Oregon TECH

2022-23
Biology-Health Sciences Program Assessment Report
Prepared by Y. Yang & R. Edwards for Natural Sciences Dept
Chair Nate Bickford

Section 1 – Program Mission and Educational Objectives

Program Mission:

The Bachelor of Science program in Biology-Health Sciences (BHS) prepares undergraduate students for professional and graduate schools in the medical sciences (medicine, dentistry, pharmacy, veterinary sciences, physical therapy, physician assistant, etc.).

Mission Alignment:

The BHS program has the following Educational Objectives:
• Provide an integrated foundation of knowledge in biological disciplines that includes morphological, cellular, molecular, physiological, developmental, and evolutionary principles.
• Train students to utilize the scientific method and develop skills in analysis, evaluation, and critical thinking, as well as communication, team building, and professionalism.
• Prepare students for entrance into graduate schools and professional health schools, including preparation for national admissions examinations such as the Graduate Record Examination (GRE), Medical College Admission Test (MCAT), Dental School Admissions Test (DAT), and similar examinations, or qualify them for entry level positions in biology and health-related occupations.

Section 2 – Program Student Learning Outcomes

Upon completion of the program, students will have demonstrated the following abilities:
Program Student Learning Outcomes

- PSLO 1 - Demonstrate scientific knowledge and understanding. a. Demonstrate foundational knowledge in the natural sciences (e.g., terminology, organization, classifications, appropriate use of units, methodologies, and fundamental principles). b. Apply scientific principles to biological and medical examples/contexts.
- PSLO 2 - Be proficient in scientific reasoning and critical thinking. a. Analyze data to determine its relationship to principles and evaluate the data for errors. b. Analyze and evaluate content in biology.
- PSLO 3 - Be able to effectively find and use resources from literature.
- PSLO 4 - Demonstrate effective oral, written and visual communication.
- PSLO 5 - Demonstrate mathematical knowledge and skills in the biological sciences.

PSLOs are reviewed annually to maintain relevance in a rapidly evolving job market. Our agency partners advise on essential skills and desired qualifications to ensure that our graduates are successful on the job.

Section 3 – Curriculum Map

Institutional Student Learning Outcomes (ISLOs) are aligned with our Program Student Learning Outcomes (PSLOs) to make sure both are following a 3-year assessment cycle.
ISLO 1 – Communication
ISLO 2 – Inquiry & Analysis
ISLO 3 – Ethical Reasoning
ISLO 4 – Quantitative Literacy
ISLO 5 - Teamwork
ISLO 6 – Diverse Perspectives

PSLOs and ISLOs are assessed at three levels and each PSLO/ISLO addressed by each course is listed at the appropriate level.

- Foundational (F) – introduction to the concept
- Practice (P) – performance within programmatic coursework that builds on foundational knowledge
- Capstone (C) – synthesis of knowledge from multiple areas in coursework in application of professional level practice

University	ISLO 1,3,6	ISLO 2,5	ISLO 3,6	ISLO 1,5	ISLO 2,4
Program	PSLO 1	PSLO 2	PSLO 3	PSLO 4	PSLO 5
FRESHMAN YEAR					
BIO 109 - Intro to Medical Sciences Credit Hours: 2			F	F	
BIO 211 - Principles of Biology Credit Hours: 4	F	F			
BIO 212 - Principles of Biology Credit Hours: 4	F	F			
BIO 213 - Principles of Biology Credit Hours: 4	F	F			
SOPHOMORE YEAR					
BIO 209 - Current Research Tpc Med Sci I Credit Hours: 1		F	F	F	
BIO 345 - Medical Microbiology Credit Hours: 5	P	P			
CHE 221 - General Chemistry I Credit Hours: 5	F	F			F
CHE 222 - General Chemistry II Credit Hours: 5	F	F			F
CHE 223 - General Chemistry III Credit Hours: 5	F	F			F
JUNIOR YEAR					
BIO 331 - Human Anatomy/Physiology I Credit Hours: 5	P	P			
BIO 332 - Human Anatomy/Physiology II Credit Hours: 5	P	P			
BIO 333 - Human Anatomy/Physiology III Credit Hours: 5	P	P			
CHE 331 - Organic Chemistry I Credit Hours: 4	P	P			P
CHE 332 - Organic Chemistry II Credit Hours: 4	P	P			P
CHE 333 - Organic Chemistry III Credit Hours: 4	P	P	P	P	P
PHY 221 - General Physics w/Calculus Credit Hours: 4 d	F	P			P
PHY 222 - General Physics w/Calculus Credit Hours: 4 d	F	P			P

