a boost from [Physics Today](#), which posted a link to the course on its [Facebook page](#) that received more than 12,500 Likes, the OCW course got more than 176,000 pageviews in July and rocketed to the number 3 spot on OCW's list of most popular courses for that month.

Students who have taken *8.04 Quantum Physics I* can move on to *8.05 Quantum Physics II*, taught by Professor Barton Zwiebach. Topics covered in this course include the general formalism of quantum mechanics, harmonic oscillator, and quantum mechanics in three-dimensions.

Next year *8.05 Quantum Physics II* will be offered as a MOOC on edX. The online course will follow the MIT on-campus version and will be equally rigorous. Reviewing the prerequisite courses (including *8.04*) on OCW may be the best way to prepare.

The MIT Physics Department is unusual in offering multiple courses on Quantum Physics to undergraduates. (Note that OCW has even a third undergraduate course, *8.06 Quantum Physics III*, though without video lectures). Most collegiate physics departments offer only a single course on quantum physics, so the publication of these resources on OCW gives physics students around the world the opportunity to gain an understanding of physics at a highly

**DONATE NOW** >

We hope you learned something new or refreshed your memory on a topic you've previously studied.

If you enjoy OCW resources and can afford to support OCW, then please consider [donating to OCW](#) today.

Your gift demonstrates your commitment to knowledge as a public good and shows our sponsors and funders how much our visitors value the site.

Make your donation count event more with a matching gift from your company. To find out whether your company has a matching gift policy, please enter your employer's name in the [MIT matching gifts page](#).



**OCW is grateful for the support of:**



sophisticated level and to better prepare themselves for graduate study.

With the publication of these two new courses, OCW has made available the first five MIT undergraduate physics courses with full video lectures:

- [8.01SC Physics I: Classical Mechanics](#)
- [8.02SC Physics II: Electricity and Magnetism](#)
- [8.03SC Physics III: Vibrations and Waves](#)
- [8.04 Quantum Physics I](#)
- [8.05 Quantum Physics II](#)

The world has never seen so much physics!

---

## New Courses



[Lean Enterprise en Español](#)



[1.84J Atmospheric Chemistry](#)

- [7.341 Designer Immunity: Lessons in Engineering the Immune System](#)
- [7.342 Personal Genomics and Medicine: What's in Your Genome?](#)
- [21L.430 Popular Culture and Narrative: Serial Storytelling](#)

---

## Updated Courses



[21M.013J The Supernatural in Music, Literature and Culture](#)



[20.201 Mechanisms of Drug Actions](#)

- [15.871 Introduction to System Dynamics](#)
- [15.872 System Dynamics II](#)
- [17.408 Chinese Foreign Policy](#)

> [Find courses that interest you](#)  
> [Subscribe to the RSS](#)

---

accenture  
High performance. Delivered.

MathWorks

LOCKHEED MARTIN  
We never forget who we're working for®

DOW

Ab INITIO  
Ab Initio and OpenCourseWare:  
Built on fundamentals

## OCW Educator



Daylong Professional Development Session, Using Games in the High School Classroom

MIT does not have a School of Education, but that does not mean that students interested in teaching can't pursue teaching careers while at MIT.

The [MIT/Wellesley Scheller Teacher Education Program](#) (STEP) prepares MIT and Wellesley College students to become teachers who are:

- Competent to teach in their field and not afraid to challenge established norms
- Able to bridge the boundaries among disciplines
- Eager to help students develop the desire to question and explore.

OCW has published a number of teacher education courses that are part of the STEP program. Among the most interesting are two courses taught by Professor Eric Klopfer in the Department of Urban Studies and Planning: [11.124 Introduction to Education: Looking Forward and Looking Back on Education](#) and [11.125 Introduction to Education: Understanding and Evaluating Education](#).

Professor Klopfer takes a constructivist approach to the teaching of teaching, in which students learn primarily through experience (as in doing projects, making presentations, and having discussions), and the instructor minimizes the amount of time spent lecturing the class.

