2017 Biological Sciences Annual Program Plan

BIOL Biological Sciences

I.A. Describe the program(s) to be reviewed. What is the purpose of the program and how does it contribute to the mission of Skyline College? **(Program Profile: Purpose)**

Narrative

Biology continues to contribute to the College mission and goals by providing preparation for transfer to a baccalaureate institution, professional schools (for postbaccalaureate) and for allied health workforce development. Nearly every student working towards an Associate degree and/or transfer takes a Biology course. The goals of BIOL courses include providing tools for students to make wise decisions regarding their personal health and the global environment. We are committed to the strategic priority of providing learning opportunities that prepare students for their future. Courses numbered BIOL 100—299 are transferable to UC and CSU. BIOL 100—199 are specifically designed to provide students with a scope of information that will help them develop the ability to objectively deal with the responsibilities of daily life with attention to environmental, social, and personal responsibilities. Courses numbered BIOL 200—299 are carefully designed and articulated for Biology, Biotechnology, and Allied Health Science degrees for transfer to four-year schools or professional program. The core program for biology majors consists of two courses, BIOL 215 (Organismal Biology) and BIOL 230 (Introduction to Cell Biology). The primary goal of this program is to prepare students for upper division work at their transfer institutions. This is done through courses that offer a diversity of topics that emphasize critical thinking and laboratory skills. An honors course (BIOL 675) is offered for concurrent enrollment with another BIOL course. BIOL 695 provides students with opportunities to explore scientific research.

II.A. Describe the progress made on previously established program objectives (goals) including identification of achievements or areas in which further effort is needed. Programs which have not yet established CPR/APP objectives should discuss progress on program implementation or activities. **(Analysis: Progress on Prior Program Objectives (Goals) and Activities)**

Narrative

Every course has been assessed in some way by the end of the 2016-2017 cycle, most courses have been assessed several times. The data have been quite consistent across multiple assessments, demonstrating that the assessment methods themselves are good. Additional emphasis is made in class on areas where student performance falls below expectations. Faculty are participating in the citizenship ISLO for the Spring 2017 semester.

II.B. Describe any recent external or internal changes impacting the program or which are expected to impact the program in the next year. Please include when the specified changes occurred or are expected to occur. **(Analysis: Program Environment)**

Narrative

Internal

The BIOL Load is one of the highest in the District (**Figure 1**). Our load increased 7% between Fall 2011 and Spring 2016, while the College Load decreased 9% (**Figure 2**). The quality of the program will be affected if our Action Plan is not implemented.

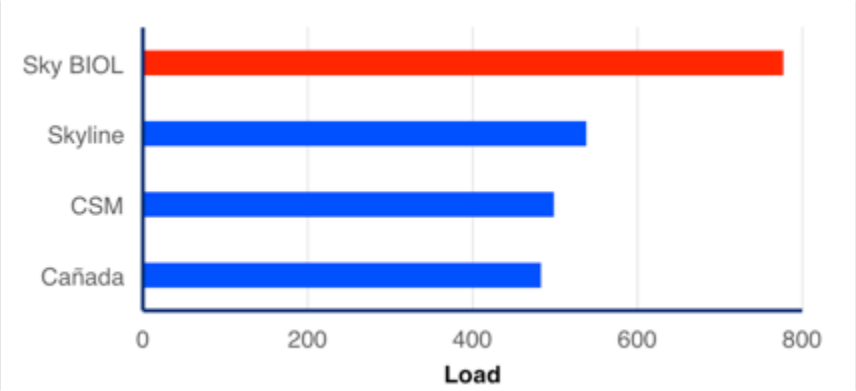

Figure 1. The Skyline BIOL load is one of the highest LOADs in the District (Fall 2011 - Spring 2016).

