Students are admitted to UCSC with a "proposed major" in most cases, and later petition to officially declare the major. Admission to UCSC does not guarantee acceptance into a particular major. Students must be declared in a major by the end of the second year (or equivalent), so learning about and preparing for a major is a primary goal for first-year students.

<table>
<thead>
<tr>
<th>Major: MATHEMATICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of an early start:</td>
</tr>
<tr>
<td>Qualification requirements and/or prerequisites for the major:</td>
</tr>
<tr>
<td>Frosh who intend to pursue this major should do the following things prior to the beginning of fall term...</td>
</tr>
<tr>
<td>...and should take these courses their first term:</td>
</tr>
</tbody>
</table>
| Sample first year plan: | Fall: MATH 19A: *Calculus for Science, Engineering, and Math*  
Winter: MATH 19B: *Calculus for Science, Engineering, and Math*  
Spring: MATH 23A: *Multivariable Calculus*, OR  
MATH 21: *Linear Algebra* (recommended for pure track) |
| Skills important for success in this major: | Students should not only have computational fluency in calculus, but also a desire to understand the theoretical underpinnings of ancient and modern mathematics. Mechanical computation quickly gets replaced by writing proofs -- careful logical arguments -- and students are required to develop this technical writing skill. Successful students in mathematics are critical thinkers, careful writers, close readers, and are devoted to mathematics for its own sake as well as for its applications. |
| Other information: | • Students who intend to pursue the mathematics major should not take the Math 11A/B calculus series. The Math 19A/B series is required.  
• A combined major with economics is also available. Students interested in this possibility should contact the adviser. |
| Links to More Information: | [http://admissions.ucsc.edu/academics/majors/](http://admissions.ucsc.edu/academics/majors/) (general info)  
[http://registrar.ucsc.edu/catalog/programs-courses/](http://registrar.ucsc.edu/catalog/programs-courses/) (major requirements, course descriptions, etc.)  
[http://undergrad.pbsci.ucsc.edu/mathematics/](http://undergrad.pbsci.ucsc.edu/mathematics/) (program website) |
| Questions? Contact an Adviser! | Nicole Lautenschlager  
459-4143 or mathadvising@ucsc.edu  
142 Jack Baskin Engineering Bldg |
Students are admitted to UCSC with a "proposed major" in most cases, and later petition to officially declare the major. Admission to UCSC does not guarantee acceptance into a particular major. Students must be declared in a major by the end of the second year (or equivalent), so learning about and preparing for a major is a primary goal for first-year students.

**GLOBAL ECONOMICS**

This is a course-intensive program, and students who intend to pursue this major must begin taking classes for the major sometime in their first year at UCSC.

**Importance of an early start:**

Students who have a combined grade-point average (GPA) of 2.8 or better in ECON 1, 2, and the first calculus course qualify for the economics major upon applying. Students receiving a grade of NP, D, or F in one of the courses required for admission to the major may only declare once they have passed the same or equivalent course with a grade of C or better. Students who receive two grades of NP, D, or F in the required courses are not eligible to declare the major.

**Qualification requirements and/or prerequisites for the major:**

Students who have taken college-level transferable classes that may apply to the requirements of this major should submit an unofficial transcript to the department prior to July 1. This transcript is in addition to the official transcript that is required by the UCSC Admissions Office.

**Frosh who intend to pursue this major should do the following things prior to the beginning of fall term...**

- Determine your Math Placement by completing an assessment in ALEKS before July 17 at [http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-assessment-guidelines.html](http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-assessment-guidelines.html). If you completed a college-level math course, or scored 3 or better on an AP or IB calculus exam, you may be able to use that for placement instead of the ALEKS assessment.

- Students who have taken college-level transferable classes that may apply to the requirements of this major should submit an unofficial transcript to the department prior to July 1. This transcript is in addition to the official transcript that is required by the UCSC Admissions Office.

**...and should take these courses their first term:**

- Language Course (if available in your language and at your level)
- Math 2 or 3, or AMS 11A (depending on placement)
- We advise students to wait until winter or spring to take ECON 1 or 2, since it is crucial they do well in these classes, in addition to their first quarter of calculus (Econ/AMS 11A) for admittance into the major.

