



2016-17 Program Assessment Report

Sleep Health A.A.S. Polysomnographic Technology Option

Mission, Objectives & Learning Outcomes

Oregon Tech Mission

Oregon Institute of Technology, an Oregon public university, offers innovative and rigorous applied degree programs in the areas of engineering, engineering technologies, health technologies, management, and the arts and sciences. To foster student and graduate success, the university provides an intimate, hands-on learning environment, focusing on application of theory to practice. Oregon Tech offers statewide educational opportunities for the emerging needs of Oregonians and provides information and technical expertise to state, national and international constituents.

Core Theme 1: Applied Degree Programs

Oregon Tech offers innovative and rigorous applied degree programs. The teaching and learning model at Oregon Tech prepares students to apply the knowledge gained in the classroom to the workplace.

Core Theme 2: Student and Graduate Success

Oregon Tech fosters student and graduate success by providing an intimate, hands-on learning environment, which focuses on application of theory to practice. The teaching and support services facilitate students' personal and academic development.

Core Theme 3: Statewide Educational Opportunities

Oregon Tech offers statewide educational opportunities for the emerging needs of Oregon's citizens. To accomplish this, Oregon Tech provides innovative and rigorous applied degree programs to students across the state of Oregon, including high-school programs, online degree programs, and partnership agreements with community colleges and universities.

Core Theme 4: Public Service

Oregon Tech will share information and technical expertise to state, national, and international constituents.

Program Alignment to Oregon Tech Mission and Core Themes

This program is designed to meet the needs of new technicians working in clinics across the country. The new regulations that were initially supposed to become effective in 2012 requiring technicians sitting for the national registry exam to have completed a program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) instead of on-the-job training have been postponed but not eliminated. This distance education program is designed to meet the CAAHEP Committee on Accreditation for Polysomnographic Technology (CoA PSG) standards and the

needs of place-bound technicians. The entire program is delivered online with local clinical facilities, where the students are located, providing the clinical practicum.

Core Theme 1: Applied Degree Programs: We are dedicated to providing the highest quality education in the EMS industry as demonstrated through the caliber of our faculty, the tremendous success of our alumni, and the enthusiastic support of our EMS employers.

Core Theme 2: Student and Graduate Success: Our aim is to continue to partner with high potential students, from diverse backgrounds and perspectives, and assist them in becoming national EMS clinical and organizational leaders.

Core Theme 3: Statewide Educational Opportunities: We will continue supporting bold intellectual pursuits that advance and expand the EMS industry's comfort zone in order to improve and innovate both the quality of individual patient care as well as the systems of EMS care.

Core Theme 4: Public Service: We strive to partner with communities, industry, other colleges and universities, and private citizens to develop community-based solutions to community problems

Program Mission

Polysomnographic Technology, an Associate of Applied Science degree program, provides instruction and clinical practice in a distance learning format. The program will prepare students to achieve professional proficiency and acquire professional credentials in sleep medicine technology.

Program Educational Objectives

- The Polysomnography program prepares students for immediate employment anywhere in the United States in a high-demand health care profession.

Program Faculty Review

Program Student Learning Outcomes and Objectives were reviewed by program faculty during Fall Convocation Program Assessment Meeting.

Faculty review is an on-going process with frequent phone/email communication between the Program Director and main faculty members.

Showcase Learning Opportunities

None to report.

Program History & Vision

Program History

The program began in 2007 as the first national fully-online CAAHEP accredited program for polysomnography. Students take online didactic courses along with a part-time clinical rotation in an AASM accredited sleep lab in their local area. Students must complete a total of 540 clinical hours during the program, with 360 of the hours being completed during night shift.

Meeting with Advisory Board

Program faculty held a meeting with their Advisory Board during the academic year.

Advisory Board Review

The Advisory Board reviewed the Program Mission and Objectives during the academic year.

Current enrollment - averaging 12 in the program with 2-4 graduating each 10-week quarter.

We have the largest phone and online requests from prospective students, more than any other program on campus but the smallest actual enrollment. Efforts are being made to convert more of the inquiries to actual applicants. We are removing the requirement that they must speak to me, instead we are adding all of the information that I typically tell them to the web site and requiring that they check off that they have read the material.

The Academic Council have voted that I cannot require job shadowing before submitting the application. I have argued that this is a big mistake and gave my reasons, but I lost that argument. One department has job shadowing as part of the first term requirement. This is too late for our students since by then they are already in their clinical and much time and commitment has been made with the individual clinical sites to develop the contract between OIT and them. Their rational is that we should get them in the door and if they do not like the program, they are more likely to just change to another degree so we will not lose the student.

BRPT Passage rate - currently at 100% for this year

CSH Program - no enrollment. Until AAST stops offering the 1-day seminar as a qualifier, we will continue to have no students. They have repeatedly pushed back the ending date, now it is March 31, 2017.

New Initiative: Dental Sleep Health Badges leading to certificate and AAS degrees. This is a joint program with the Dental Hygiene Program. We discussed the idea of "badging" in industry and justification for offering the program. The committee voted to move forward with the proposal.

Next meeting: December 1, 2017

Respectfully Submitted
Jane Perri, Program Director

Program Enrollment

Program enrollment continues to be stable. The PSG program at OIT receives the most inquiries of any program in Distance Ed.

[*Attachment 1_Enrollment_5_Year_History_by_Major*](#)

Program Graduates

In the 2016-2017 academic year, 10 students graduated with a certificate. Some decided/may decide to continue on to earn an AAS degree. Enrollment is stable the last few years and is expected to remain stable.

[*Attachment 2_Graduates_10_Year_History_by_Major*](#)

Employment Rates and Salaries

The average salary for a PSG Tech surveyed in 2016 was \$40,500. Nearly all PSG Techs receive a night shift differential.

[*Attachment 3_Grad_Data_First_Destination_3_Year_History_by_Major*](#)

Pass Rates on Board and Licensure Exam

Data from the Board of Registered Polysomnographic Technologists (BRPT) from 2013 (most recent data available) show an exam pass-rate of 62% for people qualifying for the exam through pathway #3: CAAHEP/CoARC. In 2015-2016, the pass-rate for OIT students was 100%, and so far for 2016-2017 it continues to be 100%.

Results of Board or Licensure Exam

Program Pass Rates Meet or Exceed National Average

Other Program Assessment Data

N/A

Desired Data

N/A

Closing the Loop

Describe any actions taken and re-assessment done during this academic year in response to assessment findings from prior academic years.

Program Faculty implemented actions during the academic year based on assessment findings from previous assessment cycles.

We have gathered assessment data following changes that indicated further action is needed.

Changes Implemented

The instruction for cardiac arrhythmias was significantly enhanced in 2015-2016 after a pattern of low ratings. This had been a weak area in the past. The topic of ECG is now presented in multiple areas of the program in addition to students being required to take Echo 227. For reasons unclear, this rating dropped significantly in 2016-2017. Only 22% of students scored a 3 or 4 out of 4 rating for identifying cardiac arrhythmias. Last year it was 83%.

Assessment Findings

Extra instruction on ECG arrhythmias will be presented in PSG 231 starting in Winter 2018 term. Will also discuss the issue at the upcoming program advisor meeting in Dec 2017.

Program Student Learning Outcomes Assessment Cycle

PROGRAM STUDENT LEARNING OUTCOMES 3-Year Cycle Sleep Health A.A.S. Polysomnographic Technology Option	2016-17	2017-18	2018-19
OIT-ASPT 2016-17.1 The ability to perform analysis of pre-testing information.	Practical Exam		
OIT-ASPT 2016-17.2 The ability to accurately prepare the equipment and patient for data collection.	Practical Exam		
OIT-ASPT 2016-17.3 The ability to accurately collect data and summarize clinical observations.	Written Exam Practical Exam		
OIT-ASPT 2016-17.4 The ability to accurately analyze, interpret, and report data.	Scoring Exam Written Exam		
OIT-ASPT 2016-17.5 A thorough understanding of normal and disordered sleep.	Written Exam		
OIT-ASPT 2016-17.6 The ability to apply standard precautions throughout the patient's evaluation in order to prevent the spread of infection to patients and staff.	Written Exam		
OIT-ASPT 2016-17.7 Knowledge of how to provide patient support and educational information.	Written Exam		
OIT-ASPT 2016-17.8 Knowledge of site management.	Written Exam		

Assessment Map & Measure

- F – Foundation – introduction of the learning outcome, typically at the lower-division level,**
P – Practicing – reinforcement and elaboration of the learning outcome, or
C – Capstone – demonstration of the learning outcome at the target level for the degree

For each outcome, programs should identify at least 2 direct measures (student work that provides evidence of their knowledge and skills), and 1 indirect measure (student self-assessment of their knowledge and skills) for each outcome.

For every program, data from the Student Exit Survey will be an indirect measure at the capstone level.

OIT-ASPT 2016-17.1 Ability to perform analysis of pre-testing information.	
Course/Event	Practical Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--essay or problem
Criterion	80% of Students score 3 or 4
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey

Criterion	80% of Students score 3 or 4
OIT-ASPT 2016-17.2 Ability to accurately prepare the equipment and patient for data collection.	
Course/Event	Practical Exam
Legend	C – Capstone
Assessment Measure	Direct – Behavioral Observation
Criterion	80% of Students score 3 or 4
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.3 Ability to accurately collect data and summarize clinical observations.	
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--multiple choice type
Criterion	70% correct or greater
Course/Event	Practical Exam
Legend	C – Capstone
Assessment Measure	Direct – Behavioral Observation
Criterion	80% of Students score 3 or 4
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.4 Ability to accurately analyze, interpret, and report data.	
Course/Event	Scoring Exam
Legend	P – Practice
Assessment Measure	Direct – Simulation
Criterion	85% or greater on ISR for 3 types of sleep disorders
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--multiple choice type
Criterion	70% correct or greater
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.5 A thorough understanding of normal and disordered sleep.	
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--multiple choice type
Criterion	70% correct or greater
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.6 The ability to apply standard precautions throughout the patient's evaluation in order to prevent the spread of infection to patients and staff.	
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--multiple choice type
Criterion	70% correct or greater
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.7 Knowledge of how to provide patient support and educational information.	
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--essay or problem
Criterion	70% correct or greater
Course/Event	Student Exit Survey
Legend	C – Capstone
Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

OIT-ASPT 2016-17.8 Knowledge of site management.	
Course/Event	Written Exam
Legend	C – Capstone
Assessment Measure	Direct – Exam Questions--essay or problem
Criterion	70% correct or greater
Course/Event	Student Exit Survey
Legend	C – Capstone

