

Tips/Tricks: A Guide to Being Course 14 at MIT

Undergraduate Economics Association

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1 Overview

So you wanna be a Course 14? You've come to the right place. This handbook will hopefully tell you (most) things you need to know, from classes to research to life after MIT.

If you have any feedback on this handbook, feel free to email us at uea-officers@mit.edu. Also sign up for our Piazza at piazza.com/mit/other/14uea.

2 Getting Involved

Note that what follows is accurate at the time of writing but is always subject to change so be sure to check the official requirements too!

2.1 Majoring in Course 14

The following table lists major differences between the 3 economics degrees offered by the department:

<i>14-1 major Degree Chart</i>	<i>14-2 major Degree Chart</i>	<i>6-14 major Degree Chart</i>
No math requirement	Requires 18.100A and (18.03 or 18.06)	Requires 18.06 and 6.042
No CS requirement	No CS requirement	Requires 6.0001, 6.006, 6.046, and 6.036. Requires either 6.009 or 6.0002.
2 economics CI-Ms	1 economics CI-M + 1 math CI-M	1 economics CI-M + (one of 6.UAT/6.UAR/15.276)
Assigned 14 advisor	Assigned 14 advisor	Ability to select between 6 or 14 advisor

This comparison chart is accurate as of February 2021. Detailed and up-to-date information on each major is available at the Degree Chart links in the chart above.

2.2 Minor in Course 14

6 subjects distributed into three tiers. See details on the MIT Economics website [here](#).

2.3 Concentrating in Course 14

3 subjects including 14.01 and/or 14.02, or equivalent. See details on the MIT Economics website [here](#).

3 Classes

3.1 Where to start?

No prior knowledge of economics is necessary to major in economics!

Students typically start with 14.01 Principles of Microeconomics or 14.02 Principles of Macroeconomics; these two courses are prerequisites for most economics courses at MIT. Students who scored a 5 on the Economics AP may take 14.03 Micro Theory and Public Policy, which is a faster-paced version of 14.01 with slightly more advanced theory, a brief introduction to empirical techniques, and a greater emphasis on policy and papers, in place of 14.01. (Although, psst — no one will check your AP scores, so if you think you're up for it, you can speak with the instructor about taking 14.03 instead of 14.01.)

Those who would prefer to start with electives can take 14.73 The Challenge of World Poverty, which does not have a prerequisite. In Spring 2021, 14.70 Medieval Economic History in Comparative Perspective, which also does not have a prerequisite, is also being offered jointly with the history department.

14.009 is also a great 3-unit exploratory introduction to what modern economics research looks like.

3.2 Common Course Substitutions

If you want to submit a petition to substitute a class, email commreq@mit.edu briefly explaining your situation. They'll respond asking you to fill out some forms; you will also need your advisor's approval for the petition to go through.

All majors

18.650 may be substituted for 14.30.

14.03 may be substituted for 14.01.

Generally, you cannot substitute another class for 14.32.

Some precocious students will substitute graduate-level economics courses for their undergraduate counterparts. You should speak with your advisor if this is something you want to do.

Substitutions specific to 14-2

18.100B/P/Q may be substituted for 18.100A in the 14-2 major.

It is sometimes possible to substitute the math CI-M requirement for a second economics CI-M requirement in the 14-2 major, commonly 14.33.

You are required to have one CI-M that has primarily written communication, and one that has oral communication. For example, 14.05, 18.200, 18.100P/Q, and 18.642 all fall into the bucket of "only written communication, no oral communication" and so they can't be taken as your CI-Ms together.

3.3 Course Reviews

You can find formal reviews of courses from past semesters [here](#).

You can find informal reviews of courses from past semesters [here](#). Usually, UEA officers or course 14 upperclassmen will also maintain a sheet where students can tell one another what they are planning on taking. *As of January 2020, we are using Paolo Adajar's system; you should follow the instructions in the README in the link above to add yourself to the current courses sheet.