PHY 223 - General Physics w/Calculus Credit Hours: 4 d	F	P			P
SENIOR YEAR					
BIO 346 - Pathophysiology I Credit Hours: 3	C	C			
BIO 409 - Crnt Rsch Tpcs in Med Sci II Credit Hours: 2		C	C	C	
CHE 450 - Biochemistry I Credit Hours: 4	C	C			C
CHE 451 - Biochemistry II Credit Hours: 4	C	C			C
Health Biology Electives (lower-division):					
BIO 200 - Medical Terminology Credit Hours: 2	F	F			
BIO 205 - Nutrition Credit Hours: 3	F	F	P	P	
BIO 216 - Intro to Veterinary Medicine Credit Hours: 4	F	F			
BIO 226 - Intro to Wildlife Rehab Credit Hours: 3	F	F			
Health Biology Electives (upper-division):					
BIO 326 - Parasitology Credit Hours: 4	P	P			
BIO 341 - Medical Genetics Credit Hours: 3	P	P	P	P	
BIO 342 - Cell Biology Credit Hours: 4	P	P			
BIO 347 - Pathophysiology II Credit Hours: 3	P	P			
BIO 352 - Developmental Biology Credit Hours: 4	P	P			
BIO 357 - Intro to Neuroscience Credit Hours: 3	P	P	P	P	
BIO 426 - Evolutionary Biology Credit Hours: 3	P	P			
BIO 435 - Exercise Physiology Credit Hours: 3	P	P			
BIO 436 - Immunology Credit Hours: 4	P	P			
BIO 461 - Human Cadaver Dissection Credit Hours: 1	C	C			
BIO 462 - Human Cadaver Dissection Credit Hours: 1	C	C			
BIO 495 - Research Project in Biology Credit Hours: Varies (1-4)		C	C	C	C
CHE 360 - Clinical Pharmacology/Hlth Prf Credit Hours: 3	P	P			
CHE 452 - Biochemistry III Credit Hours: 4	C	C			C
CHE 495 - Research Project in Chemistry Credit Hours: Varies (1-4)		C	C	C	C
STAT 414 - Stat Methods in Epidemiology Credit Hours: 4	P	P			

Section 4 – Assessment Cycle

The assessment cycle was revised in AY21-22 to better align program specific learning outcome assessment with institutional learning outcome assessment. This content should remain relatively static from year to year.

ISLO	PSLO	2021-2022	2022-2023	2023-2024
Communication	**PSLO 4**	C BIO 409 - Crnt Rsch Tpcs in Med Sci II		
Ethics	**PSLO 3**	F BIO 109 - Intro to Medical Sciences		
Teamwork	**PSLO 2**	P PHY 221- Gen Physics w/Calculus		
Diverse Perspectives	**PSLO 3, 4**		F BIO 109 - Intro to Medical Sciences P BIO 209 - Crnt Rsch Tpcs in Med Sci I C BIO 409 - Crnt Rsch Tpcs in Med Sci II	
Inquiry and Analysis	**PSLO 1, 2**			F BIO 212 Principles of Biology P PHY223 – Gen Physics w/ Calculus C CHE 451 - Biochemistry II
Quantitative Literacy	**PSLO 5**			F CHE 221 – Gen Chemistry P PHY 221 – Gen Physics w/ Calculus C CHE 450 Lab – Biochemistry I

Section 5 – Assessment Data Collection Processes

In 2022-23 data was collected on one of six ISLOs and two of five PSLOs:

- **ISLO 6 – Diverse Perspectives Cultural Sensitivity & Global Awareness.**
- **PSLO 3 - Be able to effectively find and use resources from literature.**
- **PSLO 4 - Demonstrate effective oral, written, and visual communication.**

Performance Target:

The overall standard of success established by BHS faculty members was a minimum of 80% of students assessed would score 75% or higher on the chosen artifact.

Activity:

Assignments for ISLO 6 and PSLO 3 – BIO 209 & BIO 409:

Students are guided to search scientific literature databases, read primary, peer-reviewed scientific literature in an area of their choosing (some of which may be from different countries or cultural backgrounds), and integrate information with scientific, biological principles learned from their other coursework. They will demonstrate these abilities both orally and in writing.