Because the grade in calculus is included in the qualification to the major, students should be sure they are well prepared to take this course.

- Sample academic plans are available at: [http://economics.ucsc.edu/academics/undergraduate-program/forms.html](http://economics.ucsc.edu/academics/undergraduate-program/forms.html)

**Sample first year plan:**

**Fall:**

- MATH 3: Precalculus
- Language Course (if possible; see above)

**Winter:**

- ECON 1: Introduction to Microeconomics
- ECON/AMS 11A: Math Methods for Economists I
- Language Course (if possible; see above)

**Spring:**

- ECON 2: Introduction to Macroeconomics
- ECON/AMS 11B: Math Methods for Economists II
- Language Course (if possible; see above)

**Skills important for success in this major:**

Critical reading and thinking skills, skills in mathematics and formal reasoning, deductive thinking.

**Other information:**

ECON 100A/M, 100B/N and 113 are much more difficult than ECON 1 & 2. Students should devise their academic plans to ensure they will not have to take more than one of ECON 100A/M, 100B/N, and 113 in the same term, since it is crucial that students pass these courses on the first attempt.

**Links to More Information:**

- [http://admissions.ucsc.edu/academics/majors/](http://admissions.ucsc.edu/academics/majors/) (general info)
- [http://registrar.ucsc.edu/catalog/programs-courses/](http://registrar.ucsc.edu/catalog/programs-courses/) (major requirements, course descriptions, etc.)
- [http://economics.ucsc.edu/academics/undergraduate-program/global-economics.html](http://economics.ucsc.edu/academics/undergraduate-program/global-economics.html) (program website)

**Questions? Contact an Adviser!**

Lisa Morgan and Inga Tromba
459-5028 or 459-2028 or econ_ugrad_coor@ucsc.edu
401 Engineering 2
Students are admitted to UCSC with a "proposed major" in most cases, and later petition to officially declare the major. Admission to UCSC does not guarantee acceptance into a particular major. Students must be declared in a major by the end of the second year (or equivalent), so learning about and preparing for a major is a primary goal for first-year students.

### Major: BUSINESS MANAGEMENT ECONOMICS

#### Importance of an early start:

This is a course-intensive program, and students who intend to pursue this major must begin taking classes for the major sometime in their first year at UCSC.

#### Qualification requirements and/or prerequisites for the major:

Students who have a combined grade-point average (GPA) of 2.8 or better in ECON 1, 2, and the first calculus course qualify for the economics major upon applying. Students receiving a grade of NP, D, or F in one of the courses required for admission to the major may only declare once they have passed the same or equivalent course with a grade of C or better. Students who receive two grades of NP, D, or F in the required courses are not eligible to declare the major.

See [http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-course-credit.html](http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-course-credit.html) for information on placement based on college courses, and [http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-test-credit.html](http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-test-credit.html) for information on placement based on AP exams.

- Students who have taken college-level transferable classes that may apply to the requirements of this major should submit an unofficial transcript to the department prior to July 1. This transcript is in addition to the official transcript that is required by the UCSC Admissions Office.

- Determine your Math Placement by completing an assessment in ALEKS before July 17 at [http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-assessment-guidelines.html](http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-assessment-guidelines.html). If you completed a college-level math course, or scored 3 or better on an AP or IB calculus exam, you may be able to use that for placement instead of the ALEKS assessment.

- Students who have taken college-level transferable classes that may apply to the requirements of this major should submit an unofficial transcript to the department prior to July 1. This transcript is in addition to the official transcript that is required by the UCSC Admissions Office.

Because the grade in calculus is included in the qualification to the major, students should be sure they are well prepared to take this course.