3.4 Thesis (14.THU)

The thesis counts for an elective for economics students.

To complete a thesis, you should register for three units of 14.THU in your senior fall and twelve units of 14.THU in senior spring.

A thesis-advisor approved copy of your thesis proposal is due to Gary King (the economics academic administrator) by Drop Date in the fall. You should contact a faculty mentor directly to be your thesis advisor during the fall semester.

You should write your proposal during the three unit course in the fall. You can expect the (spring) thesis to be about as much work as a twelve unit class.

The prerequisite for 14.THU is that you must have completed 14.33 by the end of senior fall to register for 14.THU in your senior spring.

Non-majors may complete 14.THU.

NOTE: the thesis process is highly individualized between a student and their thesis advisor. It's normal for there to be very little communication about the thesis with the department or your "class" of thesis writers.

4 UROPs

4.1 Getting a UROP

Detailed information on UROPs can be found at urop.mit.edu.

Take note of UROP deadlines [here](#). You should ask professors earlier rather than later, since some faculty members have limited UROP openings.

Most people get a UROP by either 1) formally applying for a UROP or 2) asking a professor if you can work with them. You can also look beyond the MIT economics department, such as in Sloan or in the mathematics department, for professors conducting interesting work in tangential fields.

Formal openings for UROPs can be found [here](#). They will often require a CV (see section 8.1), a list of relevant courses taken, and/or a statement of interest. In the past, formal openings have been posted by Professor Frank Schilbach's graduate students, Professor Townsend's graduate students, Professor Jonathan Gruber, Professor Sara Ellison, and Professor Ben Olken, but they are generally uncommon in economics.

If you directly ask a professor instead, it's easiest to ask a professor that you have taken a class with, since then they know that you exist. However, you can also ask professors whose research you simply find interesting. You should write an email like the following (with some personal flair):

Hi Professor [NAME],
[If from class] I am a student in [CLASS]. I find your research in [RESEARCH] very interesting, and was wondering if you have any UROP openings for [TERM].
Thanks!
[NAME]

If a professor does not respond in a few days, you should bump your email, with a short statement like "I'd like to touch back on this. Thanks!" When they respond, they may ask you for a CV and list of relevant courses taken, so you should have these prepared in advance.

Once you get in touch with the professor, you should make sure to get information on what the project is about, what your responsibilities will be, who you will be working with, how often you will receive mentorship, how many hours you will need to commit to each week, and how many terms you will be UROPing for.

4.2 How do I UROP

Getting paid

There are two sources for UROP funding: 1) direct funding and 2) supervised funding. You can also UROP for credit, but you'll probably take enough classes to graduate anyway, so doing it for pay is likely a better bet.

Direct funding is capped at \$13.50 as of Jan. 2021. (Check [here](#) for updated rates.) Most economics UROPs are through direct funding.

The supervised funding rate is dictated by your UROP supervisor. Some supervisors may choose to pay more than the \$13.50 minimum.

Regardless of your funding source, you will need to complete an I-9 form to complete your pay eligibility.

What if I am not liking my UROP

You should speak with your UROP supervisor. For example, if you are only doing grunt work, you state that you would like some more analytical tasks or if there are other additional ways in which you can support the project. If things do not change, you may need to consider leaving your UROP.

What if I experience discrimination/harassment

This is a serious issue. The economics department head is responsible for handling issues of discrimination and harassment. Other resources are the [Institute Discrimination and Harassment Response Office](#), where you can file a report, and [Ombuds](#), an independent confidential resource you can speak with.

4.3 Leaving a UROP

Professors understand that students are in the process of exploration, so you should not feel bad about leaving a UROP. You should give at least several weeks notice before ending your UROP so your supervisor knows and can find another student to fill your role if necessary.

Meeting with your supervisor at the end of your UROP is a good time to speak about what opportunities are available in the future and get advice on classes and career plans. Make sure you keep in touch even after your UROP ends; your supervisor may be a great mentor for years to come.