Assessment Measure	Indirect – Student Exit Survey
Criterion	80% of Students score 3 or 4

Analysis of Results

OIT-ASPT 2016-17.1 Ability to perform analysis of pre-testing information.	
Criterion	Met
Summary	100% of students met the criteria for the direct assessment. 100% of students met the criteria for the indirect assessment.
Improvement Narrative	N/A
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.2 Ability to accurately prepare the equipment and patient for data collection.	
Criterion	Met
Summary	100% of students met the criteria for the direct assessment. Only 71% of students met the criteria for the indirect assessment. The 2 indirect assessments not meeting passing criteria were 1) Accurately calibrated computers used for data acquisition 2) Correctly applied ancillary equipment to patient
Improvement Narrative	<i>Operational Change within Program:</i> Clinical lab preceptors will be encouraged to focus on these 2 procedures during clinical rotations in the clinical courses.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.3 Ability to accurately collect data and summarize clinical observations.	
Criterion	Not Met
Summary	100% of students met the criteria for the direct assessment. Only 57% of students met the criteria for the indirect assessment. The 3 indirect assessments not meeting passing criteria were 1) Recognize and visually discriminate appropriate waveforms from instrument artifact 2) Make appropriate alternations to recording parameters 3) Correctly identify how to recognize and respond to seizures
Improvement Narrative	<i>Other:</i> For #1, we will focus more on this using the Atlas of Clinical PSG examples. For #2, lab preceptors will be reminded to cover this more thoroughly. For #3, the seizure section in PSG 231 will receive more focus.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.4 Ability to accurately analyze, interpret, and report data.	
Criterion	Not Met
Summary	Two of the eight ratings in this category were not met for both direct and indirect measures: 1) Recognize cardiac arrhythmias 2) Calculating sleep statistics
Improvement Narrative	<i>Other:</i> More focus on these areas in the PSG courses will be put in place.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.5 A thorough understanding of normal and disordered sleep.	
Criterion	Met
Summary	One of the 3 direct assessment ratings was not met: Demonstrated knowledge of all characteristics of normal sleep
Improvement Narrative	<i>Other:</i> This is a wide-ranging topic and is touched on in multiple courses. Will discuss with other faculty.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.6 The ability to apply standard precautions throughout the patient's evaluation in order to prevent the spread of infection to patients and staff.	
Criterion	Not Met
Summary	The 1 direct assessment for this PSLO was not met.
Improvement Narrative	<i>Operational Change within Program:</i> Lab preceptors will be reminded to spend some time focusing on this.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.7 Knowledge of how to provide patient support and educational information.	
Criterion	Not Met
Summary	The 1 direct measure for this PSLO was not met.
Improvement Narrative	<i>Other:</i> This topic will receive more focus in PSG 291 Clinical Sleep Health.
Attachment 4_ASSESSMENTS	

OIT-ASPT 2016-17.8 Knowledge of site management.	
Criterion	Met
Summary	Both direct and indirect measure criteria were met.
Improvement Narrative	N/A
<i>Attachment 4_ASSESSMENTS</i>	

References

Program Assessment Coordinator: Michael Schwartz, Instructor, Respiratory Care & Sleep Health

Office of Academic Excellence

The following data represents majors declared by student as of Fall 4th week. Students with multiple/dual majors have been reported under each major in which they enrolled; therefore the student headcount will be duplicated. A small number of students that declared a third major have now been included in this report. Data reported is combined for all levels and all locations. Some programs may have had name changes such as CLS and have been reported as they were (historically).