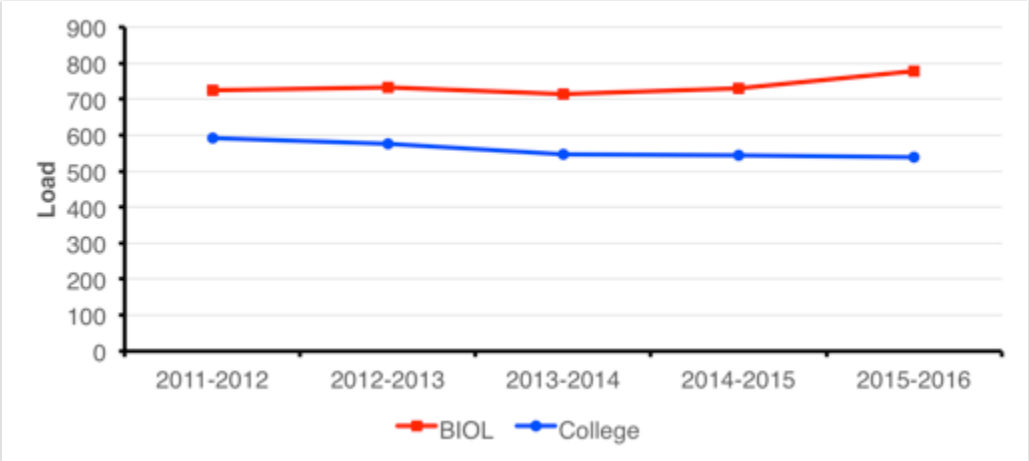

Figure 2. The Skyline BIOL load increased 7% while the College Load decreased 9% between Fall 2011 and Spring 2016.

No new courses have been added to Biology in the past year. The Biotech courses (170/171, and 400s have been moved to the new BTEC department. These courses were not regularly offered and their movement does not affect our Load.

External
Science education is critical for all students. Citizens are faced increasingly with having to grapple with matters of science in everyday life. Individuals are bombarded with blatant falsehoods about a variety of important topics including vaccines and nutrition, and some of the country's most complicated and urgent public policy debates have at their center been questions of science. For example, an understanding of the science of embryonic stem cell research is critically important to inform policymakers who are advocating or opposing this research; an understanding of ecological principal is essential to developing sustainability and energy policies.

A knowledge and respect of science is the ultimate equalizer, the pathway to human rights and a better quality of life. Countries that strongly supported science programs are better off economically and have greater numbers of people creating new technologies.

II.C. (1) Instructional Programs Only: Describe what was learned from the assessment of course SLOs for the current and past year.

(2) Student Service Programs Only: If PSLOs are being assessed this year (3-year cycle), describe what was learned. If no assessment was done because this is an off-cycle year, please state that this item is not applicable. **(Analysis: Student Learning Outcomes (SLOs and PSLOs))**

Narrative

The Biology Department has three major areas of focus. General Education, Majors, and Allied Health Science. The Department has consistently developed General Education Biology courses (numbered BIOL 100–199) to provide students with a scope of information that will help them to objectively deal with the events and responsibilities of daily life. The primary goals of these courses are to promote scientific literacy and therefore good citizenship. SLOs for these courses are essentially identical and include specific information and problem-solving skills necessary to make decisions regarding personal nutrition, environmental resources, and personal health.

We created SLOs for these courses based on the unifying themes in Biology including evolution, scientific methodology, and ecology that could be used to assess all of the 100-level courses. We created assessment criteria that set the bar high for ourselves to encourage us to promote scientific literacy for all. The 100-level courses have completed several SLO assessment cycles.

The SLOs for majors are based on skills and knowledge needed to continue in upper division work. Our BIOL majors are confident in their abilities: They scored 4.4 (out of 5) on a self-assessment at the end of the Spring 2016 semester. The majors do transfer to four-year schools and we do see the fruits of our labor. Several students have returned to Skyline College with advanced degrees to teach with us, present in our annual Expanding Your Horizons in Math and Science Conference and Science in Action lecture series, and contact us for recommendations for post-graduate programs and professional schools.

The SLOs for Allied Health courses were developed to cover skills and knowledge needed for the professional programs to which the students aspire. The students meet or exceed our standards.

III.A. Consider the previous analysis of progress achieved, program environment, and course-level SLOs or PSLOs (if applicable). What are the key findings and/or conclusions drawn? Discuss how what was learned can be used to improve the program's effectiveness. **(Reflection: Considering Key Findings)**

Narrative

Several common issues recur in examining reasons why General Education students are not meeting the various standards. These include:

- Students are underprepared coming into the introductory level courses. However, more importantly they come in saying "I don't like science" or "I don't do well in science."
- Students do not integrate information from several sources when they are writing essays, research papers and other assignments that require this skill. It is apparent that students write the first response to googling the question—regardless of whether the response addresses the question.
- Students have difficulty solving problems that require a multi-step process and/or quantitative skills.

While continuing to incorporate the importance and fun of understanding sciences some mitigations in progress:

- Divide challenging (quantitative) concepts into step-wise problems that guide problem solving.
- Incorporate more assessment measures that allow students to work collaboratively. (This has resulted in increased scores.)
- Require students to analyze why each possible answer to a multiple-choice question is or is not correct.

