

Best Practice for Course Sharing in the CSU – Collaborative Undergraduate Clinical Hematology Course

Background:

A shortage of clinical laboratory scientists affects patient health and well-being with much the same impact as the nursing shortages. Students interested in attending postgraduate Clinical Laboratory Scientist training programs in California are required to obtain a trainee license. One of the prerequisites for obtaining the license is a preparatory course in hematology. Over the past several years, hematology course offerings at universities statewide have declined making it very difficult for students to prepare and qualify for entrance into the training programs. A team-taught inter-campus effort combined with distance and distributed technologies has provided a pedagogically sound solution to course availability and access to course content.

A successful model for providing student access to required specialty courses not available to them at their local universities has resulted in a best practice for the California State University system. Faculty at California State University, Sacramento, California State University, Stanislaus, and San Diego State University work with faculty from other California campuses to provide students access to a clinical hematology course offered on the Sacramento campus. The faculty from CSU, Sacramento, CSU, Stanislaus and San Diego State University collaborate to team-teach the course. Colleagues from several other campuses throughout the state assist students with registration and proctor exams on their campuses as part of the multi-campus effort. Accessibility is achieved through this intercampus collaboration and the combined use of synchronous and asynchronous video streaming, videoconferencing and WebCT (SacCT) learning resources. What began as a pilot effort is now an eight-year, pedagogically successful, ongoing practice that serves students over the entire state of California. This achievement provides a framework to utilize in providing the means for other necessary courses short on instructors and enrollments to reach a broad state, national or even international student audience without compromising content or academic integrity.

Dr. Rose Leigh Vines, CSU, Sacramento, and Dr. Jane Bruner, CSU, Stanislaus, offer Clinical Hematology (BIO 124) spring semesters to students throughout California. Dr. Jeanne Weidner and Ms. Marlene DeMers from San Diego State University assist in the course by offering laboratories and exams to students from the Southern California area.

Registration:

Regular Registration Process for CSU, Sacramento Students: Students enrolled at CSU, Sacramento register for the course using the traditional registration process in CMS.

CSU Intrasystem Concurrent Enrollment: If a student is enrolled at another CSU campus, he/she may apply for CSU Intrasystem Concurrent Enrollment status to enroll in the BIO 124 course on the Sacramento campus through their home campus Registrar. Students pay their fees to the home campus and CSU, Sacramento gets the FTEs for the concurrently-enrolled students in the course. The hematology course units (3) are considered part of their total number of units for the semester at their home campus.

CSU, Sacramento College of Continuing Education (Open University): If a student has previously graduated from a campus or is attending a non-CSU campus, he/she will enroll through the CSU, Sacramento College of Continuing Education (Open University). E-mailed instructions on the registration process are sent in early Nov. There is a special section of the course for Open University students and students cannot enroll unless they are pre-approved.

Technology Format:

Students at the CSU, Sacramento campus and other students who live in the Sacramento region attend the hematology class in a studio classroom on the Sacramento campus where lectures are delivered by Dr. Vines and Dr. Bruner.

Students from CSU, Stanislaus view the class using **two-way videoconferencing** technologies in a studio classroom on their campus. This allows interactivity between the students in the studio classroom on the Sacramento campus and the students on the CSU, Stanislaus campus.

Students not viewing the class on the CSU, Sacramento or CSU, Stanislaus campuses view the class on a computer through **synchronous “live” video streaming**. All students who take the course using video streaming technology are required to view the class live (4:30-6:20pm M,W).

Students have two options for watching the live video streamed classes. Students may view the class at their home campus computer lab (if they are presently enrolled in a university) or they may also view the class synchronously from a personal computer at home or a work site if they have a high-speed DSL or cable modem connection. Since the instructors will not be able to see students attending the lectures, keywords are given during every lecture. Students must respond via e-mail within one hour after class is over in order to get credit for attending the required “live” video streamed lectures.

Each lecture is archived in SacCT to allow students who have an excused absence to view the lecture asynchronously and so that students can review the lectures for exams. The archived lectures are only for review and are not intended as a substitute for viewing the live video streamed class synchronously on Monday and Wednesday evenings. Students are expected to attend each class and to view the lectures synchronously either at the Sacramento or Stanislaus campuses or at a video stream viewing site (campus computer lab or home/work computer with high-speed connection).

A student must have RealPlayer software installed on their computer to view the live and/or archived video streamed lectures. One can download the software FREE from the www.real.com website.

Laboratories: The labs are offered from 8:30am – 5:00pm on two days during the semester. Those students who are enrolled in the class from Northern California have labs on the CSU, Sacramento campus. Those students who live in Southern California have labs at San Diego State University. These labs are offered Fridays, Saturdays and Sundays at the Sacramento campus and Saturdays at the SDSU campus.

Labs are mandatory for completion of the course and cannot be missed. There is no opportunity to make-up the labs. If a laboratory is missed, a student will not receive credit for the course. Morphology quizzes and taped lab demonstrations are available in SacCT to help prepare students for the “wet” weekend laboratories. Students are required to take morphology quizzes on cell identification before they come for the labs to maximize efficient use of the laboratory time.

SacCT: All of the PowerPoint presentations used for lectures, laboratory demonstrations, morphology data bases, and morphology exercises and quizzes are posted on SacCT. Students are requested to download the lecture notes (pdf files of PowerPoint lectures) before attending class. A student will need to have Acrobat Reader installed on his/her computer to download files. This software is free from the Adobe website at www.adobe.com.

Case Studies: Students are required to present two clinical case studies during the semester. Students who are in the studio classroom at CSU, Sacramento present the cases orally. Those students who are video streaming the course are required to research the Web and prepare two clinical case studies in written format to fulfill this course requirement.

Examinations: There are two midterm exams and a final exam during the semester. Students take midterm and final exams on the CSU, Sacramento, CSU, Stanislaus, or San Diego State University campus. Special arrangements can be made with proctors from other CSU campuses to administer the midterm exams at their campuses but the final exam must be taken at one of the three teaching campuses.