5 Internships

5.1 Winter Externships

Winter Externships happen for a month over IAP. It's a great way to explore a new place, work on an interesting project, and earn some money without a multi-month commitment. Many winter externships also lead to summer internships.

An externship is essentially a short-term internship during IAP and hosted by MIT alumni. You must apply through the externship portal and depending on the listing, you would submit your resume, transcript, and/or cover letter. You are only allowed to apply up to 3 externship postings. The process starts sometime in September as well, so please make sure to check the timeline on the externship website. However, due to disruptions of COVID-19, the externship program has transferred to utilizing Handshake listing externships as "micro-internships" for 2020. It is unclear what the future of the externship program will look like at this moment. Contact externship@mit.edu to clarify the process for your current year!

Some examples of past winter externships include NASDAQ, economic consulting, and various data science opportunities.

A popular externship many Course 14 students have found themselves partaking in is with NERA Economic Consulting in New York City hosted by MIT alum Dr. Dave Tabak. Economic consultants are typically hired by businesses and government organizations to provide economic guidance to litigators on a range of issues such as anti-trust, financial market regulation, healthcare, valuation, and more. Economic consulting is a somewhat common private-sector choice for students graduating in economics; the same data and programming skills you learn as an undergraduate apply directly to this career, and some exit economic consulting after a few years to return to a Ph.D. program. Typical work an extern would find themselves doing involves supporting NERA's analysts' work such as data cleaning, running preliminary diagnostics, and research on industry and/or clients. Working at NERA would give externs useful experience working with data and tools such as Excel and SAS. Furthermore, NERA externs are invited to partake in various events throughout IAP such as case presentations and a resume critique (more of a roast). Lastly, externs are typically invited to return for a summer internship!

5.2 Summer Opportunities

Outside of UROPs, there are many opportunities for summer internships for economics students. Gary King will often send out emails about such opportunities.

Here are a few popular options:

MIT Washington, D.C. Internship Program

Many economics students are alumni of the MIT Washington, D.C. Internship Program; in fact, 3 slots each year in the program are reserved for economics students. Students in the past have worked at organizations including the Government Accountability Office, the World Bank, and various think tanks. There are also

unique opportunities to work with economists at organizations like the Department of Agriculture and the Department of Justice. The program offers housing and a stipend, a great perk since most government internships are unpaid. Additionally, the program offers a speaker / event series and a great networking opportunity with other MIT and UVA students that are interested in public policy. More information is available on the program [website](#).

Federal Reserve

There are 12 Federal Reserve Banks scattered across the US, plus the Board of Governors in D.C. The largest — and most commonly interned-in offices — are the Board of Governors in D.C. and the Federal Reserve Bank of New York. While economics students most commonly intern in the research department, there are also other opportunities available, such as bank supervision or capital markets.

The following is a list of research internship positions at different branches of the system:

Click “Start Job Search” at the top left corner of the Federal Reserve Board’s [internships overview](#) to apply for an internship at the **Federal Reserve Board**.

Click “Applications are now open...” towards the bottom of the [internship page](#) on the Federal Reserve Bank of New York’s website to apply for an internship at the **New York Fed**.

Click “Apply Now” under “Research Department College Interns” at the Boston Fed’s [internship programs overview](#) to apply for an internship at the **Boston Fed**.

See “Research Interns” at the bottom of the [careers page](#) on the Federal Reserve Bank of St. Louis’ website to apply for an internship at the **St. Louis Fed**.

See the San Francisco Fed’s [internships overview](#) to apply for an internship at the **San Francisco Fed**.

See the Philadelphia Fed’s [internship page](#) for a description of summer positions; click “Search for Jobs” to apply for an internship at the **Philadelphia Fed**.

Click “Search Jobs” at the bottom of the Cleveland Fed’s [paid internships page](#) to apply for an internship at the **Cleveland Fed**.

See the Richmond Fed’s [internships page](#) to apply for an internship at the **Richmond Fed**.

See the Atlanta Fed’s [careers page](#) to apply for an internship at the **Atlanta Fed**.