III.B. If the program participated in assessment of ISLOs this year:

(1) What are the findings and/or conclusions drawn?
(2) Does the program intend to make any changes or investigate further based on the findings? If so, briefly describe what the program intends to do. **(Reflection: ISLOs)**

Narrative

Institutional SLOs (ISLOs) are regularly assessed in Biology. ISLOs such as citizenship, information literacy, and critical thinking are highly integrated into our courses. We continue to use our ISLO assessment assignments to develop projects for our students, which stimulate them to excel in ISLOs and encourage them to continue to promote science in decision-making. By continuing work on ISLOs, we will ensure our students understand that many important personal and societal decisions they will make must be based in science.

In general, students did not meet targets for analyzing data or other evidence. They met or surpassed our expectations for finding information but often failed to use the information to specifically address a problem.

IV.A. Indicate whether the program is continuing implementation of the last CPR strategy or revising the strategy. Please describe the modifications if revisions are intended.

Note: Any new strategies should be linked to Institutional Goals through creation of objectives in the next section. If the program has not yet participated in comprehensive program review, an annual or multi-year strategy can be defined in this item. **(Strategy for Program Enhancement: Continuation/Modification)**

Narrative

We continue our dedication to science education and to Skyline College students. We requested a full-time anatomy (BIOL 250) faculty position in our CPR 2014 and APPs 2013 and 2015. All eight sections of BIOL 250 are still taught by adjunct faculty. Thus students do not have access to support for the required laboratory study hours. Additionally, another faculty member has taken on the additional responsibilities of maintaining laboratory specimens and curriculum development.

Degrees

Our Allied Health students usually earn the associates degree in Allied Health. From student surveys, we know that 100% of our majors transfer or go directly to professional schools although they are not earning (the Natural Science) Associate degrees.

Degree	Percent of degrees offered 2011-2016*
Allied Health	10.8
Natural Science	3.1

We have developed an AS-T curriculum, which was approved by the State. For years, the Natural Science degree has included Biology, Geology, Chemistry, and Physics majors. When The AS-T Biology is in the College Catalog, we will study elimination of the Natural Science degree.

Of the Top 10 degrees* Allied health is #2, after IS-Letters & Science. Natural Science is not listed in the Top 10 but our calculations show Natural Science ties with #10 Liberal Arts (3%) of degrees awarded. We expect to see an increase when the AS-T Biology degree is implemented.

General Education

Students in G.E. Biology generally enjoy Biology and are more comfortable with science after taking their Biology class. They are less fearful of scientific/technical issues on a ballot. Allied Health students gain the knowledge and skills necessary for their professional paths. In the current economy, many students have returned from the CSU and UC systems to increase their skill set to improve their chances of being hired in biotechnology. The Biotechnology program is being redesigned and expanded to help these students meet their needs.

Asking questions is an essential part of doing science and a fundamental skill expected of scientists. Questioning facilitates development of analytical and critical thinking skills. To further engage students, we have implemented the use of online Course Management Systems to supplement instruction. Students who may not participate in the classroom do participate online. We encourage students to think critically and avoid writing the first response to googling a question by proposing problems that require several sources and/or collaboration with classmates.

Most of our classes have a laboratory component. Performing lab experiments gives student experience in learning how science works and in critical thinking. Lab experiments require that students ask questions, and critically analyze their data. It isn't possible to goggle the analysis of unique laboratory data.

Demographics, success, and retention
From available data (2011-2016): More female and Filipino students are in BIOL than in other College classes. The percentage of White students in Biology courses is less than the College enrollment. Overall, success in Biology (71%) is similar to the College (72%). Likewise, retention in Biology (85%) is similar to the College (86%).

Data needs
To determine how to best serve our students, we have been requesting data annually since 2012 that we have not received. We would like these data in Excel.

1. A common concern of students is whether they will be able to handle multiple Allied Health Science laboratory courses. We are requesting a comparison of success rates of full time students who have completed similar levels of prerequisite course work (for example, CHEM 410 and a previous BIOL course with lab) when they take BIOL 240 and/or BIOL 250 and/or BIOL 260 alone vs. when two of these demanding lab courses are taken concurrently. We would like the data to cover 5 years.

2. The number of Life Science (e.g., BIOL, premed, and related areas) planning to transfer and who do transfer.

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* http://www.skylinecollege.edu/prie/assets/research/DegreeCertificateAwarded.pdf

Skyline COLLEGE

IV.B. Based on the most recent CPR and any desired modifications, develop an annual action plan with related resource requests. No narrative response will be entered in this section, but the objectives you create will be printed automatically in the APP report under this item.

(1) To begin, click on PLANNING at the top of the page, then CREATE A NEW OBJECTIVE. To view previously created objectives, click PLANNING at the top of the page, then VIEW MY OBJECTIVE.