Prompt for oral presentation:
Each student will give a 25-minute presentation and discussion on a health science topic of their choosing. Topics should be researched using current biomedical sources, including at least one primary research article, as well as web sources. The main part of their presentation should introduce the subject and give it a broader context, but they are required to include some element of interpreting specific primary research within their topic area. Their topic should be in a biomedical area that interests them and should relate to scientific concepts that they have learned in coursework thus far at Oregon Tech but should not just repeat a topic from their classes.

Prompt for research paper:
They are required to write a 4–5-page paper on the same topic as their oral presentation. This can be at a comparable level of detail as their presentation, using the same sources. It should have in-text citations and be written in the third person. Illustrations or figures should only be included if they help explain the topic and are referred to within the text of the paper.

<u>Assignments for PSLO 4 - BIO109:</u>
Instructions are given for a written and a verbal/visual assignment for assessment of communication skills in the BHS program. For the purposes of assessment, the instructor considered these assignments with respect to the institutional COM rubric, and at a foundational level expected a 2/4 in the majority of categories on that rubric. For written assessment, direct assessment data were collected in BIO109 by letting students choose one of the 2 Cases (A or B) and respond to a series of questions provided. Student response is a minimum of 500 words. For verbal/visual assessment, small groups of students will give PowerPoint presentations on graduate degree programs throughout the term.

Sample:

- ISLO 6 and PSLO 3: BIO209 – 23 students (2 sections); BIO 409 - 24 students (2 sections)
- PSLO 4: BIO 109 - 24 students (1 section)

Reliability:
The instructor of record for each course was responsible for assessing the artifacts for the class. At the end of the term, each instructor recorded their data in the Course Learning Outcome worksheets. Three different level courses taught by three different faculty members within the BHS program was utilized for assessment to fairly distribute the workload associated with assessment and to provide a representative sample of instruction.

Section 6 – Assessment Data

Program Enrollment:

Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
161	164	169	148	129

Enrollment within the BHS program was relatively stable for a number of years. Unsurprisingly, we saw a dip in enrollment during and after the height of the COVID 19 pandemic. Our department started experimenting with different techniques to increase recruitment. These efforts have included (1) meeting with the Tech Ambassadors to give them more talking points about our program, (2) increasing the number of faculty visits to local high schools and middle schools, (3) setting faculty schedules for admissions to bring prospective students and parents over to DOW to speak with faculty during campus visits, (4) providing an option for students to text faculty to ask any questions about the program, and (5) hiring students to manage our department's social media presence.

1st Year Retention Rates

2017-18	2018-19	2019-20	2020-21	2021-22
72%	81%	75%	62%	76%

Our 1st year retention rate consistently hovers at or above the Oregon Tech target of 75%, though it did fall at the beginning of the pandemic. The retention rate then bounced back above the university-wide goal speaking to the great efforts that our department has devoted in training our program students and connecting them to Oregon Tech as well as to our local community. Enrollment and retention continue to be a priority for the BHS program and will be further addressed in our action plans.

ISLO and PSLO data:

Performance Criteria	Assessment Methods	Performance Target	Results	Met?
ISLO 6 Diverse Perspectives	Oral presentation + written research paper	80% of students scoring 75% or higher for related assignment	100% - Klamath Falls, BIO 209, 23; BIO 409, 24	Yes
PSLO 3	Oral presentation + written research paper	80% of students scoring 75% or higher for related assignment	100% - Klamath Falls, BIO 209, 23; BIO 409, 24	Yes
PSLO 4	Case studies and presentations for student written and oral communication	80% of students scoring 75% or higher for related assignment	100% - Klamath Falls, BIO109, 24	Yes
BBHS Graduation Rate	University Dashboard	6-year rate >50%	67%	Yes
BBHS Retention	University Dashboard	1-year rate >75%	76%	Yes
DFWI	University Dashboard	All program <12%	4%	Yes

Equity Gaps:
No equity gaps were identified in the courses chosen for the 2022-23 assessment process mostly due to insufficient data. For equity gap study in the future, we plan to combine the data from the last several years to identify the patterns.

History of Results:
Under the leadership of a new program director and new department chair, BHS faculty have discussed how to better align our current PSLOs with current requirement of professional schools. The assessment process has also changed significantly over this time with the introduction of Course Learning Outcome worksheets for reporting assessment data and more clearly defined performance targets. We do not have much historical data at this point and look forward to filling in this table over time.