Identifying which activities to use in class and how to foster productive discussions is crucial to the course's success. In the Instructor Insights section of his [This Course at MIT page](#) for 11.124, Professor Klopfer explains in videos and in text why he prefers a constructivist approach and how he goes about applying it in his classes.

One of the innovative techniques he employs is to get students to engage in online discussions before coming to class, so they are better prepared to do in-class activities and reflect upon them. The Instructor Insights section presents the views of both Professor Klopfer and some of his students on this aspect of the course.

[This Course at MIT](#) is part of [OCW Educator](#), a project that enhances OCW course publications with information about how the course was taught on campus.

---

## Highlights for High School



Back to school: Time to sharpen your pencils! Image courtesy of [Cliff Muller](#) on Flickr. CC BY-NC-SA.

- Finish summer internship ✓
- Complete summer reading ✓
- Purchase new school supplies ✓
- Visit Highlights for High School ←

Hold onto those last days of summer, because the new school year is right around the corner! You've probably already started getting ready, buying school supplies, new clothes, and trying to finish that book you were assigned back in June.

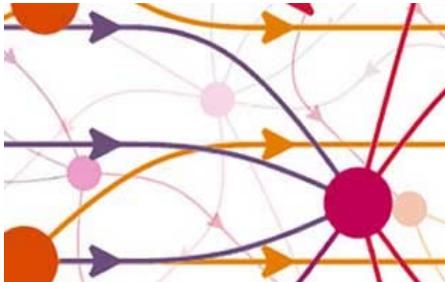
It's also a good idea to make Highlights for High School part of your day as you prepare for your fall semester. Check out our [introduction for students](#), prepare for your upcoming [AP courses\\*](#), or get a jump on learning [calculus](#) and [physics](#).

Enjoy the rest of your summer!

*\*AP is a registered trademark of the College Board, which was not involved in the production of, and does not endorse, this product.*

---

## MITx News



### Supply Chain and Logistics Fundamentals

You have a new product, smartly designed and rigorously tested. Now you need to get it to market.

You might manufacture it overseas to save money, as long as shipping costs are low enough. But what if the product takes off, and there's a sudden surge in demand? Will you be able to manufacture and ship products fast enough to fill orders halfway across the world? Maybe you should manufacture the product closer to home. If you do, how much inventory should you carry? After all, warehousing can be expensive too . . .

So many questions! What's a smart businessperson to do?

Why not register for [CTL.SC1x — Supply Chain and Logistics Fundamentals](#), a course being offered on the edX platform starting on September 30? This course covers the fundamental analytic tools, approaches and techniques used in the design and operation

of logistics systems and integrated supply chains. You can learn about:

- demand forecasting, planning, and management
- inventory planning, management, and control
- transportation planning, management, and execution

The course is the first of three courses on supply chain and logistics being offered by MITx. The second course, planned for spring 2015, is *CTL.SC2x – Supply Chain Design*. It will be followed in summer 2015 by *CTL.SC3x – Supply Chain Strategy*.

Students who complete the three-course sequence can get an “XSeries” certificate confirming their achievement.

“We have designed each of the three courses to cover the breadth of supply chain management rather than focus on just one function at a time. This is a more integrated approach,” says the instructor, Dr. Chris Caplice, Executive Director of the MIT Center for Transportation & Logistics (MIT CTL).

You don’t have to wait until September 30 to start learning. You can preview some of the topics in this first MITx Supply Chain course by exploring Dr. Caplice’s OCW course [ESD.260J Logistics Systems](#); or you can check out any of the [seventeen supply chain management courses](#) now on OCW.

---

### Views From Our Supporters



“Education has been in my life the main resource for growth, in a context where economical and social factors were not always favorable.

I also believe that it can have the same positive impact on any other individual, given that one has at least access to it.

MIT OCW not only provides this access on a large scale, but also the materials presented are very qualitative ones.

Having benefited from this opportunity, I am only grateful and I wish that OCW could remain further available to everyone.”

- Lucian, University Student, Romania

[> Read more](#)

Tell us what you think of OCW [here](#).

\*[IFNOT:ARCHIVE\_PAGE]\* \*[LIST:DESCRIPTION]\*

Our mailing address is: