

Ventura College Sabbatical Leave Proposal
Curriculum Development and Enhancement Project for Fall 2016
Submitted by Ty J. Gardner
Biology Department
October 2015

Instructor's Sabbatical Leave Status

Full-time hire date: August 2009

Previous Sabbaticals: 0

Increasing Success Rate of Pre-Nursing Students

Background of Sabbatical Project

General Human Anatomy (ANAT V01) is a high enrollment course (701 students in 2014) with high productivity (2014 = 615) but a declining success rate (2010 = 76.6, 2011 = 68.2, 2012 = 71.1, 2013 = 63.3, 2014 = 58.9). ANAT V01 is a demanding course that covers a large amount of material in both lecture and lab, introducing hundreds of new terms in a mix of English, Latin, and Greek. While Human Anatomy is generally viewed as a difficult but manageable course, it produces a good deal of fear and/or anxiety in current and future students. Our recent decline in success is a cause of concern for our department and the college. Some of this recent decline may be explained by high success rates during the economic downturn as a result of increased enrollment of students traditionally attending CSU and UC schools or other demographic changes in our student body. However, it is likely that our recent downturn is also related to the removal of the BIOL V01/L prerequisite for ANAT V01 in 2013. The removal of this prerequisite was made at the request of Nursing in order to help them meet the requirements of national accreditation. This action increased the number of unprepared students registering for ANAT V01, the first course in a series of three nursing prerequisite courses offered by the Biology department (ANAT V01, PHSO V01, and MICR V01). Failure in ANAT V01 is costly to nursing students.

¹*All entering students will be required to have a minimum overall college GPA of 2.50 and an overall biological science GPA of 2.50 (anatomy, physiology, microbiology) with no more than one withdrawal, D or F in ANY of these three (3) courses.*

Unfortunately, adding back the prerequisite course, or any other prerequisite, is not currently a viable option for addressing our declining success. However, the declining success rate is having negative impacts on students, instructors, and campus resources. We must find a different solution that allows us to maintain course rigor while adapting to a post-prerequisite reality.

Purpose of Sabbatical Project

The purpose of this sabbatical project will be to produce tools that will prepare students for successful completion of ANAT V01 and therefore increase their chances of success in applying to nursing school. I will develop a free, online lecture series introducing students to the study of Human Anatomy that students will take prior to ANAT V01. A study guide and assessment tools will be provided along with the lectures. The main goals of this

¹ <http://www.venturacollege.edu/departments/academic/nursing-science/faqs>

course will be to introduce students to basics of each system addressed in ANAT V01 and to prepare the students with study tips and vocabulary that will assist them in all of their biological/health courses. Additionally, I intend to produce materials that will help link anatomical features learned in the hands-on ANAT V01 lab to the more conceptual lecture topics to continue to support these students after they enter our ANAT V01 course. All materials produced will be made available for download at no cost.

Components of Sabbatical Project

- **Online Introduction to Human Anatomy video lecture series:** I will produce a video lecture series using photos from lab models used at Ventura College and public domains sources such as the high quality images of the 20th edition (1918) of Gray's Anatomy. The video series will discuss how to study human anatomy as well as providing a brief introduction to each system that is covered during the ANAT V01 course. Students will gain a familiarity with anatomical terminology and concepts that will assist them in learning other material when they later take ANAT V01 and PHSO V01. The video lecture series will be captioned, openly available online, and shared with students on the Ventura College Campus via counseling and advertised in our BIOL V01 courses. I will request to have links to the videos and materials on the department web page and in the notes in the schedule of classes. I will email information regarding the course to all students registering for ANAT V01 I am teaching and will encourage other instructors to do the same.
- **Study Guide and Assessment Tools for Introduction to Human Anatomy:** I will develop a study guide and set of assessment tools as a companion to the Introduction to Human Anatomy video lecture series. The study guide will assist students in note taking and provide a written source they can refer back to. Assessment tools will include unit exams and crossword puzzles that focus on associating anatomical parts with key terms in their definitions or which help students discriminate between related parts. Answer keys will be provided. All materials will be made available for free download.
- **Lab/Lecture Linking Workbook for ANAT V01:** I will develop a visual workbook for lab using photographs of lab models. Photographs of lab models will include arrows pointing to parts learned in lab allowing students to label the parts. Anatomical parts will be discussed in simple terms to help students understand the relationship between these lab models and lecture topics.