- Sample academic plans are available at: [http://economics.ucsc.edu/academics/undergraduate-program/forms.html](http://economics.ucsc.edu/academics/undergraduate-program/forms.html)

#### Sample first year plan:

<table>
<thead>
<tr>
<th>Term</th>
<th>Courses</th>
</tr>
</thead>
</table>
| Fall    | ECON 10A: Economics of Accounting I  
MATH 3: Precalculus |
| Winter  | ECON 1: Introduction to Microeconomics, and  
ECON 10B: Economics of Accounting II  
ECON/AMS 11A: Math Methods for Economists I |
| Spring  | ECON 2: Introduction to Macroeconomics, and  
ECON/AMS 11B: Math Methods for Economists II |

#### Links to More Information:

- [http://admissions.ucsc.edu/academics/majors/](http://admissions.ucsc.edu/academics/majors/) (general info)
- [http://registrar.ucsc.edu/catalog/programs-courses/](http://registrar.ucsc.edu/catalog/programs-courses/) (major requirements, course descriptions, etc.)
- [http://economics.ucsc.edu/academics/undergraduate-program/business-management.html](http://economics.ucsc.edu/academics/undergraduate-program/business-management.html) (program website)

#### Questions? Contact an Adviser!

Lisa Morgan and Inga Tromba  
459-5028 or 459-2028 or econ_ugrad_coor@ucsc.edu  
401 Engineering 2
Students are admitted to UCSC with a "proposed major" in most cases, and later petition to officially declare the major. Admission to UCSC does not guarantee acceptance into a particular major. Students must be declared in a major by the end of the second year (or equivalent), so learning about and preparing for a major is a primary goal for first-year students.

**Major:** ECONOMICS

**Importance of an early start:** This is a course-intensive program, and students who intend to pursue this major must begin taking classes for the major sometime in their first year.

**Qualification requirements and/or prerequisites for the major:** Students with a combined grade-point average of 2.8 or better in ECON 1, 2, and the first calculus course qualify for the economics major. Students receiving a grade of NP, D, or F in one of the courses required for admission to the major may only declare once they have passed the same or equivalent course with a grade of C or better. Students who receive two grades of NP, D, or F in the required courses are not eligible to declare the major.

**Frosh who intend to pursue this major should do the following things prior to the beginning of fall term...**

- Determine your Math Placement by completing an assessment in ALEKS before July 17 at http://undergrad.pbsci.ucsc.edu/enrollment/math/math-placement/mp-assessment-guidelines.html. If you completed a college-level math course, or scored 3 or better on an AP or IB calculus exam, you may be able to use that for placement instead of the ALEKS assessment.
- Students who have taken college-level classes that apply to major requirements should submit an unofficial transcript to the department by July 1, in addition to the official transcript required by UCSC Admissions.
- Students who receive two grades of NP, D, or F in the required courses are not eligible to declare the major.
- Students who have taken college-level classes that apply to major requirements should submit an unofficial transcript to the department by July 1, in addition to the official transcript required by UCSC Admissions.

...and should take these courses their first term:

- MATH 2 or 3, or AMS 11A (depending on placement)
- We advise students to wait until winter or spring to take ECON 1 or 2, since it is crucial they do well in these classes, in addition to their first quarter of calculus (Econ/AMS 11A) for admittance into the major.

**Sample first year plan:**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>MATH 3: Precalculus</td>
</tr>
<tr>
<td>Winter</td>
<td>ECON 1: Introduction to Microeconomics, and ECON/AMS 11A: Math Methods for Economists I</td>
</tr>
<tr>
<td>Spring</td>
<td>ECON 2: Introduction to Macroeconomics and ECON/AMS 11B: Math Methods for Economists II</td>
</tr>
</tbody>
</table>

**Skills important for success in this major:** Critical reading and thinking skills, skills in mathematics and formal reasoning, deductive thinking.

**Other information:** ECON 100A/M, 100B/N and 113 are much more difficult than ECON 1 & 2. Students should devise their academic plans to ensure they will not have to take more than one of ECON 100A/M, 100B/N, and 113 in the same term.

**Links to More Information:**

- http://admissions.ucsc.edu/academics/majors/ (general info)
- http://registrar.ucsc.edu/catalog/programs-courses/ (major requirements, course descriptions, etc.)
- http://economics.ucsc.edu/academics/undergraduate-program/major.html (program website)

**Questions? Contact an Adviser!**

- Lisa Morgan and Inga Tromba
  - 459-5028 or 459-2028 or econ_ugrad_coor@ucsc.edu
  - 401 Engineering 2

---

**Rev 5/31/2016**