Click “Search Jobs” at the bottom of the Chicago Fed’s [internships page](#) to apply for an internship at the **Chicago Fed**.

See the Minneapolis Fed’s [internships page](#) to apply for an internship at the **Minneapolis Fed**.

See the Kansas City Fed’s [careers page](#) to apply for an internship at the **Kansas City Fed**.

Click “Apply Now” at the Dallas Fed’s [internship overview page](#) to apply for an internship at the **Dallas Fed**.

Economic Consulting

Economic Consulting firms include the Brattle Group, Cornerstone, Charles River Associates, and NERA. They visit the career fair every year, so you can find them there.

Finance

There are a million and one finance companies that come to MIT career fair, from quant trading companies to investment banks to market makers. Just go talk to them!

6 Career Paths

There are many career path options for graduates in economics, including business, consulting, finance, academia, law, and policy.

A few firms are listed in each subsection to help you tie these fields to people and places you know.

6.1 Economic Consulting

Economists at economic consulting firms serve as expert witnesses in antitrust and intellectual property litigation. They use economic analysis to provide governments, law firms, and corporations with information and testimony. Check out the Winter Externships section of this guide for more information on economic consulting.

The Department of Economics at the University of Virginia has created a very thorough [overview](#) of careers in economic consulting.

Examples: Analysis Group, Charles River Associates, Cornerstone

6.2 Management Consulting

Management consultants are hired to improve a company's performance. Among other things, they act as an unbiased third party when a firm is unable to improve their business practices due to an internal conflict; advise firms considering mergers and reorganizations; and assist with designing the best marketing strategy for an organization.

This [Forbes article](#) gives a thorough overview of what it's like to be a management consultant.

Examples: McKinsey, Boston Consulting Group, Bain, Oliver Wyman

6.3 Government/Policy/Nonprofits/NGOs

The Federal Reserve System is a government organization that hires both research assistants directly out of college and PhD economists for higher positions. Research assistant positions at the various regional banks are advertised via the MIT economics major mailing lists throughout senior year. You can also get a research assistant positions by doing an internship with either the Federal Reserve Board or a Federal Reserve Bank and interviewing for a return offer.

Both the U.S. State Department and the CIA hire economists as analysts. State governments also hire economists; check out state employment websites for such positions.

There are economists that work on anti-trust issues within the US Department of Justice.

The World Bank is another organization that hires economics majors. With a mission to end extreme poverty and increase the incomes of the poorest 40 percent of people in every country, the World Bank might appeal as a career path to those interested in development economics.

The Abdul Latif Jameel Poverty Action Lab (J-PAL) conducts randomized controlled trials to test the effectiveness of social programs. Through policy outreach, it helps governments and NGOs use evidence-based methods to achieve their objectives. J-PAL hires at various levels. You can search for specific positions at [this link](#).

Examples: The Federal Reserve System, J-PAL, the World Bank, the International Monetary Fund

6.4 Graduate School in Economics

Economics majors can complete either a Master's in economics or a PhD in economics if they wish to go to graduate school. *Be aware that it is rare for US Economics PhD programs to reduce PhD students' course requirements because they come in with a Master's degree (though some programs allow students to "qualify out" of courses through exams). You should therefore to choose a degree program with your long term goals in mind.

The Master's in economics typically takes 2 years to complete and covers advanced microeconomics, advanced macroeconomics, quantitative analysis, and econometrics ([AEA](#)). If you're going into industry, the Master's in economics could make sense for you.

The PhD in economics consists of 2 years of coursework that is roughly equivalent to a Master's degree, plus 3-4 years of independent research and courses in a specific specialization. Some fields that current MIT PhD students are pursuing include education, labor economics, public economics, industrial organization, digital currencies and artificial intelligence, environmental economics, organizational economics, development economics, health economics, behavioral economics, financial economics, macroeconomics, political economy, microeconomic theory, international economics, applied microeconomics, econometric theory, and household finance.