Description	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	5 Year Difference	5 Year % Change
ABA Course Series	0	0	3	0	0	0	-
Accounting Certificate	0	0	0	0	1	1	-
Allied Health	0	0	0	0	3	3	-
Allied Health Management	11	5	3	2	1	-10	-90.9%
Applied Behavior Analysis	0	0	0	10	17	17	-
Applied Mathematics	41	38	47	42	33	-8	-19.5%
Applied Psychology	146	149	122	96	110	-36	-24.7%
Automat, Robot, & Cntrl Engr	0	0	0	0	1	1	-
Biology	15	8	1	1	0	-15	-100.0%
Biology-Health Sciences	136	150	150	138	151	15	11.0%
Civil Engineering	127	121	110	120	118	-9	-7.1%
Clinical Lab Science-Earlyadm	6	10	35	22	0	-6	-100.0%
Clinical Laboratory Science	62	85	94	95	2	-60	-96.8%
Communication Studies	55	42	39	47	40	-15	-27.3%
Computer Engineering Tech	82	82	81	86	63	-19	-23.2%
Dental Hygiene	226	240	211	221	202	-24	-10.6%
Diagnostic Medical Sonography	86	104	95	102	112	26	30.2%
Dispute Resolution Certificate	1	1	2	4	2	1	100.0%
Echocardiography	121	119	123	122	128	7	5.8%
Electrical Engineering	76	120	146	164	197	121	159.2%
Electronics Engineering Tech	67	58	51	37	32	-35	-52.2%
Embedded Systems Eng Tech	24	25	32	35	57	33	137.5%
Emergency Medical Services Mgt	0	0	17	20	34	34	-
EMT - Paramedic	29	30	29	28	28	-1	-3.4%
Environmental Sciences	49	49	51	48	42	-7	-14.3%
General Studies	495	736	632	1,031	1,414	919	185.7%
Geomatics	1	0	0	0	0	-1	-100.0%
Geomatics-option in GIS	13	14	10	10	7	-6	-46.2%
Geomatics-option in Surveying	49	39	26	31	30	-19	-38.8%
Health Care Mgmt-Admin Mgmt	0	10	14	19	18	18	-
Health Care Mgmt-Clinical Mgmt	0	4	10	11	25	25	-
Health Care Mgmt-Rad Science	0	3	6	12	12	12	-
Health Informatics	0	0	0	20	38	38	-
Health Sciences	1	1	0	1	2	1	100.0%
Information Technology	0	0	0	56	114	114	-
IT Accounting Option	8	4	2	1	1	-7	-87.5%
IT Applications Dev Opt	91	75	71	48	20	-71	-78.0%
IT Bus/Systems Analysis Opt	58	59	69	51	28	-30	-51.7%
IT Health Informatics Opt	54	68	59	32	17	-37	-68.5%
Magnetic Resonance Imagng Spec	0	0	0	0	4	4	-
Manufacturing Engineering Tech	129	99	109	107	101	-28	-21.7%
Marriage and Family Therapy	0	0	0	0	10	10	-
Mechanical Engineering	208	303	331	323	354	146	70.2%
Mechanical Engineering Tech	145	112	121	121	104	-41	-28.3%
Medical Lab Science-Earlyadm	0	0	0	0	17	17	-
Medical Laboratory Science	0	0	0	0	86	86	-
Mgmt Info Sys/Mgmt Acc Option	1	0	0	0	0	-1	-100.0%
Mgmt/Accounting Option	32	38	35	32	19	-13	-40.6%
Mgmt/Marketing Option	34	34	36	34	37	3	8.8%
Mgmt/Small Bus Mgmt Option	54	43	38	37	33	-21	-38.9%
MIT Applicant	0	0	1	2	0	0	-
Nuclear Medicine Technology	47	51	48	48	49	2	4.3%
Nursing	50	49	52	61	69	19	38.0%
Operations Management	61	66	65	69	70	9	14.8%
Optical Engineering	0	0	3	3	3	3	-
Picture Archive/Comm Sys Spec	0	0	1	2	3	3	-
Polysomnographic Technology	19	13	6	12	5	-14	-73.7%
Population Health Management	0	0	3	24	31	31	-
Pre-Clinical Lab Science	0	8	1	20	2	2	-
Pre-Dental Hygiene	62	65	35	37	48	-14	-22.6%
Pre-Medical Imaging Tech	273	287	253	237	226	-47	-17.2%
Pre-Medical Lab Science	0	0	0	0	27	27	-
Pre-Nursing	56	60	53	69	78	22	39.3%
Pre-Paramedic Education	0	3	3	7	0	0	-
Pre-Renewable Energy Eng	111	0	0	0	0	-111	-100.0%
Pre-Respiratory Care	11	12	8	11	9	-2	-18.2%
Radiologic Science	164	163	154	160	152	-12	-7.3%
Renewable Energy Engineering	110	206	203	180	166	56	50.9%
Respiratory Care	85	84	88	103	117	32	37.6%
Sleep Health-Polysom Tech Opt	0	0	4	6	17	17	-
Software Engineering Tech	260	268	289	309	285	25	9.6%
Spec in Entrepreneur/Small Bus	0	0	0	1	2	2	-
Specialization in Accounting	0	0	0	2	2	2	-
Specialization in Marketing	0	0	1	1	1	1	-
Specialization Travel/Tourism	0	1	0	0	0	0	-
System Engr & Technical Mgmt	0	0	2	3	0	0	-
Technology and Management	16	30	43	46	46	30	187.5%
Vascular Technology	88	95	80	93	98	10	11.4%
Total (Duplicated)	4,146	4,539	4,407	4,923	5,371	1,225	29.5%
Total (Unduplicated)	4,001	4,414	4,273	4,786	5,232	1,231	30.8%

Attachment 2_Graduates_10_Year_History_by_Major



10 Year History By Major and Degree Type
As of September 5, 2016

Specializations

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Picture Archive/Comm Sys Spec	-	-	-	-	-	-	4	4	3	-
Specialization in Accounting	-	-	-	-	-	-	-	1	-	-
Specialization in Marketing	-	-	-	-	-	-	-	2	-	-
Total	0	0	0	0	0	0	4	7	3	0

Certificates

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Accounting Certificate	-	-	-	-	-	-	-	-	-	-
Dispute Resolution Certificate	1	2	1	2	4	1	6	11	1	2
Marketing Certificate	-	-	-	-	-	-	-	-	-	-
Polysomnographic Technology	-	-	4	14	13	11	8	6	3	9
Total	1	2	5	16	17	12	14	17	4	11

Associates

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Associate of Arts	13	8	2	5	-	1	-	-	1	1
Computer Engineering Tech	7	5	3	2	3	-	5	7	6	6
Dental Hygiene	25	26	22	25	18	27	18	23	21	9
Electronics Engineering Tech	3	1	2	1	-	-	-	-	-	-
EMT - Paramedic	19	21	22	25	27	17	28	26	26	29
Office Systems Technology	-	2	2	-	-	-	-	-	-	-
Polysomnographic Technology	-	-	1	2	3	5	6	2	4	-
Respiratory Care	23	16	15	17	-	-	-	-	-	-
Sleep Health-Polysom Tech Opt	-	-	-	-	-	-	-	-	-	3
Software Engineering Tech	7	2	3	2	2	-	-	2	9	2
Total	97	81	72	79	53	50	57	60	67	50

Bachelors

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Allied Health Management	-	-	-	1	2	4	3	2	1	-
Applied Environmental Science	1	-	-	-	-	-	-	-	-	-
Applied Mathematics	-	-	7	1	5	4	7	4	4	5
Applied Psychology	46	42	37	30	36	38	30	40	37	31
Biology	10	6	16	14	11	11	3	4	1	2
Biology-Health Sciences	-	-	-	-	-	-	10	14	20	18
Civil Engineering	23	23	29	28	20	14	23	17	15	25
Clinical Laboratory Science	23	24	24	22	22	35	27	34	49	46
Communication Studies	13	13	9	10	13	8	19	13	4	8
Computer Engineering Tech	15	7	14	8	13	3	4	3	3	3
Dental Hygiene	35	38	45	55	49	54	51	76	62	65
Diagnostic Medical Sonography	21	24	21	27	29	24	19	31	25	24
Echocardiography	6	4	16	9	21	32	31	32	29	35
Electrical Engineering	-	-	-	6	11	9	11	17	17	26
Electronics Engineering Tech	18	17	13	10	18	16	11	10	10	13

Bachelors

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Embedded Systems Eng Tech	-	-	-	1	2	2	4	1	5	3
Emergency Medical Services Mgt	-	-	-	-	-	-	-	-	-	1
Environmental Sciences	1	1	3	1	5	5	4	5	11	14
Geomatics	10	8	5	5	1	-	-	-	-	-
Geomatics-option in GIS	-	-	2	1	1	3	3	5	1	2
Geomatics-option in Surveying	-	-	1	11	13	14	10	13	1	12
Health Care Mgmt-Admin Mgmt	-	-	-	-	-	-	-	-	1	2
Health Care Mgmt-Clinical Mgmt	-	-	-	-	-	-	-	-	1	-
Health Sciences	1	3	2	2	2	6	1	1	-	-
Industrial Management	-	-	-	1	-	-	-	-	-	-
Information Technology	4	4	1	2	-	1	-	-	-	-
IT Accounting Option	-	1	2	1	1	2	1	2	-	-
IT Applications Dev Opt	8	5	13	5	6	8	21	12	8	11
IT Bus/Systems Analysis Opt	1	1	4	10	12	6	12	14	13	8
IT Health Informatics Opt	-	-	-	-	2	4	9	6	14	7
Management Information System	12	2	8	3	-	2	-	-	-	-
Manufacturing Engineering Tech	30	15	16	18	18	9	13	5	11	12
Mechanical Engineering	3	3	17	12	11	19	14	27	23	45
Mechanical Engineering Tech	31	19	31	23	24	19	24	18	17	21
Mgmt Info Sys/Mgmt Acc Option	-	3	-	-	-	-	-	-	-	-
Mgmt/Accounting Option	8	4	3	8	4	9	9	12	5	8
Mgmt/Marketing Option	9	7	5	5	7	8	7	4	7	7
Mgmt/Small Bus Mgmt Option	9	11	11	18	8	6	8	12	4	7
Nuclear Medicine Technology	18	18	16	15	16	16	15	14	14	15
Operations Management	8	6	3	15	7	14	16	13	19	18
Optical Engineering	-	-	-	-	-	-	-	-	1	1
Population Health Management	-	-	-	-	-	-	-	-	-	5
Radiologic Science	47	51	50	53	51	50	48	55	45	56
Renewable Energy Engineering	-	-	6	9	29	35	60	35	29	29
Renewable Energy Systems	-	-	1	-	-	-	-	-	-	-
Respiratory Care	5	8	6	7	10	21	21	21	27	22
Software Engineering Tech	44	36	27	27	31	29	41	31	35	47
System Engr & Technical Mgmt	-	-	-	-	-	-	-	-	-	3
Technology and Management	-	-	-	-	-	-	1	1	11	8
Ultrasound/Diag Med Sono Opt	1	-	-	-	-	-	-	-	-	-
Ultrasound/Vascular Option	1	-	-	-	-	-	-	-	-	-
Vascular Technology	30	30	26	23	23	25	21	28	19	24
Total	492	434	490	497	534	565	612	632	599	689

Masters

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Civil Engineering	-	-	-	-	-	-	-	-	2	6
Manufacturing Engineering Tech	3	4	7	2	6	8	12	4	8	9
Renewable Energy Engineering	-	-	-	-	-	-	-	1	11	9
Total	3	4	7	2	6	8	12	5	21	24

Grand Total

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Grand Total	593	521	574	594	610	635	699	721	694	774

