

To: Economics Majors, Joint Majors, and Concentrators
From: Susan Elmes, Economics Department DUS
Subject: Information for academic year 2018-2019
Date: August 2018

This memo is addressed to all students who have declared a major, joint major, or concentration in economics to help you plan your program for the upcoming academic year.

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Graduation Clearance

In order to graduate, the department must certify that you have completed your declared program in economics. To do that, we check your Columbia transcript as well as any transfer credits that have been approved by the department. Each year, we discover many students whose records are incomplete (e.g. transfer credit approvals are missing) or who have not strictly followed the department's course sequencing requirements. In some cases, this is not uncovered until it is too late for the student to graduate on time with his or her intended economics degree. It is your responsibility to make sure that you have completed your economics major, and that your student records are up to date. You should complete a [checklist](#) for your program and if you have any questions or concerns about your completed checklist, then you should contact **econ-advising@columbia.edu**. You should not rely on your DAR or on your College or GS advisor to certify that you have completed your economics program. Four of the most common problems that we find are:

- ❖ **AP, IB or GCE credits** not listed on the transcript: If you are using any of these advanced placement credits in place of *Principles of Economics* or *Calculus I,II*, k- then those credits must appear on the bottom of your transcript. If they do not, then you are officially missing those required courses for the major/concentration, and you must speak with your College or GS advisor ASAP to have those advance placement credits posted.
- ❖ **Math High School credits:** If you have high school math credits that exempts you from *Calculus I*, then you must obtain written certification from the math department, and have that sent to the economics department (send to ly38). Note that if you have been waived out of *Calculus I* but not given college credit for your calculus course then you must replace the 3 credits with an additional course. The Economics

Department accepts any economics, math or statistics course at the 2000 level or higher, *Calculus II*, *Calculus IV* and any computer science course as a replacement for Calculus I.

- ❖ **Transfer credits:** All economics transfer credits used for an economics program must be approved in writing by the economics department. See the [Transfer Credit](#) page for details on how to apply for departmental transfer credit approval. Calculus I and Stat 1201 transfer credits must also be approved by the economics department. Other math /statistics courses must be approved by those departments, and a copy of that approval(s) sent to the economics department (ly38)).
- ❖ **Course Sequencing:** The department does not count credits from courses that were taken prior to the completion of the course pre-requisites. All course pre-requisites are posted in the bulletin, on the department website and on the directory of classes. If you have taken a course prior to, or concurrently with its pre-requisites, then you will be required to take at least one additional course in economics, and you should contact Laura Yan (ly38) ASAP to discuss what additional course (or courses) that you will be required to take.

The earlier that you find any of these issues, the easier it is to take care of them. All majors and concentrators should fill out the checklist for their program. Students who have any questions or concerns about the fulfillment of his or her major or concentration, are advised to see one of the graduate student advisors (weekly hours will be posted), or send an email to econ-advising@columbia.edu. The department will not give graduation clearance to any student who has not satisfied the major/concentration requirements due to any potential problems caused by the above points.

Advising

Graduate student advisors hold weekly office hours and respond daily to student emails to answer the most common questions regarding the major. The graduate student advisors are able to discuss *major requirements, course scheduling and selection, as well as review your checklists with you and discuss your progress in the major.* Other than transfer credit or study abroad questions, students should direct all questions and concerns about their major to the graduate student advisors. You may email them at econ-advising@columbia.edu. Office hours will be posted on the *Advisors'* page of the department website in the week prior to the beginning of the semester.

One issue that graduate student advisors do not handle is approval for transfer credits or study abroad credits. All economics transfer credits must be approved in writing by the Department of Economics. If you have transferred to Columbia and you would like to transfer credits from economics courses taken before you came to Columbia, then you should contact your CC or GS advisor to initiate the departmental transfer credit application process. If you are at Columbia and would like to take economics courses at another institution (including summer courses and courses taken abroad), then you should see Dr Gulati. Information regarding the application for transfer credits and the materials you must present with your application is available on the [Transfer Credit](#) page. Please read that material carefully before submitting your materials for approval.

