Student Name: _____       Advisor: _____       Date: _____

# Computer Science + Economics Major (CS+ECON) BSLAS requirements worksheet

*This is a guide for course planning in the CS+Econ Major and is not intended to convey graduation requirements in totality.*
*Please see Computer Science and Economics Academic Advisors, and your LAS Records Officer throughout college to confirm requirement completion.*
*Schedule Econ Appointments: my.atlas.illinois.edu/advising/      Econ information: www.economics.illinois.edu/undergrad/info/*

## General Education Requirements

**Composition I**
*RHET 105; CMN 111 & 112; ESL 111 & 112; or ESL 115*

**Advanced Composition** _____
*Completed AFTER Composition I*

**Quantitative Reasoning I & II**
*Typically fulfilled by Calculus I & II*

**Western Cultures** *(1 Course)* _____

**Non-Western** *(1 Course)* _____

**US Minority** *(1 Course)* _____

*Students Entering Prior to Fall 2018 only need 1 course for Non-Western OR U.S. Minority Culture*

**Language Other than English**
*Completion of 4th Level of one; or 3rd Level of two*

**Humanities & Arts** *(6 Hours)* _____ _____
*Historical & Philosophical Perspectives or Literature & Arts*

**Social & Behavioral Sciences** *(6 Hours)*
*Typically fulfilled by ECON 102 & 103*

**Natural Sci. & Tech.** *(6 Hours)* _____ _____
*Life Sciences or Physical Sciences*

## Additional Major Requirements

**MATH 220 or 221 Calculus I**
*No Substitutions; Prerequisite: Current ALEKS Math Placement Score*

**MATH 231 Calculus II**
*No Substitutions; Prerequisite: MATH 220 or 221*

**MATH 225** (Intro to Matrix Theory) **or MATH 257** (Linear Algebra w/ Computational Applications)
*or MATH 415 (Applied Linear Algebra) or MATH 416 (Abstract Linear Algebra)*

## Graduation Requirements

Earned Hours:

Hours in Progress:

Total Hours: _____ (Earned + In-Progress)

Needs: _____ Hours

60 Hours at ILLINOIS. Remaining:

21 Advanced Hours (300/400-level) at ILLINOIS. Remaining:

96 Hours in LAS (up to 24 count outside LAS). Outside LAS:

120 Hours Minimum to Graduate

Minimum ILLINOIS GPA 2.00/4.00 Required (Overall & Major)

## ECON Courses Major Requirements

**ECON 102 Microeconomic Principles**

**ECON 103 Macroeconomic Principles** _____ Substitution

**ECON 202 Economic Statistics I**
*Prerequisite: Calculus*

**ECON 203 Economic Statistics II**
*Prerequisite: ECON 202 & Calculus*

**ECON 302 Intermediate Micro Theory**
*Prerequisite: ECON 102 & Calculus*

**Additional ECON Advanced 300/400-Level Courses** (12 Hours)

ECON _____       ECON _____

ECON _____       ECON _____

## CS Course Major Requirements

☐ *CS 100 Freshman Orientation*

**CS 124 Intro to Computer Science I**

**CS 128 Intro to Computer Science II**
*Prerequisite: CS 124 or CS 125*

**CS 173 Discrete Structures**
*Prerequisites: CS 124 or 125 & MATH 220 or 221*

**CS 225 Data Structures**
*Prerequisites: CS 125 or 128 & 1 OF: CS 173 or MATH 213/347/412/413*

**CS 222 Software Design Lab**
*Prerequisites: CS 128 & Credit or concurrent enrollment in CS 225*

**CS 374 Introduction to Algorithms & Models of Computation**
*Prerequisites: CS 225 & either CS 173 or MATH 213*

**CS 421 Programming Languages & Compilers**
*Prereqs: CS 233 or 240 & CS 374 & 1 OF: MATH 225/257/415/416 or ASRM 406*

### *Choose one of the following combinations:*

**Option 1**

**CS 233 Computer Architecture**
*Prerequisites: CS 125 or 128 & CS 173 or Math 213 & Credit or concurrent enrollment in CS 225*

