

Coastline College

# Physical and Life Sciences

Program Student Learning  
Outcomes Report

Updated 2019-2020

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**COASTLINE**  
COLLEGE



## 2015-2016

### 2015-2016 Physical and Life Sciences Program Student Learning Outcomes (PSLOs)

Sciences PSLOs	N	Able and Confident	Able and Somewhat Confident	Able and Not Confident	Not Able
Adequately explain thinking and mathematical processes, and justify mathematical solutions effectively and accurately.	8	75.0%	12.5%	12.5%	0.0%
Apply appropriate physical laws and mathematical techniques to analyze various physical situations.	8	62.5%	37.5%	0.0%	0.0%
Apply major theories and principles of the field to everyday life and determine the impact of these theories on the aging individual and/or society as a whole.	8	75.0%	25.0%	0.0%	0.0%
Communicate chemical concepts effectively in written and/or oral forms.	8	50.0%	12.5%	37.5%	0.0%
Design and apply the process of science to address a hypothesis.	8	87.5%	12.5%	0.0%	0.0%
Develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment.	8	100.0%	0.0%	0.0%	0.0%
Find, select, evaluate and communicate scientific information present in primary research literature, mass media, online or other sources.	8	75.0%	25.0%	0.0%	0.0%
Identify and describe major concepts and theoretical principles as applied to physics.	8	37.5%	37.5%	12.5%	12.5%
Perform various scientific experiments and analyze data to check agreement with theoretical predictions.	8	62.5%	37.5%	0.0%	0.0%
Support opinions/ideas using solid research principles.	8	87.5%	12.5%	0.0%	0.0%

There were not enough respondents (less than 10) to the 2015-2016 post-graduation survey for the Physical and Life Sciences Program to produce meaningful data.

## 2016-2018

There were no graduate responses for the Physical and Life Sciences Program in 2016-17 and 2017-18.

## 2018-2019

### 2018-2019 Physical and Life Sciences Program Student Learning Outcomes (PSLOs)

Sciences PSLOs	N	Able and Confident	Able and Somewhat Confident	Able and Not Confident	Not Able
Adequately explain thinking and mathematical processes, and justify mathematical solutions effectively and accurately.	8	62.5%	37.5%	0.0%	0.0%
Apply appropriate physical laws and mathematical techniques to analyze various physical situations.	8	62.5%	25.0%	12.5%	0.0%
Apply major theories and principles of the field to everyday life and determine the impact of these theories on the aging individual and/or society as a whole.	8	50.0%	50.0%	0.0%	0.0%
Communicate chemical concepts effectively in written and/or oral forms.	8	37.5%	37.5%	12.5%	12.5%
Design and apply the process of science to address a hypothesis.	8	75.0%	12.5%	12.5%	0.0%
Develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment.	8	75.0%	12.5%	12.5%	0.0%
Find, select, evaluate and communicate scientific information present in primary research literature, mass media, online or other sources.	8	50.0%	50.0%	0.0%	0.0%
Identify and describe major concepts and theoretical principles as applied to physics.	8	37.5%	37.5%	12.5%	12.5%
Perform various scientific experiments and analyze data to check agreement with theoretical predictions.	8	75.0%	25.0%	0.0%	0.0%
Support opinions/ideas using solid research principles.	8	75.0%	25.0%	0.0%	0.0%

There were not enough respondents (less than 10) to the 2018-2019 post-graduation survey for the Physical and Life Sciences Program to produce meaningful data.

## 2019-2020

### 2018-2019 Physical and Life Sciences Program Student Learning Outcomes (PSLOs)

Sciences PSLOs	N	Able and Confident	Able and Somewhat Confident	Able and Not Confident	Not Able
Adequately explain thinking and mathematical processes, and justify mathematical solutions effectively and accurately.	10	80.0%	20.0%	0.0%	0.0%
Apply appropriate physical laws and mathematical techniques to analyze various physical situations.	10	80.0%	20.0%	0.0%	0.0%
Apply major theories and principles of the field to everyday life and determine the impact of these theories on the aging individual and/or society as a whole.	10	70.0%	20.0%	10.0%	0.0%
Communicate chemical concepts effectively in written and/or oral forms.	10	80.0%	10.0%	0.0%	10.0%
Design and apply the process of science to address a hypothesis.	10	90.0%	10.0%	0.0%	0.0%
Develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment.	10	90.0%	10.0%	0.0%	0.0%
Find, select, evaluate and communicate scientific information present in primary research literature, mass media, online or other sources.	10	80.0%	10.0%	10.0%	0.0%
Identify and describe major concepts and theoretical principles as applied to physics.	10	80.0%	20.0%	0.0%	0.0%
Perform various scientific experiments and analyze data to check agreement with theoretical predictions.	10	80.0%	10.0%	10.0%	0.0%
Support opinions/ideas using solid research principles.	10	90.0%	10.0%	0.0%	0.0%

The 2019-2020 post-graduation survey found that the majority of graduates of the Physical and Life Sciences Program were able and confident in demonstrating the PSLOs. Graduates indicated that their ability and confidence to design and apply the process of science to address a hypothesis; develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment; and, to support opinions/ideas using solid research principles. In contrast, graduates indicated having a lower ability and confidence to apply major theories and principles of the field to everyday life and determine the impact of these theories on the aging individual and/or society as a whole.

## 2015-2016 through 2019-2020

### Aggregate Physical and Life Sciences Program Student Learning Outcomes (PSLOs)

Sciences PSLOs	N	Able and Confident	Able and Somewhat Confident	Able and Not Confident	Not Able
Adequately explain thinking and mathematical processes, and justify mathematical solutions effectively and accurately.	26	73.08%	23.08%	3.85%	0.00%
Apply appropriate physical laws and mathematical techniques to analyze various physical situations.	26	69.23%	26.92%	3.85%	0.00%
Apply major theories and principles of the field to everyday life and determine the impact of these theories on the aging individual and/or society as a whole.	26	65.38%	30.77%	3.85%	0.00%
Communicate chemical concepts effectively in written and/or oral forms.	26	57.69%	19.23%	15.38%	7.69%
Design and apply the process of science to address a hypothesis.	26	84.62%	11.54%	3.85%	0.00%
Develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment.	26	88.46%	7.69%	3.85%	0.00%
Find, select, evaluate and communicate scientific information present in primary research literature, mass media, online or other sources.	26	69.23%	26.92%	3.85%	0.00%
Identify and describe major concepts and theoretical principles as applied to physics.	26	53.85%	30.77%	7.69%	7.69%
Perform various scientific experiments and analyze data to check agreement with theoretical predictions.	26	73.08%	23.08%	3.85%	0.00%
Support opinions/ideas using solid research principles.	26	84.62%	15.38%	0.00%	0.00%

The aggregate post-graduation survey results show that the majority of graduates of the Physical and Life Sciences Program were able and confident or somewhat confident in demonstrating the PSLOs. Graduates indicated that their ability and confidence in developing and exhibiting high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly-changing healthcare/management environment was highest. In contrast, confidence and ability was lowest in communicating chemical concepts effectively in written and/or oral forms.