Section 7 – Data-driven Action Plans:

Reflecting on the assessment data, BHS has significantly improved its retention rate for 1st-year students to 76% (up from 62% last year). While students are still facing attrition in their general educational requirements, we attribute this improvement in retention to our collective effort in creating a supportive system within our department and university. We piloted a new peer tutoring program located in the hallway in DOW. The faculty would nominate the students to be the peer tutors, and we would try to hire enough students that someone was available to tutor during almost all working hours. The 6-year graduation rate is 67 % for BHS students, which is also strongly associated with the first-year retention rate. Therefore, our action plans for the next year will still be focusing on recruitment (see our plan in **Appendix A**), stabilizing BHS enrollment and further improving first-year retention.

Action Plans for 2023-2024
Goal 1: Grow enrollment

- Continue to refine the recruitment efforts implemented last year and once available (could take years for middle school outreach efforts) analyze data on efforts to streamline and focus on those with the greatest return on effort
    - Meeting with Tech Ambassadors
    - Faculty visits to high schools and middle schools
    - Faculty meet with prospective students during campus visits
    - Texting with faculty questions about programs
    - Social media
- Increase/formalize visits for high schools/middle schools to Oregon Tech (Bonanza, Mazama)
- Update the BHS website.
- Consider new “tracks” within the BHS program (pre-Vet, microbiology, etc.)

Goal 2: Improve programmatic retention.

- Expand peer tutoring from previous year pilot program (more tutors, more hours)
- Department-wide implementation of Inspire's early warning system
- Develop department culture (research meeting, Nobel Prize symposium, Halloween party, journal club, end of year party, department shirts/jackets)
- Involve more students in research
- New hires

Goal 3: Further improve ISLO and PSLO assessments.

- Continue to expand the courses being assessed in AY 24-25 so each ISLO/PSLO is being assessed at the foundational, practicing, and capstone level.
- Inform faculty much earlier in the year and provide them with reminders during the term they are assessing so that they can collect all assessment data contemporaneously.
- Create a Qualtrics form for faculty to submit information to the assessment coordinator.

We have made progress on many of these items. Our BHS website is currently under update; last year we added faculty profiles and research interests, and this year we will be re-writing much of the text describing the program to improve readability and showcase key points about our department. In 22-23 we have hired several program faculty members. Our new hires are expected to expand our capacity to conduct undergraduate research with our students and offer elective courses within the BHS program. We are hoping to get approval to hire physics instructor(s) to help during sabbaticals, a fire ecologist since that is very relevant to our school's physical location and our ENV program, and a lab manager to help organize labs for multiple courses. These positions would help ease the workload on faculty and streamline the processes of the department improving the students' experience, and hopefully improving retention.

Section 8 – Closing the Loop: Reflection on previous work

- We hope to develop standardized questionnaires to give to students annually as metrics to measure their learning outcome in each PSLO. This more standardized approach will be easier to implement, increase the faculty involvement with data collection, and make our collected data comparable from year-to-year. As we are finishing this 3-year cycle and gather more PSLO data in the coming years, we will be better able to monitor student learning over time and close the loop on our action plans.

- As a team, we have identified a variety of retention and enrollment goals for the coming 2023-24 academic year and will meet soon to discuss the results from this assessment report and to strategically plan a better closing the loop process. Our faculty remain committed to providing the best learning outcomes for all students. Many of us have committed our weekend time for events such as "Demo Day" and "STEM Day" for recruitment. We have had a productive year improving our student retention and graduation rate for BHS. We are hoping to receive all the final approvals for the master's degree program in Biomedical Science soon and begin enrolling students in the fall.

Appendix A – Recruitment Plan

Recruitment

Last year was the first year that we implemented some new recruitment methods. Once available, we will analyze the data on enrollment and major numbers to deterine which methods are the most effective.

Goal

BHS will have 60 new students each year

Recruitment efforts implemented and being continued this year:

- Meeting with Tech Ambassadors so they have more talking points
- Faculty visits to high schools and middle schools
- Faculty meet with prospective students during campus visits (see table below)
- Texting with faculty questions about programs
- Social media
- Update BHS website
- School visits to Oregon Tech
- Build stem opportunities with our undergraduates and local schools (science fairs, etc.)
- Poster about a scientific concept and put information about department and faculty projects on there

Fall 2023 calendar example for Admissions to have faculty meet with students and parents

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
11:30	**Li**	**Usher** **Owen**	**Lund**	**Edwards**	**Lund**
3:30	**Owen**	**McClure** **Hung**	**Usher** **Kinder**	**Edwards**	**Gandhi**