Attachment 3_Grad_Data_First_Destination_3_Year_History_by_Major

Oregon Tech Graduate Outcome Data

a=2013/2014/2015 combined	% Employed		% Continuing Ed		% Looking for Work		% Not Looking		Success Rate		Median Salary	
b=2014/2015/2016 combined	a	b	a	b	a	b	a	b	a	b	a	b
% among those reporting outcomes	83.3	87.6	6.1	6.7	9.4	4.9	1.2	0.8	90.6	95.1	\$ 54,000	\$ 56,000
Biology-Health Sciences	36	38	60	62	4	0	0	0	96	100	\$ 20,750	\$ 33,000
Civil Engineering	83	92	11	8	6	0	0	0	94	100	\$ 50,000	\$ 51,540
Communication Studies	60	67	13	11	27	22	0	0	73	78	\$ 27,000	\$ 28,500
Computer Engineering Technology	89	93	0	0	0	0	11	7	100	100	\$ 63,000	\$ 64,000
Dental Hygiene	86	96	4	1	9	2	1	1	91	98	\$ 53,000	\$ 57,500
Diagnostic Medical Sonography	97	98	3	2	0	0	0	0	100	100	\$ 60,000	\$ 60,868
Echocardiography	95	93	0	3	5	3	0	0	95	97	\$ 60,500	\$ 64,000
Electrical Engineering	87	83	0	10	13	7	0	0	87	93	\$ 60,000	\$ 60,000
Electronics Engineering Technology	73	82	7	5	20	14	0	0	80	86	\$ 54,250	\$ 66,750
Embedded Systems Engineering Tech	80	83	0	17	20	0	0	0	80	100	\$ 58,250	\$ 60,000
EMT/Paramedic	100	100	0	0	0	0	0	0	100	100	\$ 48,000	\$ 52,000
Environmental Sciences	67	76	11	18	22	6	0	0	78	94	\$ 39,800	\$ 40,000
Geomatics: GIS	100	100	0	0	0	0	0	0	100	100	\$ 42,000	\$ 42,000
Geomatics: Surveying	69	64	0	9	31	27	0	0	69	77	\$ 40,500	\$ 43,000
Health Care Management	75	80	25	20	0	0	0	0	100	100	\$ 52,000	na
Health Informatics	75	79	10	11	15	11	0	0	85	89	\$ 53,000	\$ 52,000
Information Technology	84	88	0	2	16	10	0	0	84	90	\$ 55,000	\$ 55,000
Management: Accounting	78	83	6	6	17	11	0	0	83	89	\$ 32,000	\$ 32,250
Management: SmBus/Entrepreneurs	77	87	15	13	8	0	0	0	92	100	\$ 33,000	\$ 40,900
Management: Marketing	82	93	0	0	18	7	0	0	82	93	\$ 39,250	\$ 48,500
Manufacturing Engineering Technolo	77	85	5	4	13	11	0	0	87	89	\$ 62,500	\$ 60,000
Mathematics, Applied	60	71	20	29	0	0	20	0	100	100	na	na
Mechanical Engineering	71	82	12	9	10	5	7	4	90	95	\$ 60,000	\$ 60,000
Mechanical Engineering Technology	86	100	7	0	7	0	0	0	93	100	\$ 60,000	\$ 62,500
Medical Laboratory Science	100	100	0	0	0	0	0	0	100	100	\$ 53,750	\$ 55,000
Nuclear Medicine Technology	87	86	0	3	13	11	0	0	87	89	\$ 57,000	\$ 57,846
Nursing												
Operations Management	83	83	11	14	6	3	0	0	94	97	\$ 63,000	\$ 63,000
Polysomnographic Technology	83	100	0	0	17	0	0	0	83	100	\$ 50,000	\$ 40,500
Population Health Management	na	75	na	25	na	0	na	0	na	100	na	\$ 42,000
Psychology, Applied	54	66	24	26	15	5	6	3	85	95	\$ 30,000	\$ 30,000
Radiologic Science	92	97	1	0	6	3	1	1	94	97	\$ 47,000	\$ 50,000
Renewable Energy Engineering	76	83	6	8	18	9	0	0	82	91	\$ 57,000	\$ 56,500
Respiratory Care	97	98	0	0	3	2	0	0	97	98	\$ 56,000	\$ 56,000
Software Engineering Technology	93	91	0	0	3	7	3	3	97	93	\$ 62,250	\$ 66,750
Technology and Management	100	88	0	0	0	12	0	0	100	88	na	na
Vascular Technology	92	91	0	0	8	9	0	0	92	91	\$ 64,602	\$ 62,000

Additional Notes:

Numbers may not add to 100 due to rounding

na=not reported, or not available due to small sample size

METHODOLOGY

Sample Frame 2016: 781 degrees awarded per FAST

Survey Response Rate: 49% Total Knowledge Rate 2016: 75%

Sources: Data collected from a variety of sources. Below, for 2016, in chronological order:

Grad Fair paper survey

Faculty senior exit survey

Career Services survey

Career Services followup with non-respondents

Faculty information from their contact with students

LinkedIn Profiles

Salaries of \$2,500 and below and \$250,000 and above were deleted.