Value of Sabbatical Project to VCCCD and Ventura College

The low success rate in ANAT V01 has a number of negative impacts at the college and district level such as contributing to a lack of lab space. Repeated attempts at ANAT result in higher enrollment in ANAT, to the extent that we are having difficulty offering enough sections, but lower enrollment in subsequent courses (PHSO and MICR). The Biology department has been offering 7am ANAT V01 labs in order to pack in as many sections as possible. This places ANAT V01 off of the block schedule that other courses are on, making it more difficult for students and instructors to put together their schedules. We also lack time slots where the lab can be open, allowing instructors to hold office hours in the lab for student review time, potentially acting as mechanism that contributes to low student

success. A reduction by even a couple of sections would be highly beneficial to our scheduling, potentially allowing us to return to the block schedule and/or opening up time for instructors to meet with students in the lab outside of class time. Specifically, increasing success from the 58.9% of 2014 to 70%, given our enrollment of 701, would result in passing 78 more students or the equivalent of 3 lab sections. While I do not have data on the number of students who repeat, personal experience and consultation with other instructors suggests that it is common and that increasing success will have a positive impact over time. Furthermore, if we can increase the number of students moving on to later classes in the pre-nursing sequence (PHSO and MICR) we can better utilize spaces that are currently under-utilized but not suitable for multiple purposes (MICR lab).

It is also likely that our off block schedule and lack of open lab times has a greater negative impact on students who already face educational disadvantages, making our declining success rate and its associated impacts an equity issue. The Biological Sciences have a large success gap between White and Hispanic students (14.1% in 2014) but, like VC as a whole, are also seeing an increase in enrollment of Hispanic students (increasing from 44.1% in 2010 to 56.0% in 2014). My project, with its focus on introducing language and study skills, would have a differential impact on Hispanic students, low-income students, and others who may have difficulty working with the technical language of a Human Anatomy course. It is my hope that it will decrease our equity gap.

Value of Sabbatical Project to Ventura College Students

I have proposed this project to increase student success in ANAT V01. My introductory lecture series and study guide will prepare students with language and study skills needed for successful completion of anatomy and physiology. After receiving this introduction, students will have a general knowledge of the organ systems of the body that will facilitate the learning of detailed information throughout the regular semester as anatomical knowledge builds on material that has already been covered but also requires the referencing of material that will not be covered until later in the semester: knowing some anatomy will make it immeasurably easier to learn more anatomy. The lab workbook will continue to support students throughout the regular semester as it links together the hands-on/visual knowledge they gain in lab with the more conceptual and verbal material from lecture.

Increased success will save the students time and money as well as decrease stress. The provided resources will allow hard-working students the opportunity to get on track in a barrier course before they have the opportunity to fall behind and place their academic future at risk. Pre-nursing students face a good deal of stress knowing that they have only one opportunity to fail (W, D, F) and must maintain a 2.5 average in their 3 prerequisites within the Biological Sciences to be accepted into nursing school. Students are further stressed because points are earned for a multi-criteria screening process for nursing admission where a science GPA of 2.5 is worth only 25 points but up to 45 points are possible given a 4.0. A good start to the ANAT, PHSO, MICR sequence is therefore essential to support timely admission to nursing school.

Value of Sabbatical Project to Instructor

Our student body constantly changes in factors like college preparedness, ethnic background, socioeconomic status, and K-12 educational experiences. Therefore, I need to continually work to make sure that my lessons are clear and relevant to our current students. I need to develop and adopt tools and methods that help students succeed, not only when they are well prepared to succeed, but also when they come to me unprepared. Although it is student value driven, this project has two primary aspects that are of value to me in a way that is independent of the value it has to the college and the students. First, this project will provide me, and other ANAT instructors, with a larger number of students who are prepared to succeed. Not only will this improve success numbers, it will improve the classroom environment. Success boosts confidence. Confidence increases student interest and provides the instructor with a more inquisitive and less anxious environment to work in. What is good for the students is ultimately good for me too. Additionally, this project will allow me focus on a problem that has interested me for years and invest time into improving my skills as an instructor. I will have the opportunity to investigate new tools for video capturing and editing, along with captioning. I will also be able to spend time focusing on important and interesting questions like, what are the essential components of this course that will boost understanding and success with related material (what some might term threshold concepts). I look forward to spending time thinking about pedagogical problems and developing solutions to them. Furthermore, I can use the tools and strategies developed in this project in my other classes, increasing success for my students and, as is the purpose of this proposal, hopefully also the students of other instructors as learning tools are extended beyond the classroom to all interested and motivated students at VC.