When admission comes by the faculty will meet with potential students. It will not be often, but it is important when student come to visit to meet with them

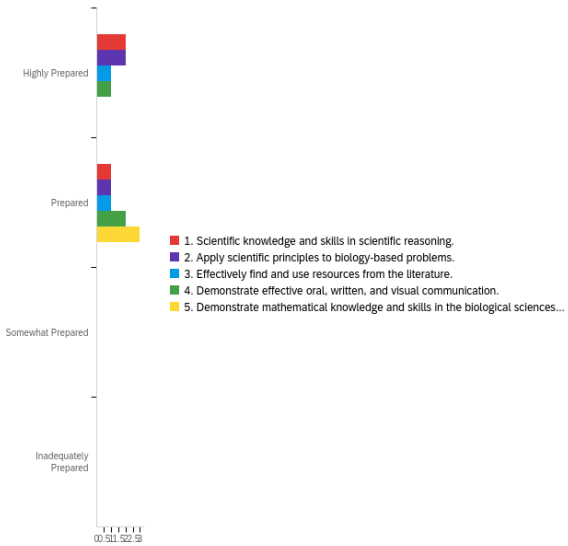
Appendix B – Exit Survey Results

BBHS

(2022-23) Student Exit Survey

September 12th 2023, 12:29 pm PDT

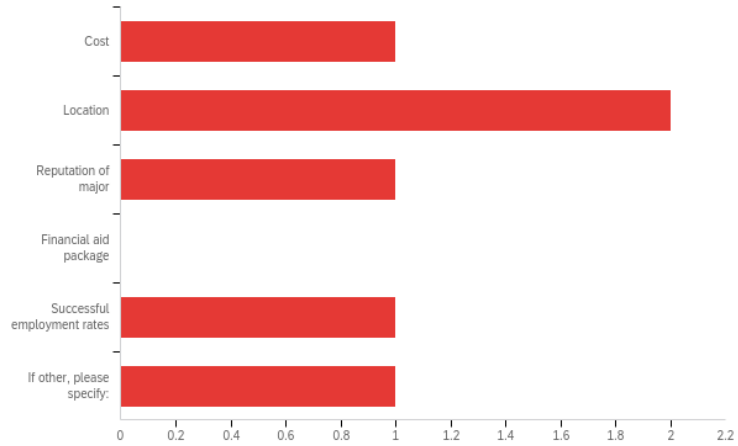
Q BBHS 1 - Program Student Learning Outcomes for Biology-Health Sciences B.S. Please indicate how well the Biology-Health Sciences program prepared you in the following areas.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	1. Scientific knowledge and skills in scientific reasoning.	1.00	2.00	1.33	0.47	0.22	3
2	2. Apply scientific principles to biology-based problems.	1.00	2.00	1.33	0.47	0.22	3
3	3. Effectively find and use resources from the literature.	1.00	2.00	1.50	0.50	0.25	2
4	4. Demonstrate effective oral, written, and visual communication.	1.00	2.00	1.67	0.47	0.22	3
5	5. Demonstrate mathematical knowledge and skills in the biological sciences.	2.00	2.00	2.00	0.00	0.00	3

#	Question	Highly Prepared		Prepared		Somewhat Prepared		Inadequately Prepared		Total
1	1. Scientific knowledge and skills in scientific reasoning.	66.67%	2	33.33%	1	0.00%	0	0.00%	0	3
2	2. Apply scientific principles to biology-based problems.	66.67%	2	33.33%	1	0.00%	0	0.00%	0	3
3	3. Effectively find and use resources from the literature.	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2
4	4. Demonstrate effective oral, written, and visual communication.	33.33%	1	66.67%	2	0.00%	0	0.00%	0	3
5	5. Demonstrate mathematical knowledge and skills in the biological sciences.	0.00%	0	100.00%	3	0.00%	0	0.00%	0	3

Q BBHS 2 - What attracted you to Oregon Tech? Please check all that apply.

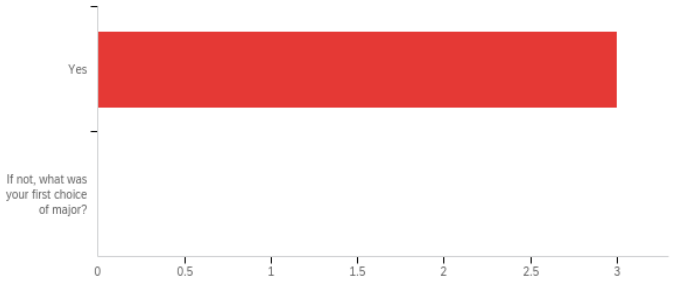


#	Answer	%	Count
1	Cost	16.67%	1
2	Location	33.33%	2
3	Reputation of major	16.67%	1
4	Financial aid package	0.00%	0
5	Successful employment rates	16.67%	1
6	If other, please specify:	16.67%	1
	Total	100%	6

Q BBHS 2_6_TEXT - If other, please specify:

If other, please specify: - Text
Basketball team

Q BBHS 3 - Was Biology-Health Sciences your first choice of major?

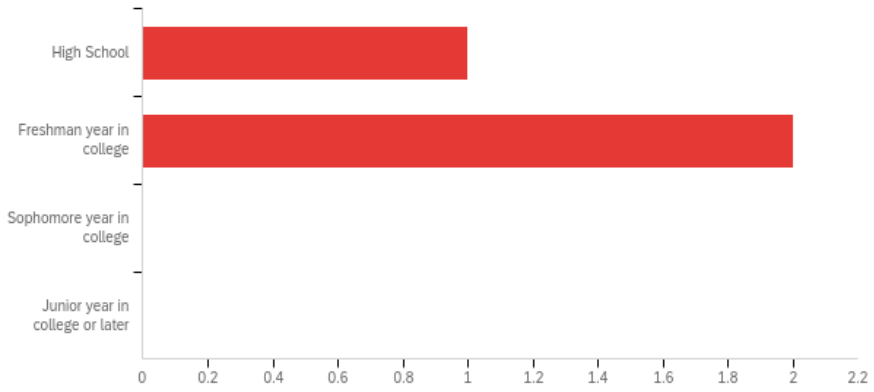


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Was Biology-Health Sciences your first choice of major? - Selected Choice	1.00	1.00	1.00	0.00	0.00	3

#	Answer	%	Count
1	Yes	100.00%	3
2	If not, what was your first choice of major?	0.00%	0
	Total	100%	3

Q BBHS 3_2_TEXT - If not, what was your first choice of major?
If not, what was your first choice of major? - Text

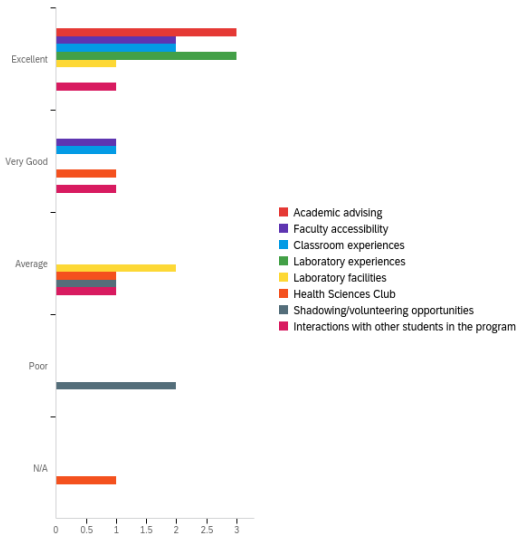
Q BBHS 4 - At what stage in your studies did you choose your major?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	At what stage in your studies did you choose your major?	1.00	2.00	1.67	0.47	0.22	3

#	Answer	%	Count
1	High School	33.33%	1
2	Freshman year in college	66.67%	2
3	Sophomore year in college	0.00%	0
4	Junior year in college or later	0.00%	0
	Total	100%	3

Q BBHS 5 - Please provide feedback about the overall quality of the following aspects of the Biology-Health Sciences Program have been to you.



