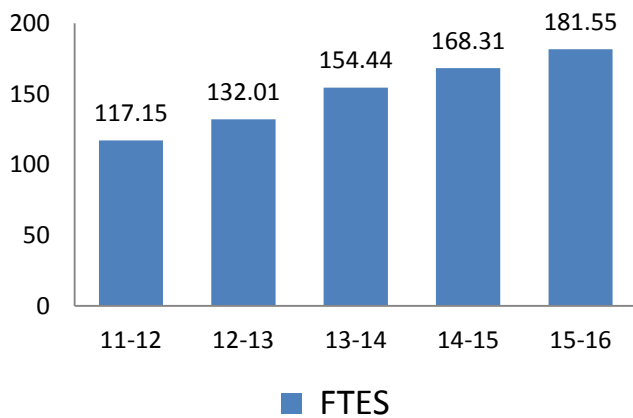


## PHYSICS/ASTRONOMY — 2015-2016



**Description:** The Physics/Astronomy/Engineering Department offers general education Physics/Astronomy courses; a physics sequence for majors in the life sciences, biology, pre-nursing/medicine, and allied health programs; a physics sequence for majors in astronomy, chemistry, engineering, geology, physics, and other physical sciences; and engineering courses. The Department operates a Planetarium and an Observatory supporting instruction and offering Astronomy programs for local schools and the community.

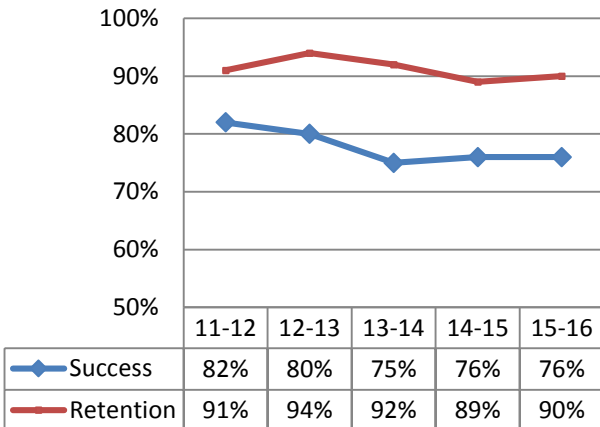
**Assessment:**

- FTES, enrollment, and WSCH/FTEF increased steadily, on average, through 15-16 since the slight drop in 11-12 resulting from section cutbacks and budget restrictions
- Retention rates slightly increased 12-13 and leveled off through 15-16; success rates dropped slightly from 11-12 and leveled off through 15-16
- With new sections opening, FTES, enrollment, and FTEF have increased, while WSCH/FTEF has oscillated since 10-11 and leveled off during 14-16; these variations may be due to 11-12 cutbacks
- Number of degrees awarded has averaged 2 per year

	10-11	11-12	12-13	13-14	14-15	15-16
Duplicated Enrollment	814	604	656	771	797	885
FTEF	6.08	5.95	6.29	7.20	8.42	9.12
WSCH per FTEF	684	591	630	643	599	597

**Department Goals:**

- Create more tutoring/workshop and SI opportunities for students through the Student Success Center
- Strengthen the Engineering program and offer more ENGR courses
- Increase the Physics Lab Tech position to full-time to facilitate increasing faculty needs and assist in maintaining the Planetarium
- Maintain lab equipment and supplies for quality education
- Update the Physics/Astronomy labs and their equipment needs
- Incorporate the use of on-line practice problem-solving software as Mastering Physics or Web-Assign in upper level courses
- Replace the Planetarium specialist to maintain the Planetarium programs and outreach activities
- Hire a full-time Physics/Astronomy faculty



**Challenges & Opportunities:**

- Develop strategies to increase student success rates and to maintain high productivity of classes determined by WSCH/FTEF
- Develop ways to encourage more students to major in the physical sciences, to encourage more pre-med students to attend SBVC, and to increase the number of degrees awarded
- Enhance the Department's curriculum with more engineering-related offerings and encourage more pre-engineering students to attend SBVC
- Identify and retain qualified adjunct to teach all Physics, Astronomy, and Engineering classes
- Create a hybrid Physics 101 course with on-line lectures and on-campus labs and/or tests

	10-11	11-12	12-13	13-14	14-15	15-16
Sections	36	26	27	33	38	44
% of online enrollment	6%	8%	7%	6%	5%	5%
Degrees awarded*	0	2	1	4	1	
Certificates awarded*	N/A	N/A	N/A	N/A	N/A	N/A

**Action Plan:**

- With Program Review, upgrade the Physics Lab Tech position to full-time, and train the lab tech in all operations of the Planetarium
- Update/revise the Physics/Astronomy labs and related equipment with Department lab technician
- With local universities, enhance Dept Engineering curriculum and encourage more pre-engineering/pre-med students to attend SBVC
- Incorporate and support the operation of the SI program in all Physics, Astronomy, and Engineering courses
- Test existing practice problem-solving software and consult with other colleges using such software to determine the most appropriate software for use at SBVC
- Consult on-line instructors to formulate hybrid Physics 101 course

TOP Code: 191100/190200

Award Source: [http://datamart.cccco.edu/Outcomes/Program\\_Awards.aspx](http://datamart.cccco.edu/Outcomes/Program_Awards.aspx)

\*Data will be available in October 2016