(2) IMPORTANT! Make sure to associate each objective to this standard in the APP. Need help? Contact the PRIE Office for further instructions. **(Strategy for Program Enhancement: Action Plan and Resource Requests)**

Narrative

Associated Objectives

- 89-Allied Health Science: Anatomy
- 91-Allied Health Science: Computer literacy, critical thinking
- 32-Allied Health Science: Planning & Curriculum
- 87-Majors: Scientific method.
- 31-Master laboratory techniques
- 70-Master laboratory techniques.
- 90-Scientific Method
- 71-To provide opportunities for students to master material.

Task Details Report

Planning Year: 2017-2018

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 31 - Master laboratory techniques

Objective Description:

Micropipetters and spectrophotometers, now nearly 10 years year old, need to be calibrated and serviced.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		Ongoing	$5,000

Equipment (autoclave, spectrophotometers, micropipettes, etc.) maintenance should be an on-going cost, to prolong the life of equipment and to laboratory work is accurate. $5000.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
5630	Biological Sciences	Equipment (autoclave, spectrophotometers, micropipettes, etc.) maintenance should be an on-going cost, to prolong the life of equipment and to laboratory work is accurate.	$5000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 32 - Allied Health Science: Planning & Curriculum

Objective Description:

To provide for planning and curriculum in Anatomy and provide support outside of classroom hours for Anatomy students.

Start Date:	Task Type:	Priority Level:	Task Order:
4/18/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		Ongoing	$90,000

Full-time instructor.
Our LOAD is among the highest in the District and has increased since 2011-12. Faculty are needed to maintain curriculum and laboratories. All eight section of Human Anatomy are taught by adjunct faculty. At present one full-time BIOL faculty, with a full teaching load, must maintain equipment and supplies in the Anatomy lab, manage SLO assessment, and laboratory schedules.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
1110	Biological Sciences	Full-time instructor. Our LOAD is among the highest in the District and has increased since 2011-12. Faculty are needed to maintain curriculum and laboratories. All eight section of Human Anatomy are taught by adjunct faculty. At present one full-time BIOL faculty, with a full teaching load, must maintain equipment and supplies in the Anatomy lab, manage SLO assessment, and laboratory schedules.	$90000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 70 - Master laboratory techniques.

Objective Description:

To provide students and staff with the necessary tools to conduct laboratory work.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		Ongoing	$50,000

Autoclave replacement. All classes require some sterile materials. All labs in BIOL 240 required sterile materials and disposal. Funds must be reserved for autoclave replacement. $50,000.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	Autoclave replacement. All classes require some sterile materials. All labs in BIOL 240 required sterile materials and disposal. Funds must be reserved for autoclave replacement.	$50000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 71 - To provide opportunities for students to master material.

Objective Description:

To provide support outside of classroom hours for BIOL students.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$60,000

Instructional Aide position. Extraordinary pressure is put on the stockroom technician to monitor equipment and supplies, as well as supervise open-lab sessions. The Technician has the only office in the laboratory-annex part of the Science building. The Biology stockroom technician is not classified as an Instructional Aide, yet she regularly manages open labs, interacts with and assists students, in addition to her technician duties. An Instructional Aide is consistant with a STEM center because science requires mastery of laboratory skills. An Instructional Aide is needed on the second floor for BIOL 215, 230, 240, and 250.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
2210	Biological Sciences	Instructional Aide position. Extraordinary pressure is put on the stockroom technician to monitor equipment and supplies, as well as supervise open-lab sessions. The Technician has the only office in the laboratory-annex part of the Science building. The Biology stockroom technician is not classified as an Instructional Aide, yet she regularly manages open labs, interacts with and assists students, in addition to her technician duties. An Instructional Aide is consistant with a STEM center because science requires mastery of laboratory skills. An Instructional Aide is needed on the second floor for BIOL 215, 230, 240, and 250.	$60000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 87 - Majors: Scientific method.

Objective Description:

To enable Biology majors to learn with state-of-the-art equipment and develop their analytic skill.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$10,000

Licor alga chamber. Adds functionality to existing Licor photosynthesis system; allowing students will address how ecosystems are affected by environmental factors including climate and drought and anthropogenic stresses such as pollution. $10,000

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	Licor alga chamber. Adds functionality to existing Licor photosynthesis system; allowing students will address how ecosystems are affected by environmental factors including climate and drought and anthropogenic stresses such as pollution.	$10000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 89 - Allied Health Science: Anatomy

Objective Description:

To provide Allied Health students the opportunity to recognize and identify the locations and gross anatomy of the organs on cadavers.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$0

Cadaver & prosection. We currently have two cadavers, One has been here about six years and is completely dissected. The other is about four years old and is mostly dissected. Anatomy students learn best by viewing and working with the actual human body. Cadaver dissection is part of the anatomy curriculum. The cadaver also serves as part of the lab practical. This needs to be a recurring budget item so we can return to the convention of replacing cadavers every two years. $12,000

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	Cadaver & prosection. We currently have two cadavers, One has been here about six years and is completely dissected. The other is about four years old and is mostly dissected. Anatomy students learn best by viewing and working with the actual human body. Cadaver dissection is part of the anatomy curriculum. The cadaver also serves as part of the lab practical. This needs to be a recurring budget item so we can return to the convention of replacing cadavers every two years	$0.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 90 - Scientific Method

Objective Description:

To provide students and staff with the necessary tools to conduct laboratory work.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	4
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$600

Microhematocrit centrifuge (2). Students are required to measure their blood hematocrit during the physiology blood labs. 2 @ $300

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
4510	Biological Sciences	Microhematocrit centrifuge (2). Students are required to measure their blood hematocrit during the physiology blood labs. 2 @ $300	$600.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	3
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$1,700

Analytical balance. Students are required to weigh materials almost weekly in all labs.$1700.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
4510	Biological Sciences	Analytical balance. Students are required to weigh materials almost weekly in all labs.	$1700.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	2
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$250

Slide holders for inverted scopes. At present, students have to manually balance slides on stage, which is not acceptable technique. 4 @ $58

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
4510	Biological Sciences	Slide holders for inverted scopes. At present, students have to manually balance slides on stage, which is not acceptable technique. 4 @ $58	$250.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Start Date:	Task Type:	Priority Level:	Task Order:
4/22/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$2,500

Glass filter holder assembly with funnel, fritted base, stopper, clamp, 47mm. After 30 years of using membrane filtration, we have only two filter assemblies left for classes of 30 students. 10@$250.

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
4510	Biological Sciences	Glass filter holder assembly with funnel, fritted base, stopper, clamp, 47mm. After 30 years of using membrane filtration, we have only two filter assemblies left for classes of 30 students.	$2500.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 91 - Allied Health Science: Computer literacy, critical thinking

Objective Description:

To provide physiology students with computer literacy skills, to run physiology simulations, graph large amounts of data, and make presentations.

Task Details Report

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$30,000

PC laptops and cart. Computer literacy is important to all allied health professionals, as computers are at the core of the medical health system . Physiology student run computer simulations, generate experimental data, analyze graphs and make presentations. For the past 17 years, a computer center with rooms that had 30+ PC work stations were available. Unfortunately, this program is being phased out, and the single remaining room will be phased out soon.
We need to obtain a PC cart with 20 PC laptops, 20 external CD drives, and a printer. This portable PC cart can be locked away when not in use. $30,000

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	PC laptops and cart. Computer literacy is important to all allied health professionals, as computers are at the core of the medical health system . Physiology student run computer simulations, generate experimental data, analyze graphs and make presentations. For the past 17 years, a computer center with rooms that had 30+ PC work stations were available. Unfortunately, this program is being phased out, and the single remaining room will be phased out soon. We need to obtain a PC cart with 20 PC laptops, 20 external CD drives, and a printer. This portable PC cart can be locked away when not in use.	$30000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Planning Unit: Biological Sciences
Unit Manager: Case, Christine

Objective: 92 - Majors: Scientific method

Objective Description:

To enable Biology majors to learn with state-of-the-art equipment and develop their analytic skill.

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	2
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$45,000

Nanodrop 2000 spectrophotometer. Uses less sample and will provide us with the ability perform laboratories on a a cost-saving, state-of-the-art nanoscale. 3 @ $15,000

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	Nanodrop 2000 spectrophotometer. Uses less sample and will provide us with the ability perform laboratories on a a cost-saving, state-of-the-art nanoscale. 3 @ $15,000	$45000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	

Task Details Report

Start Date:	Task Type:	Priority Level:	Task Order:
4/19/2017	Department/Division/Unit	High	1
Due Date:	**Completion Date:**	**Task Status:**	**Budget:**
		New/Pending	$10,000

Biorad EZ gel documation station. Currently we use older system that record the results on thermalpaper that the students then need to scan or photograph. All labs currently the newer digital system. $10,000

Budget Remarks:

Date:	Name:	Remarks:
No Data to Display		

Budget Details:

GL Code	Account	Description	Requested	Approved
6450	Biological Sciences	Biorad EZ gel documation station. Currently we use older system that record the results on thermalpaper that the students then need to scan or photograph. All labs currently the newer digital system.	$10000.00	$0.00

Assignment Details:

Name:	Email:
No Data to Display	