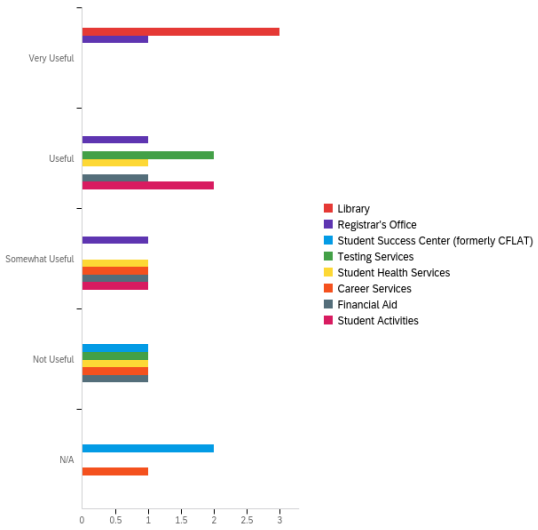
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Academic advising	1.00	1.00	1.00	0.00	0.00	3
2	Faculty accessibility	1.00	2.00	1.33	0.47	0.22	3
3	Classroom experiences	1.00	2.00	1.33	0.47	0.22	3
4	Laboratory experiences	1.00	1.00	1.00	0.00	0.00	3
5	Laboratory facilities	1.00	3.00	2.33	0.94	0.89	3
6	Health Sciences Club	2.00	41.00	15.33	18.15	329.56	3
7	Shadowing/volunteering opportunities	3.00	4.00	3.67	0.47	0.22	3
8	Interactions with other students in the program	1.00	3.00	2.00	0.82	0.67	3

#	Question	Excellent		Very Good		Average		Poor		N/A		Total
1	Academic advising	100.00%	3	0.00%	0	0.00%	0	0.00%	0	0.00%	0	3
2	Faculty accessibility	66.67%	2	33.33%	1	0.00%	0	0.00%	0	0.00%	0	3
3	Classroom experiences	66.67%	2	33.33%	1	0.00%	0	0.00%	0	0.00%	0	3
4	Laboratory experiences	100.00%	3	0.00%	0	0.00%	0	0.00%	0	0.00%	0	3
5	Laboratory facilities	33.33%	1	0.00%	0	66.67%	2	0.00%	0	0.00%	0	3
6	Health Sciences Club	0.00%	0	33.33%	1	33.33%	1	0.00%	0	33.33%	1	3
7	Shadowing/volunteering opportunities	0.00%	0	0.00%	0	33.33%	1	66.67%	2	0.00%	0	3
8	Interactions with other students in the program	33.33%	1	33.33%	1	33.33%	1	0.00%	0	0.00%	0	3

Q BBHS 6 - What are one or two specific things we could do to improve the Biology-Health Sciences major?

What are one or two specific things we could do to improve the Biology-Health Sciences major?
Increase potential shadowing chances, as well as potentially a class to better prepare us for when we do graduate. ie a class that shows the process of applying to med school, pa school. pt school etc.
More options for upper division electives. More opportunities for research and shadowing of industry professionals. Although overall, the school did a good job providing opportunities to take all the classes I would need to graduate.
- Improve lab facilities and available lab equipment. - Hire more professors (qualified professors) who have a passion for teaching and the experience to properly teach.

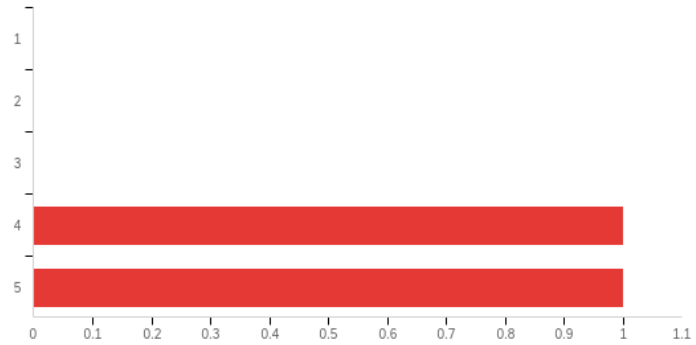
Q BBHS 7 - Please provide feedback about how useful the following Oregon Tech services have been to you.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Library	1.00	1.00	1.00	0.00	0.00	3
2	Registrar's Office	1.00	3.00	2.00	0.82	0.67	3
3	Student Success Center (formerly CFLAT)	4.00	5.00	4.67	0.47	0.22	3
4	Testing Services	2.00	4.00	2.67	0.94	0.89	3
5	Student Health Services	2.00	4.00	3.00	0.82	0.67	3
6	Career Services	3.00	5.00	4.00	0.82	0.67	3
7	Financial Aid	2.00	4.00	3.00	0.82	0.67	3
8	Student Activities	2.00	3.00	2.33	0.47	0.22	3