Pros to a PhD seem to be the freedom to manage your own schedule and work when you want. If you enjoy research (take 14.33 or do an independent project to see if you do), there is also the gratification of completing your thesis. And of course, you're likely working with people interested in the same things as you. Cons we've heard about are that the job market after the PhD is very competitive (too many PhDs, too few assistant professor positions), so there is quite a bit of stress involved in the final year. It can also begin to feel like your worth is defined by your research— you need to have a good work-life balance to preserve your mental health.

If you are curious about the frontier of economics research, a good way to explore current research is by attending economics seminars. Some seminars are publicly available on the economics department [website](#). You can also ask a professor if there are other seminars that they recommend you attend, such as the Summer Micro Lunch or the Labor Lunch. The Lunch seminars are particularly good to attend because PhD students present their thesis work in progress; you can get a good sense of what sort of work you'd do as a PhD student.

If you decide you are interested in graduate school, you should read the Graduate School handbook [COMING SOON!].

6.5 Tech

Economists are becoming highly valued at tech companies. In recent years, companies like Google, Facebook, Microsoft, Airbnb, and Uber have acquired large numbers of PhD economists. Amazon, for example, had more than 150 PhD economists as of February 2019. Tech companies hire economics PhDs to solve a variety of business problems, including determining the optimal advertising strategy, designing the optimal business platform, and looking at optimal pricing strategy.

Economists in tech are said to have better hours than PhD students / academics (who may work all days of the week as opposed to just weekdays). Other pros might include better compensation, which is a big plus.

If you want to read an article on this topic, check out this Harvard Business Review article: "[Why Tech Companies Hire So Many Economists](#)."

For a meta discussion of economists in the tech sector, check out [Athey and Luca 2020](#) in the Journal of Economic Perspectives. (This paper is written by the same people who wrote the HBR article above.)

6.6 Journalism

Economic and business journalists report on real-time financial news. Some are former economics professors; some have PhDs; and some have bachelor degrees in economics. Economic journalism became more salient after the 2008 financial crisis, during which more people needed journalists to explain the workings of the financial world.

Many economic journalists have large followings on Twitter. The most famous is probably [Paul Krugman](#) (who was a professor at MIT from 1979 to 1999!). Other economic journalists include Martin Wolf (Financial Times), Eduardo Porter and Neil Irwin (The New York Times), and Grep Ip (The Wall Street Journal). These people have usually done Bachelor's and Master's degrees in economics, but not PhD's in economics.

6.7 Finance

Students who studied economics hold analyst positions at a variety of financial institutions.

One student writes, “With my interest in mathematics and game theory and coursework in statistics, computer science, probability, I started applying to trading and quantitative economic analysis experiences for finance companies in my sophomore fall. Admittedly, I didn’t know much about them, but I did think that following the markets and using quick maths in the process was pretty fun. During IAP of my sophomore year, I ended up in BNP Paribas in New York for a trading externship, on the G10 Rates desk. There, I learned a lot more about finance and math behind options theory, but also about the different roles and opportunities to apply my interests in microeconomic theory in finance. After digging deeper into game theory, I will be heading to SIG (Susquehanna International Group) as a quant trading intern in summer 2021. SIG is well-known for their gaming culture (poker, chess, esports, and more), and I am super excited for what’s to come.”

Examples: Jane Street, Citadel, Bloomberg

6.8 Data Science, Law, and MFin/MBA

We are not as knowledgeable about these career paths, but we figured we should mention them since they’re definitely becoming more popular!

The 6-14 degree was created to bridge economics, computer science, and data science. You can find data science positions at typically finance companies at the career fairs, if I am not mistaken.

According to the American Economic Association website, [more economics majors are choosing law](#) as a career.

If you pursue an MBA, you’ll get a overview of business management practices. This will include some economics, just not in as much detail as a Master’s of economics.