Students may request a faculty advisor to discuss academic or career goals. Faculty advisors will not discuss major requirements (that is the role of the graduate student advisors). Faculty advisors will discuss course selection to meet intellectual goals and interests, as well as career or research options. If you plan on attending a PhD program in

economics or pursuing economics research after graduation, then it is recommended that you request a faculty advisor. There is a form on the [Advisors'](#) page to request a faculty advisor. Fill out the form and leave it in my mailbox (Susan Elmes) on the 10th floor of IAB in the department's main office. We will try to match you with a faculty member that shares your academic interests.

International Students

As you may be aware, the Economics Major and the Financial Economics Major are now designated as **STEM** programs. The joint majors with Math and Statistics are also designated as STEM programs. As a consequence, students who complete these programs are eligible for extended OPT. Many students choose to use some of this extended time before graduation in order to take a summer internship. It is **strongly recommended** that you contact **ISSO** as early as possible to discuss applying for **OPT** for a summer internship. There is a substantial time lag between the application for OPT and the approval of the application. If you wait until the spring semester to apply, it is likely that your application will not be approved in time. The Economics Department does not have any information about these applications and cannot answer any of your questions. You must consult with ISSO.

Lecture Courses

For the most up to date information on course offerings (*including registration numbers, days, times and classrooms*) you should check the Registrar's [Directory of Classes](#).

Waitlists

In most cases, the economics department sets the course registration cap equal to the room capacity and it is generally not possible to move classes to larger rooms. Hence, when class registration reaches the cap number, you cannot be added to the class roster by the department or the faculty member. In this instance you must sign up for the wait list online.

In the cases of 4280 Corporate Finance, any Junior Seminar (e.g. UN3952), 4995/4996 Research Credit and 4997 Independent Study, you will only be able to register for the waitlist. The [Registration Information](#) page contains the details on taking one of these classes.

UN3952 Seminar in Macroeconomics and Formation of Expectations

Prerequisites: ECON UN3211, UN3213, UN3412

Prof Hassan Afrouzi

The goal of the **junior seminars** is to strengthen the research and writing skills of our students. Like senior seminars, the prerequisites of a junior seminar are 3211, 3213 and 3412 and will have a limited number of seats. Unlike senior seminars, a junior seminar WILL count as an elective course and may be taken for elective credit for the *economics, financial economics, or any joint major*. A junior seminar does NOT replace a senior seminar, so a student who takes a junior seminar will take at least two seminars to complete the economics major. Students will be admitted to the seminars from the wait list one week prior to the beginning of classes. Preference will be given to junior majors who are interested in writing a senior thesis in economics and who are good candidates to do so (students are expected to have received a B+ or higher in the three prerequisite courses).

A student who successfully completes a junior seminar will be given preference in admission to the honors seminar. To register for this class, you must sign up for the wait list in SSOL. The class will meet on Mondays at 6:10 pm.

Course Description

This course has two main objectives:

1. *To introduce students to the process of writing a research paper. This includes identifying and formulating a research question, reviewing the previous literature and positioning the problem in that context, identifying the proper tools and data to answer the question, and finally writing the findings in the format of a research paper. An immediate goal is to prepare the students to undertake a senior thesis project.*
2. *To provide an introduction to selected topics and survey evidence in macroeconomics, with a focus on the expectation formation process of economic agents. We will start by going through some canonical models that are widely used for economic and policy analysis to understand the role of expectations in the decision making of households and firms. We will then go through a series of survey data and relate the empirical evidence to the theoretical predictions of those canonical models.*

GU4370 Political Economy

Political economy will only be offered in the fall semester. All seniors in the joint major with political science who have not previously taken political economy must take GU4370 Political Economy this fall. Juniors planning on graduating one or two semesters early must also take GU4370 this fall.