#	Question	Very Useful		Useful		Somewhat Useful		Not Useful		N/A		Total
1	Library	100.00%	3	0.00%	0	0.00%	0	0.00%	0	0.00%	0	3
2	Registrar's Office	33.33%	1	33.33%	1	33.33%	1	0.00%	0	0.00%	0	3
3	Student Success Center (formerly CFLAT)	0.00%	0	0.00%	0	0.00%	0	33.33%	1	66.67%	2	3
4	Testing Services	0.00%	0	66.67%	2	0.00%	0	33.33%	1	0.00%	0	3
5	Student Health Services	0.00%	0	33.33%	1	33.33%	1	33.33%	1	0.00%	0	3
6	Career Services	0.00%	0	0.00%	0	33.33%	1	33.33%	1	33.33%	1	3
7	Financial Aid	0.00%	0	33.33%	1	33.33%	1	33.33%	1	0.00%	0	3
8	Student Activities	0.00%	0	66.67%	2	33.33%	1	0.00%	0	0.00%	0	3

Q BBHS 8 - What is your overall rating of the quality of education you received?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your overall rating of the quality of education you received?	4.00	5.00	4.50	0.50	0.25	2

#	Answer	%	Count
1	1	0.00%	0
2	2	0.00%	0
3	3	0.00%	0
4	4	50.00%	1
5	5	50.00%	1
	Total	100%	2

Q BBHS 9 - Do you have any other comments about your time at Oregon Tech?

Do you have any other comments about your time at Oregon Tech?

Was the best 4 years of my life! Thankful for everyone who helped along the way.

Rosalind McClure is one of the finest professors and advisors at OIT and her work/dedication for her students needs to be recognized by the administration.

Response to BBHS Exit Survey results

Q1 – Data is pretty consistent from previous year. A slight improvement in that no student gave a response lower than "Prepared" this year compared to the previous year, but the overall trend is consistent. Students feel better prepared for PSLOs 1 (scientific knowledge) and 2 (apply scientific principles to biology problems) relative to 4 (communication) and 5 (mathematical knowledge and skills). We may want to investigate how to improve on 4 and 5.

Q2 – This last year, the percentage of students who said cost as what attracted them to Oregon Tech decreased, as well as reputation of major and successful employment rates. Location is the only answer that increased in frequency from 12.5% to 33.3%. Both years one student wrote in an answer related to athletics. The sample size is small, but this could reflect the increasing cost of Oregon Tech, that students don't know the reputation of Oregon Tech prior to coming, or that more students are coming here from local areas. Or it is due to small numbers and there will always be variability in the answers. If the location trend is not an artifact, then our increased efforts to build relationships with local schools should begin to have a positive effect on enrollment.

Q3 – This year, all students who graduated in our program came in with BHS as their first choice of major. This is different from the previous year in which 22% of respondents did not come into the school as a BHS major. This data indicates that few students come to Oregon Tech and would switch into the BHS major. This means recruiting directly into our program is important for BHS.

Q4 – This year all students responded that they chose their major in high school or freshman year. The previous year, 22% also chose during sophomore year. Similar to Q3, this would indicate that few students are going to come to Oregon Tech undecided or in a different major and switch into BHS, so recruiting directly to the program is important.

Q5 – Academic advising, faculty accessibility, classroom experiences, and laboratory experiences continue to have most students rating as "Excellent." Student ratings of laboratory facilities decreased slightly and the rating for shadowing/volunteering opportunities decreased with all students rating it as "Average" or "Poor." The department should consider how to better facilitate shadowing and volunteer opportunities. As the Master's program starts up, this may naturally become more prevalent for undergraduate students in addition to masters students.

Q6 – The last two years, students wrote comments about improving shadowing chances and that apparently it is difficult to set up without a school affiliated program for shadowing. This year students also mentioned more upper division electives, more opportunities for research, improving lab facilities and available lab equipment, and hiring more professors. Chemistry just completed the renovation and move of its labs back into Boivin for this year. Physics was in the process of moving into the new CEET space throughout last year. Our department continues to push for new hires each year, but whether those are approved by administration and whether the search is successful is somewhat out of the control of our department.

Q7 – In terms of the usefulness of different Oregon Tech services, students generally felt that services were less useful to them this year than the previous year. The library and registrar's office were the only services that any students listed as very useful. Students listed the Student Success Center, Testing Services, Student Health Services, Career Services, and Financial Aid as not useful. From only this data, it is not clear whether this means that the students who responded just didn't actually need those services, or if when they used those services they were unhelpful, or if students could have used those services but were unaware of how they could be helpful to them. As a department, we could make sure to let students know how all of those services can be useful to them.

Q8 – The last two years all students who responded rated the quality of their education a 4 or 5 out of 5.

Q9 – Comments about their time this year were only very positive.