

# **PHYSICAL SCIENCES**

Curriculum Guide for Academic Year 2017-2018

## Table of Contents

Associate in Arts or Associate In Science Degree, p. 1 Career Opportunities, p. 2 Program Mission and Outcomes, p. 3 Legend, p. 3

Students planning to **transfer** to a four-year college or university should refer to the ASSIST web site at <u>www.assist.org</u> and **consult a counselor** before beginning a program of study. Please call 562-938-4561 for the LAC, or (562) 938-3920 for PCC to schedule a meeting with a counselor. Students may also wish to visit the Transfer Center on either campus.

Program of study leading to: Associate in Arts (A.A.) or Associate in Science (A.S.) Degree										
REQUIRED COURSES: Complete THIRTEEN - FIFTEEN (13 - 15) UNITS from the following disciplines:										
ASTRONOMY (ASTR) All Courses	†CHEMISTRY—Choosefrom: CHEM 2 OR CHEM 3OR CHEM 1A (but limited toIRONOMY (ASTR)only one of these courses),ENVIRONMENTAL			PHYSICAL GEOGRAPHY All Courses						
GEOLO Choose From: GEOL 1 Any other GEOL co	PHYSICS (PHYS) PHYS 2A or 3A but not both 3B but not both, PHYS 3C YS course offered at LBCC.									
COURSE NO.	COURSE NO. COURSE TITLE			In Progress	Completed Grade					
		Subtotal Units	13 - 15							
IN ADDITION, Complete a Co										
Computer Class—Any class which satisfies the Technology portion of the Information Competency requirement for graduation. See the current General Education Course Pattern Guide for a complete listing of acceptable courses.										
COURSE NO.	COURSE TITLI	E	1	In Progress	Completed Grade					
		Subtotal Units	1 – 4							
Associate Degree requiremen	nts continue on the following page:									

Associate Degree requirement	s continued from the previous page:
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IN ADDITION, Complete FIVE – SIX (5 – 6) UNITS from any Mathematics course which has a prerequisite of Intermediate Algebra (MATH 130) or higher

<u>_</u>	COURSE NO. COURSE TITLE			UNITS	In Progress	Completed Grade				
			Subtotal TOTAL I		5 – 6 19 - 25					
NOTE: Courses are offered each semester excluding the following: PHYS 2B is offered once each year, usually in the second semester. PHYS 3C is offered once each year, usually in the second semester. GEOL 3 is offered once each year, usually in the second semester										
<ul> <li>For graduation with an A.A. or A.S. Degree with a major in Physical Sciences:</li> <li>1. Minimum Unit Requirements: §Any course that appears on a curriculum guide and the General Education Pattern (Plan A) may fulfill both major and general education requirements (Approved by College Curriculum Committee Spring 2012). For this degree, complete a minimum of 60 units in courses numbered 1-599. Please note that additional elective units may be required to meet this minimum based upon courses selected to fulfill General Education for the Associate Degree.</li> </ul>										
		A.A. Degree	Physical Sciences Major: General Education/A.A. §		25 units 25 units					
		A.S. Degree	Physical Sciences Major: General Education/A.S. §		25 units 19 units					
2. Scholarship: Maintain an overall grade point average (GPA) of 2.0 ("C" average) based on all accredited college work applied to the degree, no matter where completed. For this field of concentration, complete each course above with a										
3.	<ul> <li>grade of "C" or better, or "P" if course is graded on a P/NP basis.</li> <li>3. Residence for the Degree: Complete at least 12 semester units of the required 60 semester units in residence at Long</li> </ul>									
<ul> <li>Beach City College in order for the college to grant an Associate of Arts and/or an Associate of Science Degree.</li> <li><b>Residence for the Field of Concentration</b>: Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at least 9.5 – 12.5 units of the required 19 - 25 must be completed at Long Beach City College. Credit earned by exam, where applicable, may be included.</li> </ul>										
5.	General Education	and Proficiency R ts*, otherwise known	equirements: Complete the as "Plan A". For Plan A rec	ne requir	ed A.A./A					
6.	Complete and submit course work. These for	the degree applicati orms are available in e of Classes ( <u>http://</u>	on form to the Admissions a the Admissions and Record schedule.lbcc.edu) and click	ls office, o	or online a	at http://admis	sions.lbcc.edu/			
This ca	atalog year may be any	year between the	and the field of concentration year of initial enrollment to of "continuous enrollment".							

### **Career Opportunities**

Students are provided an introduction to the lower division course preparation for transfer to a baccalaureate degree in various physical science majors.

This <u>Associate Degree</u> will prepare students for an entry-level position as laboratory technician. Appropriate course selection will also facilitate transfer in a related major.

### **Program Mission and Outcomes**

The mission of the physical science program is to teach courses which provide an understanding of physical science concepts and thus permit students to transfer to four-year institutions and to enable students to apply the scientific method to gain an evidenced-based understanding of contemporary scientific issues.

Outcomes

- Differentiate between unsupported opinions and verifiable scientific facts supported by observations, experiments, and scientific theory.
- Demonstrate a basic scientific understanding of a specific field of science by examining and analyzing the nature and content of applicable physical laws.

#### Legend

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

PHYSICAL SCIENCES 2017-2018 **AA = 1540; AS = 2540** Departmental Phone: 562-938-4168; Web site: <u>http://www.lbcc.edu/physicalscience/</u> Information on this sheet is subject to change without notice. Any updates to this guide are posted at <u>http://osca.lbcc.edu</u>.