7 Undergraduate Economics Association (UEA)

The UEA is an ASA-recognized student organization that seeks to improve the undergraduate Course 14 experience. We aim to strengthen the economics community, provide mentorship channels for freshmen, and hold events that expose undergraduates to the wide variety of fields within economics and in possible careers. We also hold events with economics clubs at other universities, which is a great chance to make new friends. With the Economics department and graduate students, we are currently working on initiatives to make the department a more diverse, welcoming, and inclusive place for all. We are always looking for new initiatives and new ideas – contact us at uea-officers@mit.edu for any feedback/comments/new ideas!

Any person can become a UEA member (you do not need to be an Economics major). Simply add your email to the uea@mit.edu mailing list on webmoira to receive emails about our events or add yourself to our Slack [ADD LINK TO ACCESS SLACK]. All of our events are open to everyone, regardless of whether you are a major or on our mailing list.

The UEA officers plan the events and initiatives. We are a small group of undergraduates passionate about economics and the community. You can check us out on our [website!](#)

7.1 Events and Initiatives

7.1.1 Study Breaks and Trivia

We hold study breaks and trivia nights to foster the undergraduate economics community! Typically, our study breaks are biweekly and held in the economics lounge, where we often cater Chipotle and hang out informally. In this virtual time, we have held trivia nights with monetary prizes, including trivia nights with other clubs such as MIT’s Undergraduate Women in Math (USWIM) – a Math vs Econ battle – and the UPenn and Wellesley Economics Associations.

7.1.2 Collaborations with Other Universities

We have collaborated with many different universities on events. Here are some of the more notable:

1. From June 13, 2020 to June 14, 2020, we organized the COVID-19 Economics Policy Hackathon jointly with the Stanford Economics Association. The event attracted over 800 participants from 40 different countries, and teams worked together to create innovative policy solutions to problems in one of our four tracks: public health, firms and workers, trade and immigration, financial policy.
2. From October 5, 2020 to October 10, 2020, we hosted an Economics Symposium jointly with Pontificia Universidad Católica de Chile, Universidad de los Andes, and the Tecnológico de Monterrey. This was a great opportunity for our students to connect and share our perspectives on Latin American issues.

7.1.3 Diversity, Equity, and Inclusion

We conduct initiatives that promote diversity, equity, and inclusion in the department. In 2020, we conducted a survey of economics majors, minors, and economics introductory course students to better understand students' perspectives on diversity and inclusion. In 2021, in partnership with the Graduate Economics Association and the faculty Anti-Racism Committee, we held the first economics DEI town hall.

7.1.4 Mentorship and Freshman Outreach

We coordinate events such as coffee chats with undergraduate upperclassmen and economics grad school panels.

In 2019, the UEA started a Mentor-Mentee program. Mentor-Mentee pairings meet around once a month (or as desired) to talk about life and Course 14. Each month, UEA will sponsor a challenge and you will be eligible for a prize.

7.1.5 Book Club

The book club meets weekly to discuss books on various economics subjects. In the past, we have read and discussed *Radical Markets* by Eric Posner and Glen Weyl, *Nudge* by Richard Thaler and Cass Sunstein, and most recently *Jump-starting America* by Jonathan Gruber and Simon Johnson. For *Jump-starting America*, we had a discussion with one of the authors, MIT Professor Jonathan Gruber! Book clubs are a great way to learn about applications of economics in the real world, meet new people, and have fun!

8 Appendix

8.1 Writing a CV or Resume

A resume is generally one page and only lists most relevant items, whereas a CV lists full employment and publication history. A CV is more common in academia and academic-adjacent jobs, whereas resumes are more common for most industry jobs.

Your CV should have sections for Education, Experience, Publications, Awards/Honors, and Skills. You should also include any unpublished works, since as undergraduates most of us don't get published :)

You should keep descriptions of each item in the experience section to 2-4 bullet points and make sure to use quantifiable, descriptive language.

The [CAPD](#) has additional advice (including formatting guides) and professionals that are always happy to meet with you. You can also ask the UEA Academic Officer to get you connected to a helpful upperclassman.