UN3213 Intermediate Macro

As of Fall 2016, Math 1201 Calculus III will be a co-requisite for UN3213 Intermediate Macro. Students must have either taken Calculus III or must take it concurrently with Intermediate Macro. Students who took UN3213 Intermediate Macro prior to the Fall of 2016, will not be affected by this change.

SDEV UN2320 Economic and Financial Methods for Sustainable Development

Economics majors and concentrators may take SDEV UN2320 for 2000 level elective credit. If you are pursuing programs in both economics and sustainable development, you should speak with your College or GS adviser regarding the new policy on double counting this course. If you took this class in a previous year and would like to count it as a 2000 level elective, then you must send Laura Yan an email (ly38) indicating that you would like to count this course as your 2000 level elective in economics.

College Business Courses

Columbia College offers several business oriented classes. The department does not oversee these courses, and does not have any information about them. **If you have questions about these courses, please contact the Business School for more information** at BusinessManagement@gsb.columbia.edu. Note that you may only take these courses for credit towards the financial economics major. You should consult the bulletin for more information on the requirements for the financial economics major. You may not take these courses for credit towards an economics major, concentration or any of the joint majors.

5000 and 6000 Level Courses

Graduate level courses in economics (courses numbered 5000 and above) are closed to online registration by undergraduates. All 5000 level courses are restricted to Masters students only. Undergraduates wishing to take a 6000 level class must receive approval from both the Director of Undergraduate Studies and the Director of Graduate Studies. Prior to taking any of these 6000 level classes, it is expected that you have successfully completed one or (preferably) more of the advanced undergraduate courses (4211, 4213 and 4412), higher level statistics (such as the year-long sequence 4203-4204), and at least one semester of mathematical analysis (4061). Requests to take one of the 6000 level courses must be made in writing (se5@columbia.edu) by **August 20**.

Elective Courses Offered Only in the Fall

The following courses will be offered by the department only in the Fall semester: UN2105 The American Economy, UN3952 Macroeconomics and Formation of Expectations, GU4213 Advanced Macro, GU4325 Economic Development of Japan, GU4370 Political Economy, GU4412 Advanced Econometrics, GU4438 Economics of Race, GU4480 Gender and Applied Economics, GU4700 Financial Crises, and GU4850 Cognitive Mechanisms and Economic Behavior.

Elective Courses Offered Only in the Spring

The following courses will be offered by the department only in the Spring semester: UN2257 Global Economy, GU4211 Advanced Micro, GU4230 Economics of NYC, GU4260 Market Design, GU4321 Economic Development, GU4413 Time Series, GU4505 International Macroeconomics, GU4710 Financial Markets and the Real Economy, GU4750 Globalization and its Risks, and GU4860 Behavioral Finance.

Elective Courses Offered Both Semesters

The following courses will be offered in both the fall and spring semesters: UN3025 Financial Economics, UN3265 Money and Banking, GU4251 Industrial Organization, GU4280 Corporate Finance, GU4415 Game Theory, GU4465 Public Economics and GU4500 International Trade.

Elective Requirements for Joint Majors

- ❖ If you are a joint major with political science, statistics or mathematics, then only economics elective courses at the 3000 level or higher may be counted towards your major requirements.
- ❖ If you are an **Economics-Philosophy** joint major then all three of your electives must be at the 3000 level or higher. In addition, you must select two of your required three electives from the following list to fulfill your major requirements: GU4020 Economics of Uncertainty and Information, GU4213 Advanced Macro, GU4228 Urban Economics, GU4230 Economics of NYC, GU4235 Historical Foundations of Modern Economics, GU4301 Economic Growth and Development, GU4321 Economic Development, GU4370 Political Economy, GU4400 Labor Economics, GU4415 Game Theory, GU4438 Economics of Race in the United States, GU4465 Public Economics, GU4480 Gender and Applied Economics, GU4500 International Trade, GU4615 Law and Economics, GU4625 Economics of the Environment, GU4750 Globalization and its Risks, GU4840 Behavioral Economics, GU4850 Cognitive Mechanisms and Economic Behavior, GU4860 Behavioral Finance, BC3011 Inequality and Poverty, BC3019 Labor Economics, BC3029 Development Economics, BC3039 Environmental and Natural Resource Economics and BC3041 Theoretical Foundations of Political Economy.

Underlined courses indicate that these classes are offered in the fall semester. Your third elective may be any elective at the 3000 level or higher.

- ❖ If you are a **Financial Economics** major then you must take 4 elective courses and a minimum of 2 of these must come from the following list of economics courses: UN3265 Economics of Money and Banking, UN3952 Macroeconomics and Formation of Expectations, GU4020 Economics of Uncertainty and Information, GU4213 Advanced Macroeconomics, GU4251 Industrial Organization, GU4412 Advanced Econometrics, GU4415 Game Theory, GU4465 Public Economics, GU4500 International Trade, GU4505 International Macro, GU4700 Financial Crises, GU4840 Behavioral Economics, GU4850 Cognitive Mechanisms and Economic Behavior, GU4860 Behavioral Finance, BC3014 Entrepreneurship, and BC3017 Economics of Business Organizations. Underlined courses indicate those courses offered in the fall. Your remaining 2 elective courses may come from the above list of economics courses or from the list of acceptable outside courses. See the major checklist on the department website or the bulletin for the list of courses that you may take for your remaining 2 elective courses for the financial economics major.

Senior Seminars

Fall Seminar Cancelled

Prof **Clarida's** seminar (4913 sec 3) for the Fall semester has been cancelled due to his nomination to the Board of Governors of the Federal Reserve. We have added Neal **Masia's** seminar on the Healthcare Industry (4911 sec 6).

Fall Seminar Registration

Seminars are strictly limited to **16** students. Registration for GU4911 section 0 is closed for the fall semester. **Final assignments** to the seminars will be made by **August 27th**. All remaining seats will be available for walk in registration beginning on the first day of classes. During the **first week of classes only seniors** may sign up for seminars. After the first week of classes any student who has completed his or her core requirements in economics may sign up for any seminar that remains open. For more information about the sign up process please see the [Senior Seminars Registration](#) page on the department's website.

Econ- Political Science Majors

Students in this joint major must take **GU4921**. This seminar will be **offered only in the spring semester**. All students must have completed their econometrics requirement (either UN3412 or POLS GU4711) and ECON GU4370 Political Economy before taking the seminar. If you are a junior and are planning on graduating early (either in your junior year or fall of your senior year), then you must take this seminar in the spring semester as the department generally does not offer the seminar in the fall semester.

Econ-Philosophy Majors

Students in this joint major must take **GU4950**, the economics and philosophy seminar which is **only offered in the spring semester**. If you are a junior who is planning on graduating early (either in your junior year or fall semester of your senior year), then you must take 4950 this spring. You must have completed all of your core requirements (UN3211, UN3213 and UN3412) prior to taking the seminar.

Econ-Statistics Majors

Students in this joint major must take the econometrics seminar, GU4918, which is offered only in the spring semester this year. If you are a junior who is planning on graduating early (either in your junior year or fall semester of your senior year), then you should take 4918 this spring. It will be assumed that students registered for this seminar have a strong background in econometrics and statistics. This joint seminar is open to all students.

Financial Economics Majors

The following fall seminars will fulfill the seminar requirement for the major: GU4911 2 Neven, GU4911 4 Dang, GU4911 5 Dutta, GU4911 6 Masia, GU4913 1 Drenik, GU4913 2 La'O, and GU4913 4 Pinkovskiy.

