Astronomy 2017-18

Associate Degree Graduation Requirements

(1) Complete all department requirements with a "C" or better or "P" in each course (at least 20% of the department requirements must be completed through SBCC); **(2)** Complete one of the following three General Education options: **OPTION 1:** SBCC General Education Requirements (Areas A-D) and Institutional Requirements (Area E) and Information Competency Requirement (Area F) OR **OPTION 2:** IGETC Pattern OR **OPTION 3:** CSU GE Breadth Pattern; **(3)** Complete a total of 60 degree-applicable units (SBCC courses numbered 100 and higher); **(4)** Maintain a cumulative GPA of 2.0 or better in all units attempted at SBCC; **(5)** Maintain a cumulative GPA of 2.0 or better in all college units attempted; and **(6)** Complete 15 units through SBCC.

Department Requirements
(Total Department Units: 40-43)

Current Course No.	Previous Course No.	Title *applies to SBCC GE areas*	Units	Institution & Course No.	Grade	Units (s/q)	Term
• CHEM 155	(5)	General Chemistry I [A]	5.0				
• CS 105	(135/COMSC 135/35)	Theory and Practice I ***OR***	3.0				
CS 133	(none)	Intro to Programming for Engineers ***OR***	3.0				
CS 137	(COMSC 137/37)	C Programming ***OR***	3.0				
CS 140	(COMSC 140)	Object-Oriented Programming, Using C++	4.0				
• ERTH 101	(17)	Introductory Astronomy [A] ***OR***	3.0				
ERTH 101H	(101HR)	Introductory Astronomy, Honors [A]	4.0				
• ERTH 102	(18)	Observational Astronomy, Laboratory [A]	1.0				
• ERTH 106*	(none)	Black Holes and the Universe ***OR***	3.0				
ERTH 111	(EARTH 111/3)	Dynamic Earth-Physical Geol ***OR***	3.0				
ERTH 111H	(none)	Dynamic Earth-Phys Geol, Honors ***OR***	4.0				
ERTH 141	(EARTH 141/1)	Physical Geography ***OR***	3.0				
GEOG 101	(1)	Physical Geography	3.0				
• MATH 150	(25)	Calculus with Analytic Geometry I [D2]	5.0				
• MATH 160	(26)	Calculus with Analytic Geometry II [D2]	5.0				
• PHYS 121	(21)	Mechanics of Solids and Fluids [A]	5.0				
• PHYS 122	(22)	Electricity and Magnetism	5.0				
• PHYS 123	(23)	Heat, Light and Modern Physics	5.0				

*Students interested in pursuing a degree in astronomy with an astrophysics emphasis should take ERTH 106. Students interested in pursuing a degree in astronomy with a planetary emphasis should take either ERTH 111 (or 111H) or ERTH 141 (or GEOG 101).

Additional Program Information

For further information, contact the Counseling Center, 965-0581, Ext. 2285, or Michael Robinson, Department Chair, 965-0581, Ext. 3741.

SBCC AA/AS Degree Graduation Requirements Worksheet (Must complete IA or IB or IC, and II, and III and IV below)

IA. IGETC (http://articulation.sbcc.edu/IGETC/IGETC.pdf)		Course #	Grade	Units (s/q)	Term
1A.	English Composition				
1B.	Critical Thinking-English Composition				
1C.	Oral Communication (CSU only)				
2A.	Mathematics				
3A.	Arts				
3B.	Humanities				
4.	Social Sciences				
5A/5C.	Physical Sciences				
5B/5C.	Biological Sciences				
6A.	Language Other Than English (UC only)				
IB. CSU GE Breadth Pattern (http://articulation.sbcc.edu/CSU/CSUGE.pdf)		**Course #**	**Grade**	**Units (s/q)**	**Term**
A1.	Oral Communication				
A2.	Written Communication				
A3.	Critical Thinking				
B1/B3.	Physical Science				
B2/B3.	Life Science				
B4.	Mathematics				
C1.	Arts				
C2.	Humanities				
D.	Social Sciences				
E.	Lifelong Learning and Self-Development				
IC. SBCC GE, Institutional & Info Competency (http://www.sbcc.edu/applv/files/gereq.pdf)		**Course #**	**Grade**	**Units (s/q)**	**Term**
A.	Natural Sciences with Lab				
B.	Social and Behavioral Science				
C.	Humanities				
D-1.	English Composition				
D-2.	Communication and Analytical Thinking				
E-1.	Mathematics - *Plus complete 3 out of the 4 areas listed below (E-2 through E-5)*				
E-2.	American Institutions				
E-3.	Physical Education/Health Education				
E-4.	Oral Communication				
E-5.	Multicultural/Gender Studies				
F.	Information Competency				

II. Unit and Grade Point Average Requirements: Refer to Graduation Requirements on the other side of this document.

	Total Semester Units Attempted	Total Semester Units Completed	Grade Points	GPA
SBCC				
Transfer				
Total				

III. Residency Requirements: 15 units completed through SBCC & 20% of Department Requirements completed through SBCC? ☐ Yes ☐ No

IV. Department Requirements: Refer to the other side of this document for a list of department required courses. ☐ Yes ☐ No

Santa Barbara City College

Astronomy

2017-18

Associate in Science Degree in Astronomy
Astronomy has played an important role in the development of modern science and technology. Astronomers study the formation, chemistry, composition, and evolution of celestial objects. Modern astronomers work with advanced technology and instrumentation to study planets, stars galaxies, nebulae, black holes, and the universe itself. Students take astronomy courses to prepare for a major in astronomy, or to fulfill general education requirements in related fields, or to prepare for various jobs as technicians for high-tech industries. In addition, the Associate in Science in Astronomy degree (A.S. in Astronomy) at Santa Barbara City College will prepare students to continue on with science, engineering, astrophysics and astronomy baccalaureate majors at UC and CSU campuses.

Careers in Physics
Graduates with a bachelor's degree in astronomy pursue careers as museum and planetarium directors, astronomers/astrophysicists, space scientists, mission data analysts, spacecraft and instrument designers, teachers, observatory technicians, telescope operators, electronics technicians, computer programmers, or to work in the fields of optics, mathematics, electronics, or computer programming.

Note: Program first offered Spring, 2017.

SBCC: Your Open Door to Educational Excellence