Long Beach

# ASSOCIATE IN SCIENCE IN MATHEMATICS FOR TRANSFER 

## Curriculum Guide for Academic Year 2011-2012

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Resources available for transfer students:
Academic Counselors (Call 562-938-4561 at LAC or 562-938-3920 at PCC)
Transfer Center (Call 562-938-4670 at LAC or 562-938-3920 at PCC)
ASSIST web site at www.assist.org

## Program of study leading to: <br> Associate in Science (AS-T) Degree

| REQUIRED COURSES (20 Units): |  |
| :---: | :---: |
| *† MATH 60 | First Calculus Course |
| * $\dagger$ MATH 70 | Second Calculus Course |
| * $\dagger$ MATH 80 | Third Calculus Course |
| * $\dagger$ MATH 84 | Intro Differential Equations \& Linear Algeb |
| LIST A: Choose One Course (3 Units Minimum) |  |
| $\dagger$ MATH 55 | Discrete Mathematics |
| * $\dagger$ PHYS 3A | Physics for Sci. \& Eng-Mechanics |
| * $\dagger$ PHYS 3B | Physics for Sci. \& Eng-E \& M |
| * $\dagger$ PHYS 3C | Physics for Sci. \& Eng-Modern Physics |
| $\dagger$ ENGR 54 | Computer Methods |
| $\dagger$ CS 11 | Computer Programming-- C++1 |
| $\dagger$ CS 21 | Intro to Computer Science I |
| STAT 1/1H | Elementary Statistics/Honors |


| C-ID <br> Descriptor | CSU <br> GE Area | IGETC <br> Area | Units | In <br> Progress | Completed <br> Grade |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MATH 210 | B4 | 2 | 5 |  |  |
| MATH 220 | B4 | 2 | 5 |  |  |
| MATH 230 | B4 | 2 | 5 |  |  |
|  | B4 | 2 | 5 |  |  |


|  |  |  | 4 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | B1 | 5 | 5 |  |  |
|  | B1 | 5 | 4 |  |  |
|  | B1 | 5 | 4 |  |  |
|  |  |  | 3 |  |  |
|  |  |  | 3.5 |  |  |
|  |  |  | 3.5 |  |  |
|  | B4 | 2 | 3 |  |  |

## IN ADDITION to the above major courses, students are also required to obtain general education certification and meet other degree requirements as specified on the next page.

## General Education Certification Requirements

Completion of EITHER the California State University General Education-Breadth pattern (CSU GE Breadth) OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern IS REQUIRED. For general education patterns, visit the following web site: http://osca.lbcc.edu/genedplan.cfm, or the LBCC catalog. After completion of the General Education Pattern students must request GE certification. Consult with a counselor for more information about the GE Certification process.

## Other Degree Requirements

1. Minimum Unit Requirements: Complete a minimum of 60 transferable units. Please note that additional units may be required to meet this minimum based upon courses selected to fulfill CSU-GE Breadth Pattern or the IGETC Pattern.

If following CSU-GE Breadth Pattern

|  | Units |
| :--- | :--- |
| Math Major | $23-25^{* *}$ |
| CSU-GE Breadth | 39 |
| Minimum Required | $\mathbf{6 0}$ |

If following IGETC Pattern

|  | Units |
| :--- | :--- |
| Math Major | $23-25^{\star *}$ |
| IGETC Pattern | 37 |
| Minimum Required | $\mathbf{6 0}$ |

**Double-Counting of Units: SB 1440 Regulations allow for double-counting of major requirements towards CSU- GE Breadth or IGETC patterns, and 9-10 units of the Math for Transfer coursework can be applied to the CSU- GE Breadth or IGETC patterns.
2. Minimum grade and GPA requirements: Maintain an overall grade point average (GPA) of 2.0 ("C" average) in all CSU-transferable coursework. For the major complete each course with a grade of " C " or better, or " P " if course is graded on a P/NP basis.
3. Residence for the Degree: Complete at least 12 units of the required 60 in residence at LBCC.
4. Degree Application: Complete and submit the degree application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at http://admissions.lbcc.edu/. Refer to the Schedule of Classes (http://schedule.lbcc.edu) and click the "Important Dates" link to view the actual deadline for each semester.

## Suggested Sequence of Classes

This is not an educational plan, as course offerings, student schedules, and circumstances vary. Students must meet all the prerequisites in order to be eligible for the sequence of courses.

A suggested full-time sample sequence of courses for the program includes:

| First Semester |  | Units | Second Semester |  | Units |
| :--- | :---: | :---: | :---: | :---: | :---: |
| MATH 60 | 5 | MATH 70 | 5 |  |  |
|  |  |  |  | SHYSICS 3A | 5 |
|  | Semester Total | 5 |  |  |  |
| Third Semester |  | Fourth Semester |  | 5 |  |
| MATH 80 |  | MATH 84 | Semester Total | 5 |  |

## Program Mission and Outcomes

Please contact the Long Beach City College Mathematics department @ 562-938-4168 or 562-938-4428 for the Program Mission statement and Student Learning Outcomes.

## Legend

$\dagger$ This course has a prerequisite; prerequisite courses must be completed with at least a " C " or " P " grade. Refer to the General Catalog (http://www.lbcc.edu/cat/index.html), the Schedule of Classes (http://schedule.lbcc.edu/), or the online Credit Course Outline (http://wdb-asir.lbcc.edu/coursecurriculum/coursedetails/) for specific prerequisite information.

* This course is an exception to "the double counting" rule; it may be double counted.