Students with dual majors are included under each major

Known Outcomes 2016: 587

Known Outcomes 2013/2014/2015 combined N=1008

Known Outcomes 2014/2015/2016 combined N=1244

2016-2017 PSG DIRECT ASSESSMENTS (Pre-Post, Precept, PSLOs, BRPT)	% Meets or Exceeds Expectations	Mean	Student A	Student B	Student C	Student D	Student E	Student F	Student G	Student H	Student I
			S16	S16	SU16	Su 16	F16	F16	F16	S16	F16
Entered Start Of	-----	-----	S16	S16	SU16	Su 16	F16	F16	F16	S16	F16
Grad End Of	-----	-----	S17	S17	S17	S17	S17	S17	S17	SU17	S17
Pre test scores /44		19.3	21	18	23	22	18	19	18	17	18
Post test scores /44		38.9	40	41	39	34	40	40	40	44	32
Post Program Scores /115		89.3	87	87	89	96	110	75	98	81	81
Preceptor Checklist Rating Final Course			536/540	471/490	416/490	490/540	490/490	446/490	485/490	486/490	540/540
Preceptor Mean		0.96	0.99	0.96	0.85	0.91	1.00	0.91	0.99	0.99	1.00

4=Highly Prepared 3=Prepared 2=Somewhat Prepared 1=Unprepared

SLO#1: Demonstrate the ability to perform analysis of pre-testing information

Identifies accurate & inaccurate test requests	100%	3	3	4	4	4	3	3	3	4
Identifies appropriate testing methods used	100%	3	4	4	4	4	3	4	4	4
Identifies external factors affecting testing	100%	3	4	4	4	4	3	4	4	4

SLO#2: demonstrate the ability to accurately prepare the equipment and patient for data collection.

Accurately calibrated computers used for data acquisition.	89%	3	4	4	3	4	2	4	4	3
Selected proper settings based on physician orders and best practices	89%	3	4	4	3	4	2	4	4	3
Determined correct montage and accurately applied equipment.	100%	3	4	4	3	4	3	3	4	3
Correctly interfaced ancillary equipment to primary recording computer.	100%	3	4	4	3	4	3	3	3.5	3
Correctly applied ancillary equipment to patient	89%	3	4	4	3	4	3	2.5	4	3
Correctly conducted physiological calibrations and corrected problems.	89%	3	4	4	4	4	3	2.5	4	4
Demonstrated proper patient communications	100%	3	4	4	3	3	3	4	4	3

SLO#3: demonstrate the ability to accurately collect data and summarize clinical observations.

Recognize and visually discriminate appropriate waveforms from instrument artifact	89%	3	4	4	3	4	3	2.5	3	3
Make appropriate alternations to recording parameters	89%	3	4	4	4	4	3	2.5	4	3
Correctly identify how to recognize and respond to clinically significant events and emergency situations	89%	4	3	3	4	4	4	2	4	4
Follow protocols	100%	4	4	4	4	4	3	4	4	3
Correctly identify how to titrate PAP/O2	100%	4	3	4	4	4	4	3	4	3
Correctly identify how to recognize and respond to seizures	89%	4	3	4	4	4	3	2	4	4

Correctly identify how to perform CPR	100%	4	4	4	4	4	4	3	4	4
Apply CPAP interfaces and interventional equipment	100%	4	4	4	4	4	4	3	4	4
SLO #4: demonstrate the ability to accurately analyze, interpret, and report data.										
Identify sleep stages IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Identify wake, arousals, body movements and movement time IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Recognize and visually discriminate appropriate waveforms from instrument artifact IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Document SaO2and CO2 changes IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Document sleep apnea & hypopnea IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Identify limb movements (e.g., periodic, restless legs, fragmentary myoclonus) IRS IS REQUIRED TO BE ABOVE 85%	100%	4	4	4	4	4	4	4	4	4
Recognize cardiac arrhythmias	22%	1	1	1	2	4	1	2	1	3.5
Calculating all sleep statistics	78%	4	3	2	4	4	4	1	4	4
SLO #5: demonstrate a thorough understanding of normal and disordered sleep.										
Demonstrated knowledge of all characteristics of normal sleep	56%	4	3	2	4	2	4	2	2	4
Demonstrated knowledge of the characteristics of the various sleep disorders	100%	4	4	4	4	4	4	3	4	4
SLO #6: demonstrate the ability to apply standard precautions throughout the patient's evaluation in order to prevent the spread of infection										
Demonstrated knowledge of standard safety precautions to prevent the spread of infection	67%	2	4	3	4	2	3	2	4	4
SLO#7: Demonstrate the knowledge of how to provide patient support and educational information.										
Demonstrated knowledge of providing patient support and educational information	78%	4	2	3	4	3	3	2	4	4
SLO #8: demonstrate the knowledge of site management.										
Demonstrated knowledge of site management	89%	3	2	3	4	3	3	3	4	3.5

BRPT#

#23337

#23349

Not taken

#23218

#23233

Not taken

23362

Not taken

#23343

Pass Date	-----	-----	8/24/2017	9/19/2017	8/7/2017	8/14/2017	9/19/2017	9/18/2017
BRPT Attempts	-----	5/5	1	1	1	1	1	1
Employed?	-----	5/9	Y	Y	Y	Y		Y

2016-2017 PSG INDIRECT SELF ASSESSMENT PSLO RATINGS

	% Meets or Exceeds Expectations	Mean (0-4)	Student A	Student B	Student C	Student D	Student E	Student F	Student G	Student H	Student I
Entered Start Of	-----	-----	S16	S16	SU16	Su 16	F16	F16	F16	S16	F16
Grad End Of	-----	-----	S17	S17	S17	S17	S17	S17	S17	SU17	S17

3=Highly Prepared 2=Prepared 1=Somewhat Prepared 0=Unprepared

PSLO#1: Demonstrate the ability to perform analysis of pre-testing information

Identifies accurate & inaccurate test requests	100%	3.3	4	4	3		3		3	3
Identifies appropriate testing methods used	86%	3.2	4	4	2		3		3	3
Identifies external factors affecting testing	86%	3.2	4	4	2		3		3	3

PSLO#2: Demonstrate the ability to accurately prepare the equipment and patient for data collection.