**CS 241 System Programming**
*Prerequisites: CS 225 and CS 233*

**OR**

**Option 2**

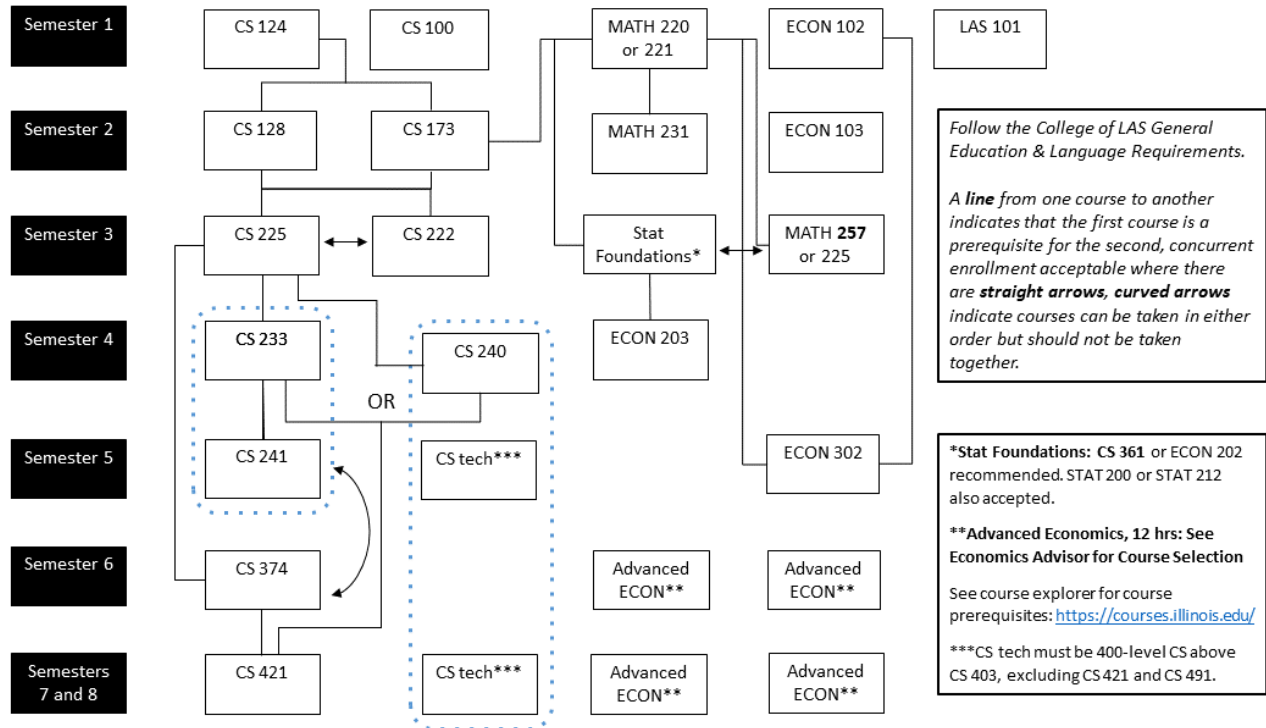**CS 240 Introduction to Computer Systems**
*Prerequisite: CS 225*

CS 4__

CS 4__

Expected Graduation Date: _____

NOTES:_____
_____
_____

## Curriculum Flow Chart for Computer Science + Economics

| | | | | | |
|---|---|---|---|---|---|
| **Semester 1** | CS 124 | CS 100 | MATH 220 or 221 | ECON 102 | LAS 101 |
| **Semester 2** | CS 128 | CS 173 | MATH 231 | ECON 103 | |
| **Semester 3** | CS 225 | CS 222 | Stat Foundations* | MATH **257** or 225 | |
| **Semester 4** | CS 233 | CS 240 | ECON 203 | | |
| | | OR | | | |
| **Semester 5** | CS 241 | CS tech*** | | ECON 302 | |
| **Semester 6** | CS 374 | | Advanced ECON** | Advanced ECON** | |
| **Semesters 7 and 8** | CS 421 | CS tech*** | Advanced ECON** | Advanced ECON** | |

Follow the College of LAS General Education & Language Requirements.

*A line* from one course to another indicates that the first course is a prerequisite for the second, concurrent enrollment acceptable where there are **straight arrows**, **curved arrows** indicate courses can be taken in either order but should not be taken together.

***Stat Foundations: CS 361** or ECON 202 recommended. STAT 200 or STAT 212 also accepted.

****Advanced Economics, 12 hrs: See Economics Advisor for Course Selection**

See course explorer for course prerequisites: https://courses.illinois.edu/

*****CS tech must be 400-level CS above CS 403, excluding CS 421 and CS 491.

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# Declaring CS + ECON*:

On-campus students who would like to declare this major must meet the following criteria:

- **Grade of B- or higher in ECON 102, ECON 103, ECON 202, and ECON 203**
  - ECON 202 or substitute – see ECON website.
  - At least 2 courses must be taken at ILLINOIS
  - Individual grades for all Econ courses taken must be a B- or higher
  - All ECON courses taken at the time of declaring are considered
- **Grade of B- or higher in MATH 231**
- **Grade of B+ or higher in CS 173 and CS 225**
  - Grade of B+ or higher in all CS courses taken at ILLINOIS
  - Individual grades used (not a combined GPA)
  - Students who earn proficiency or transfer credit in CS 173 and/or 225 must complete CS 233 then CS 241 at ILLINOIS with a minimum grade of B+
- **Cumulative GPA of 3.50 or higher**

*Students must be approved for transfer to the CS+X majors via a portfolio application process; meeting the course, grade, and GPA standards does not guarantee admission.

Visit the LAS Website for More Information: http://www.las.illinois.edu/students/programs/declaring/

## Visit Econ Website for Additional Information:
https://economics.illinois.edu/academics/undergraduate-program/majors-minor/cs-econ
*and*
https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs