

**ECONOMICS-MATH MAJOR**  
**Undergraduate Requirement Check List**

**Important Notes:**

- 1) This is a check list for your convenience only. It does not replace the **bulletin**. For details regarding the requirements below you must consult the bulletin.
- 2) You must receive a grade of **C-** or higher in any class taken for major credit. The ONLY exception is UN1105 Principles which you may take Pass/D/Fail and must receive a “P” grade for it to count towards the major. If you have taken a required class **P/D/F**, then you will be required to **uncover the P**. After receiving a P, you may not retake a course for a letter grade.
- 3) You must have all **transfer credits** for economics classes approved by the economics department. For information on what transfer courses will be accepted and how to obtain approval for transfer credits in economics, math and statistics, go to: <http://econ.columbia.edu/transfer-credit-information>.
- 4) **ECON and Math AP/IB/GCE Credits:** CC Students: said credits must appear in your SSOL transcript. GS Students: said credits must be confirmed in writing by your school advisor or included on your transfer credit submission to the department.
- 5) High school math and IB math *Standard-level* exam that exempt students from MATH UN1101, but do not grant college credits must have those missing credits replaced by taking an **additional course** – for details, go to: <https://econ.columbia.edu/undergraduate/requirements-and-forms/>
- 6) You will not receive major credit for a course taken before the completion of its pre-requisites.
- 7) If you have questions about the requirements for the Math half of the joint major then you should speak directly with an advisor in the Math Department.

**ECONOMICS Requirements**

**I. Core Courses**

- Students may not take any of the core economics courses concurrently with a senior seminar in economics.
- You must complete all of these courses at least one semester before your planned graduation date. If you are planning to take any of these courses in your penultimate semester, then you must write to the DUS for specific permission to do so.
- You may not take any of the Barnard core economics classes to replace any of the classes listed below

Taken	Course	Prerequisites
	UN 1105 Principles of Economics	None
	UN 3211 Intermediate Micro	ECON UN 1105 and MATH UN 1201
	UN 3213 Intermediate Macro	ECON UN 1105 and MATH UN 1101 Corequisite: MATH UN 1201
	UN 3412 Econometrics	ECON UN 3211 or ECON 3213, MATH UN 1201 and STAT UN 1201

List any **exam credits** (AP, IB etc) or **department approved substitution(s)** (e.g. transfer credits) for the above

## II. Electives

Three elective courses in Economics are required.

- At Columbia only elective courses taken from either the Columbia or Barnard Economics Department may be used to fulfill the elective requirement.
- All elective courses must be at the **3000 level or higher**.
- All electives in the Economics Department at the 3000 or 4000 level require BOTH UN 3211 and UN 3213 as prerequisites (and some have additional pre-requisites). Prerequisites can be found at [Course Prerequisites | Department of Economics at Columbia University](#)
- Senior Seminars do not count as electives.

Course Number	Course Title

List any **approved substitution(s)**, including transfer credits, for above requirements.

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### **Required Number of Courses Taken in the Columbia Department of Economics:**

All Economics Joint Majors are required to take a **minimum of 5 lecture courses in the department**. These 5 lectures courses will include both economics core and elective lecture courses. In addition, students must take their senior seminar in the department.

**List number of lecture courses taken in the Economics Department:** \_\_\_\_\_ (*minimum = 5*)

## III. Seminar

One senior seminar is required from the following:

- ECON GU 4911 Micro, GU 4913 Macro, GU 4918 Econometrics, GU 4999 Senior Honors Seminar (2 semesters) or GU 4921 Political Economy.
- Barnard seminars are not allowed to be taken to fulfill this requirement.
- UN 3211, UN 3213 and UN 3412 are the prerequisites for all seminars. GU4921 has an additional prerequisite of GU4370.
- The Senior Seminar must be taken in the Columbia Economics Department.

Course Number	Course Name

Students who have **questions** about any of the **above requirements** should first consult the bulletin or the online **FAQ page** at: <https://econ.columbia.edu/undergraduate/student-information/faq/>

If after consulting the bulletin and the FAQ page you still have questions, then contact: [econ-advising@columbia.edu](mailto:econ-advising@columbia.edu).

## **MATH-STAT Requirements**

### **Calc AP Credits**

- 0 Credits
- 3 Credits: a score of 4 or 5 on the AP Calculus AB exam, a 4 on the AP Calculus BC exam, or a 6 on the IB Mathematics: analysis and approaches HL exam, upon completion of either Calculus 2 or Calculus 3 with a grade of C or higher.
- 6 Credits: a score of 5 on the AP Calculus BC exam or 7 on the IB Mathematics: analysis and approaches HL exam, upon completion of Calculus 3 or Accelerated Multivariable Calculus with a grade of C or higher.
- Other, explain:

Please verify AP credits are correctly registered in SSOL; otherwise consult with your CC/GS advisor.

See [Credit for Previous College-level work](#).

### **Placement**

In some situations (see [Placement](#)) students may be allowed to place out of Calculus 1 and/or 2 without receiving matching AP or transfer credits. In this case the missing credits have to be replaced by an additional approved course(s) (e.g. Math UN2000). If applicable, explain:

For questions on AP, transfer and placement for Calculus and Linear Algebra courses, please consult the Calculus Director.

### **Calculus and Linear algebra sequence**

Calculus I + Calculus II + [Calculus III *or* Accelerated multivariable calculus] + Linear Algebra *or* Honors Math A + Honors Math B

Code	Course name	Term	Grade

### **Analysis requirement**

Math UN2500 Analysis and Optimization

Code	Course name	Term	Grade

## Statistics requirement

Stat GU4001 *or* [Stat GU4203 + Stat GU4204]

Code	Course name	Term	Grade

Note: if you take GU4203-4024, GU4203 also counts as one of three electives.

## Electives

Three courses selected from: Math UN1202, Math UN2030, approved Math 3000+ courses.

Code	Course name	Term	Grade

Note: if you take Math UN1205 for multivariable calculus, you may not use as elective nor receive credit for Math UN1202.

## Transfer

If applicable, please enter here courses taken at another institution used to fulfill a major requirement.

All transfers have to be approved by departmental advisor(s) (Calculus director for Calc/Linear algebra/ODEs). For study abroad, consult your departmental advisor in advance of registration.

Please verify that transfer credits are correctly entered in SSOL, and check with your CC/GS advisor regarding transfer credit limits.

Code	Course name	Institution	Term	Grade

## Grading

No course with a grade of D or lower can count toward the major, with the exception of: a P for the first course taken in the major; any sporadic exception allowed by the COI (one P in F23; two Ps in SP24).

## Double-Counting

See [Departmental Major/double-counting](#). Calculus I to IV/Honors Math A-B/Stat 1201/COMS 1004 ('introductory courses') may be freely double-counted with another program (second major, or concentration/minor). In addition to these, a maximum of two courses may be double-counted, subject to approval of all concerned departmental advisors (Math+Econ+department(s) offering the second program).

If applicable, record here non-introductory courses claimed for double-counting.

Code	Course name	Second program	Term	Grade

## Additional comments and information (if needed)