Accurately calibrated computers used for data acquisition.	57%	2.5	3	4	1		4		2	1
Selected proper settings based on physician orders and best practices	100%	3.5	3	4	3		4		3	4
Determined correct montage and accurately applied equipment.	100%	3.7	4	4	3		4		3	4
Correctly interfaced ancillary equipment to primary recording computer.	86%	3.3	4	4	3		4		3	2
Correctly applied ancillary equipment to patient	71%	3.2	4	4	2		4		3	2
Correctly conducted physiological calibrations and corrected problems.	86%	3.5	4	4	3		4		2	4
Demonstrated proper patient communications	100%	3.8	4	4	4		4		3	4

PSLO#3: Demonstrate the ability to accurately collect data and summarize clinical observations.

Recognize and visually discriminate appropriate waveforms from instrument artifact	71%	3.3	4	4	2		4		2	4
Make appropriate alternations to recording parameters	57%	2.5	3	3	2		3		2	2
Correctly identify how to recognize and respond to clinically significant events and emergency situations	100%	3.3	4	3	4		3		3	3
Follow protocols	86%	3.5	4	3	2		4		4	4
Correctly identify how to titrate PAP/O2	100%	3.2	3	3	3		3		4	3
Correctly identify how to recognize and respond to seizures	57%	2.8	4	2	2		2		4	3
Correctly identify how to perform CPR	86%	3.7	4	2	4		4		4	4
Apply CPAP interfaces and interventional equipment	100%	3.7	3	4	4		3		4	4

PSLO #4: Demonstrate the ability to accurately analyze, interpret, and report data.

Identify sleep stages	86%	3.5	4	4	2		4		3	4
Identify wake, arousals, body movements and movement time	86%	3.7	4	4	2		4		4	4
Recognize and visually discriminate appropriate waveforms from instrument artifact	86%	3.5	4	4	2		4		3	4
Document SaO2and CO2 changes	100%	3.8	4	4	4		4		3	4

Document sleep apnea & hypopnea	100%	3.7	4	4	3	4	3	4
Identify limb movements (e.g., periodic, restless legs, fragmentary myoclonus)	100%	3.7	4	4	4	3	3	4
Recognize cardiac arrhythmias	71%	2.7	3	2	2	3	3	3
Calculating all sleep statistics	71%	3.0	4	2	3	4	2	3

PSLO #5: Demonstrate a thorough understanding of normal and disordered sleep.

Demonstrated knowledge of all characteristics of normal sleep	100%	3.5	4	4	3	4	3	3
Demonstrated knowledge of the characteristics of the various sleep disorders	86%	3.2	3	4	3	4	2	3

PSLO #6: Demonstrate the ability to apply standard precautions throughout the patient's evaluation in order to prevent the spread of infection

Demonstrated knowledge of standard safety precautions to prevent the spread of infection	86%	3.5	4	4	2	4	4	3
--	-----	-----	---	---	---	---	---	---

PSLO#7: Demonstrate the knowledge of how to provide patient support and educational information.

Demonstrated knowledge of providing patient support and educational information	86%	3.3	4	4	2	3	4	3
---	-----	-----	---	---	---	---	---	---

PSLO #8: demonstrate the knowledge of site management.

Demonstrated knowledge of site management	100%	3.2	3	4	3	3	3	3
---	------	-----	---	---	---	---	---	---

COMMENTS

What do you consider to be the strengths of the program?

1. Because it is online, I found the internship to be very valuable. The teachers are also very good at responding quickly to concerns.
2. The depth of education
3. The journals and articles are helpful to explain different scenarios of sleep disorders [lesson plan].
4. Clinical site provides opportunity for "applied" learning along with courses.
5. Great teachers, quick on responding.
6. Love the online aspect, wish we has a better chance to work a a hospital for clinicals
7. Well-organized, excellent teaching and curriculum, allowed the students to be immersed in knowledge from day 1.

What do you consider to be the weanessos of the program?

1. Because it is online that in itself makes it harder.
2. No complaints!
3. A practice model head for the 10-20 system.

4. Students must be prepared to commit to learning a lot in a short period of time.
5. Online is harder than in class.
6. My clinical lab was okay, but don't feel they follow AASM protocols as they should but not programs' fault.
7. Not enough students sometimes made discussions hard.

Please comment on the "customer service" you received from the Distance Education staff and PSG faculty

1. Staff is amazing, no complaints here :)
2. Awesome!
3. Great, always responds to email and questions. Personal phone numbers available if you need to call.
4. Everyone I encountered was helpful and courteous.
5. Everyone has been very nice.
6. They were great!
7. Everyone treated me with respect and care throughout the program and were quick to answer all questions I had I had and made the program enjoyable.

How can the program be improved?

1. No improvements are needed.
2. Keep up the great work
3. More time between the weeks of classes.
4. Nothing I can think of, I had a great experience!
5. Program is great!
6. Practice board exams throughout the course of the program would be helpful and I really enjoyed the pre-test and post-test. Having that for every course would be great.

Any other comments

1. Grateful for opportunity