Honors Thesis

All students who are interested in writing a senior honors thesis during academic year 2018-19 should have submitted a preliminary proposal during the spring 2018 term. Regardless of whether you did or not, you must send your final proposal to me by **August 20th** (se5@columbia.edu). The final proposal must include the following information:

1. A (minimum) one paragraph description of your topic. The paragraph must contain at least one economics question that you would like to address in your thesis. Since most theses are empirical, you must also note what data sets you will be using to answer your question.
2. A second paragraph indicating what in your background (either class work or work experience) qualifies you to work on your proposed topic (e.g. if your topic is Russian exchange rate movements you might want to tell me that you have taken international monetary theory).
3. All of the grades that you have received in your economics classes at Columbia. Simply copy the grades in economics classes as recorded in your Columbia DAR. You should not include grades from other departments. If you have transferred any economics credits then you should include those grades as well.
4. Finally, include the name(s) of faculty members that you believe would be interested in working with you. If you do not know a faculty member who would be interested, then you should look at the department's website for information on their research interests.
5. You must complete the Google form at https://docs.google.com/forms/d/e/1FAIpQLSeotOm6bpL2Uj3pe4OS1OO_mCSbEk_dEc_7Euj3J6UwoZ42bw/viewform?usp=sf_link

A faculty committee will review the proposals to both select students for the seminar and to help match students with an appropriate faculty member who will serve as the student's thesis advisor. Admitted students will be told to put their names on the waitlist for the honors seminar.

GU4999 will run as a year-long course for 3 points per semester (students will be automatically registered again in the spring), with a grade reported only at the end of the academic year. Writing a thesis will substitute for the departmental seminar requirements. Students who wish to drop out of the honors program at the end of the fall semester may do so. In this case he or she will receive a grade of R for the fall semester. The student will then have to take a senior seminar to satisfy the seminar requirement.

In addition to working one-on-one with your faculty advisor, the senior thesis candidates will meet as a group to discuss their research and to present their final results. In the fall these meetings will be held on Wednesdays from 10:10-12 with Prof Best. You must be able to attend the Wednesday meetings if you would like to write a senior thesis. The first meeting will be in late September. Once you are registered for the seminar you will receive a meeting schedule.

For more information regarding Departmental Honors and the Senior Thesis, see the [Honors and Prizes](#) page. The page includes advice, a link to a writing guide and examples of some of the outstanding theses of former students.

Opportunities

[Career Opportunities](#) has links to specific information available from Career Education, as well as, links to online career and job search resources for economics majors. [Research Opportunities](#) has information both for students looking for RA positions at Columbia and for students looking for full-time positions after graduation.

Graduate Study in Economics

The AEA has a resource page for [Preparing for graduate school](#). There you will find general information about types and rankings of programs, fellowships available, and academic preparation for graduate work. [Considerations for prospective graduate students](#) in economics has general advice regarding pursuing a PhD in economics, as well as, links to further advice on the application process and the expectations of a graduate program. Of particular note in this list is the Athey essay and the BYU guide, but all of the links contain helpful information.

If you are considering graduate work you should speak with econ-advising ASAP to plan your course schedule. We also recommend that you

- check out the list of recommended courses on the Sample Programs posted on the website
- take a junior seminar
- write an honors thesis
- work as an RA for at least one faculty member.
- request a faculty advisor

In general, there is an information session in the fall semester for students considering graduate work in economics. Information about this session will be sent out on the major listserv and posted on the wiki page.

TA Positions

This fall the department is hiring undergraduates to work alongside our graduate students as teaching assistants in several courses. Each assistant will be paid \$1800 per semester. An announcement will be sent shortly advertising the positions that are available. Applications for all positions will be due on **August 20th**.

Research Assistants

At the beginning of the semester, the department will send out on the major listserv the names of faculty members who are looking for undergraduate research assistants. You will also find the latest information on jobs, internships and other opportunities for undergraduates on the [wiki](#) space: Alternatively, if you know of a faculty member who would like to hire you as an assistant, then ask that faculty member to contact me. For more information on RA positions see the [Research Opportunities](#) page on the website.

Prizes

All prizes are open to majors and students in the joint majors.

The **Parker Prize** is awarded each year to the top CC economics major that will be pursuing a Ph.D. in economics. The prize committee will consider applicants who are not planning to immediately start graduate school the next academic year, although preference may be given to those students who are entering a Ph.D. program in 2019-20. Please be sure to let me know in the fall semester if you are applying for graduate study in economics for academic year 2019-20, or else plan to pursue a Ph.D. in economics within the next few years.

The **David Estabrook Romine Prizes** in Economics are available to both CC and GS students: one prize will be awarded for the best paper written in a senior seminar, and one prize will be awarded for the best senior honors thesis (the two prizes may not be given to the same student). Faculty will be asked to nominate students for these prizes and a faculty committee will select the winner. All prize winners will be announced at the end of the Spring term. If you are taking a senior seminar in the spring of your senior year and you want to be considered for the Romine Prize then you should speak with your instructor before the first week of April. At that time your instructor will be able to tell you when the deadline is for submission of a paper to be considered for the Romine Prize. For more information about the prizes please refer to the *Departmental Honors and Prizes* page on the website.

The **Parker Prize for Summer Research** provides financial support for CC students who take unpaid summer internships that focus on research. The **GS Prize for Summer Research** provides financial support for GS students to conduct research during the summer months. By introducing students to original research, a summer internship can provide the foundation for an honors thesis or develop an interest in pursuing a graduate degree. We are looking to support up to five CC (juniors preferred but it is open to all economics students) and two GS underclassmen. We will provide each student with a stipend of \$2500.

For more information regarding Prizes, see the [Honors and Prizes](#) page on the department website.

Computing and Data Resources

There is a dedicated TA in the department to assist students with data and programming related questions. Students who are writing empirical papers or working on empirical projects either in a lecture (other than UN3412 Econometrics) or a seminar, may speak with the TA during his or her office hours regarding programming issues. The office hours will be posted on the Advising page and the [Computing and Data Resources](#) page of the

department website early in the semester. The TA will be able to answer questions regarding STATA and R programming. In addition, the TA will hold workshops on how to handle some of the more common data issues that economics researchers face. Students who are planning on pursuing research careers in economics are strongly advised to attend these workshops. On the Computing and Data Resources page, you will also find some basic STATA and R tutorials as well as links to more information on the web. Students who are taking econometrics should continue to consult with their econometrics TAs regarding their programming issues.

Transfer Credits, AP/IB Credits and Barnard Electives

The department sets a minimum number of lecture courses that you must take in the Columbia economics department to fulfill your major requirements. The remainder of your credits may come from a combination of AP credits, transfer credits and Barnard elective course credits.

The following table outlines the rules for each of the majors and joint majors in economics.

| Program | # Lecture Courses in Economics¹ | Min # in Department² | Max # Outside³ |
|--------------------------|---|--|----------------------------------|
| Major | 9 | 5 | 4 |
| Financial Econ | 8 | 5 | 3 |
| Math | 7 | 5 | 2 |
| Political Science | 7 | 5 | 2 |
| Statistics | 7 | 5 | 2 |
| Philosophy | 7 | 5 | 2 |
| Concentration | 7 | 4 | 3 |

1. Lecture courses do not include seminars which must be taken in the Columbia department. The lecture course counts are counts of economics courses only, and do not include math, statistics or courses in other departments.
2. At least 2 of the 3 3000-level core courses must be taken in the department and no corresponding Barnard courses will be accepted. The two courses jointly taught by the Columbia and Barnard departments (UN3025 and UN3265) will continue to be counted as departmental courses regardless of the instructor.
3. Outside courses include AP (IB, GCE) credits for Principles (1 class), transfer credits for Principles (1 class even if it was a two semester sequence), Barnard 2000 and 3000 level elective courses and transfer credits from other universities.

Information regarding transfer credit approval can be found on the [Transfer Credit](#) page. You must read this material carefully before seeking approval. To apply for transfer credits for courses taken prior to registering at Columbia, you must speak with your CC or GS advisor to initiate the departmental transfer credits application process. To apply for transfer credits for courses taken during a study abroad or summer session, you must speak with Dr Gulati *prior* to taking those courses to seek preliminary approval. You must speak to him again when you return to campus to get a final approval.