LONG BEACH CITY COLLEGE

ASSOCIATE IN SCIENCE IN MATHEMATICS FOR TRANSFER

Curriculum Guide for Academic Year 2013-2014

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

Program of study leading to:
Associate in Science (AS-T) Degree

REQUIRED COURSES:		C-ID Descriptor	CSU GE Area	IGETC Area	Units	In Progress	Completed Grade
† MATH 60	First Calculus Course	MATH 210	B4	2	5		
† MATH 70	Second Calculus Course	MATH 220	B4	2	5		
† MATH 80	Third Calculus Course	MATH 230	B4	2	5		
† MATH 84	Intro Differential Equations & Linear Algebra		B4	2	5		
				Subtotal Units	**20**		
IN ADDITION, Complete 1 Course from LIST A:							
LIST A							
† MATH 55	Discrete Mathematics				4		
† PHYS 3A	Physics for Sci. & Eng—Mechanics		B1	5	5.5		
† PHYS 3B	Physics for Sci. & Eng—E & M		B1	5	4.5		
† PHYS 3C	Physics for Sci. & Eng—Modern Physics		B1	5	4.5		
† ENGR 54	Computer Methods				3.5		
† CS 11	Computer Programming-- C++1				4		
† CS 21	Intro to Computer Science I				4		
† STAT 1/1H	Elementary Statistics/Honors	MATH 110	B4	2	3		
				Subtotal Units	**3-5.5**		
				TOTAL UNITS	**23-25.5**		

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

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		**If following IGETC Pattern**	
	Units		Units
Math Major	23-25.5**	Math Major	23-25.5**
CSU-GE Breadth	39	IGETC Pattern	37
Minimum Required	**60**	**Minimum Required**	**60**

****Double-Counting of Units:** SB 1440 Regulations allow for double-counting of major requirements towards CSU- GE Breadth or IGETC patterns, and **6 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**
†	MATH 60		5
		Semester Total	**5**

	Second Semester		**Units**
†	MATH 70		5
†	PHYSICS 3A		5.5
		Semester Total	**10.5**

	Third Semester		
†	MATH 80		5
		Semester Total	**5**

	Fourth Semester		
†	MATH 84		5
		Semester Total	**5**

Program Mission and Outcomes

The mission of the Associate in Science in Mathematics for Transfer program is to give those students who aspire to become scientists or engineers the opportunity to explore these fields of study here at Long Beach City College, and to supply students with the necessary lower division preparation at the community college.

Outcomes:

- To serve students to meet graduation for an Associate in Science in Mathematics for Transfer.
- To serve students to meet career/transfer requirements.

Legend

† 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.