

FIRST TIME TEACHING OF ONLINE OCEANOGRAPHY AT A SMALL
COMMUNITY COLLEGE

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1. INTRODUCTION

The American Meteorological Society's Online Ocean Studies is being offered for the first time at New Mexico State University - Grants Campus (NMSU-G) during the fall semester of 2006. The main concern with offering this course was sufficient enrollment to prevent the course from being cancelled during the initial registration period. Campus history had proven that new courses with no connection to established degree programs generally did not fare well. Grants is the county seat of Cibola County, and has a population of about 8,000. Population of the county, which is the designated service area for the college, is 26,000. The current student body of NMSU-G is near 750 students, of which 39% are Native American, 34% are Hispanic, and 27% are of other ethnicity, mainly Anglo. NMSU-G is a two-year local and commuter-based community college. In order for this course to be a success, and meet the joint AMS and NMSU goal of bringing relevant and interesting science instruction to minority populations, a great deal of prior planning was required to overcome the problem of insufficient enrollment and prevent the course from being cancelled during the enrollment period.

2. COURSE IMPLEMENTATION PLANNING

Planning for this course began 3 semesters prior to the semester that the course was to be taught. This long lead time was required to allow for the time necessary to add the new course to the NMSU catalog, as Introductory Oceanography had not been offered previously in the NMSU system. The course was proposed as a 4-credit hour lower division laboratory science class in the Geography department. Prior coordination was effected with the Geography Department chair and faculty members of the department at the NMSU main campus, to insure approval of the course when presented to the

department. Approval for the catalog addition of the course was granted as proposed, and without modification. Geography (GEOG) 259 - Introduction to Oceanography - became a cataloged course available to be taught.

Assistance was given by the distance education coordinator, attached to the Grants Campus from the Main Campus, in having this course recognized as a credible 4-credit laboratory science course meeting the general science criteria for bachelor degree plans. In particular, the teacher education program, a bachelor's completion and teacher certification program offered by the Main Campus through distance education on the Grants Campus, readily accepted the program. The distance education program coordinator then started advising students into the course, as did the NMSU-G advisors.

A marketing campaign was started utilizing the assistance of the campus marketing representative. The theme of the marketing campaign was, "Why should I take Oceanography, I live in the desert?" The marketing campaign related specific reasons why the ocean was important even to those who live in the desert. An active monsoon season during the heavy registration period assisted in this endeavor. We were able to tie this weather activity to its source - the ocean, emphasizing the need to understand that local flooding events actually began in the ocean. This marketing campaign was a very active, but inexpensive program. An advantage to living in a small town is that just about anything new is newsworthy. Our local radio station provides a free, half-hour radio show to the college on a weekly basis. The course instructor was able to be a guest on this show, and was interviewed about the course. AMS provided a news release, which the campus marketing representative modified slightly, and sent to the local newspaper. The article was immediately printed, further saturating the market with information on the course. NMSU Main Campus Public Information Office picked up on the news release, which our marketing representative sent to them. As a result, the faculty and staff newspaper, Page One, interviewed the instructor

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and published a front page article that went throughout the NMSU system. It is important to note that this market saturation was accomplished at no cost to the institution, other than labor involved by personnel in the normal course of their duties.

A final step was taken to make the course more appealing to non-traditional, as well as traditional students. Two sections of the course were offered. The first section was a traditional lecture-type class, with completion of labs, or investigations online via the AMS Online Ocean Studies gateway. The second section was attended totally online. Students were allowed to freely move from one section of the class to the other as their needs and situations changed throughout the semester. While this is a non-traditional approach, accomplishment of this was easy, because all assignments and tests were completed online via the campus WebCT course management system. To further reinforce those students who were hesitant concerning the online lab completion, a geography/science major work-study was hired to conduct lab help sessions at the students convenience, either in person or via email. This, of course, was in addition to the instructor's availability for assistance either in person or virtually. With the exception of the AMS provided investigations, which are based upon real-time data and are prepared and posted at specific weekly times, all other course requirements were available from day one of the course. Both online and traditional students could work ahead on homework and writing assignments. Submission windows were established to keep students on track, and final submission dates for assignments were established, which paced the course with the AMS-provided investigations, but working ahead was allowed. There were also no synchronous activities scheduled, allowing students to establish their own schedules for completion of assignments. If the instructor desired discussions, he posted the discussion topic to the discussion board, then emailed students advising them of the posting, and giving them a time frame (usually one week) to respond on the discussion board. Asynchronous activity seemed to appeal to the students.

3. THE RESULTS

As of census day, the enrollment in the course was 31 students. 7 students were enrolled in the traditional section, and 24 students were enrolled in the online section. Although this may sound like a small enrollment, one must remember that this is a small college, with average class size hovering near 15. In fact, the oceanography class has the largest class enrollment for a single lab science course. This is due

to the fact that the course is a laboratory science course that is free from the need for a physical laboratory. The largest laboratory classroom available on campus seats 24, limiting class size in traditional laboratory science courses. To date, no student has taken advantage of the ability to switch freely between sections, although the availability of that option appeals to them. There have been students from the online section that have had difficulty understanding some of the material on their own, and have showed up for the lecture on these occasion to gain better understanding of the material.

As of midterm, and the last day to drop a course with a "W" grade, 26 students remain in the course, for an 84% retention rate. Of the remaining students, 23 are passing the course with a grade of "C" or better. 11 of the 26 students are minority students, and 73% of the students remaining in the course are female. Three students are located out of the service area for the campus. Two are attending our sister NMSU campus at Carlsbad, NM, some 350 miles away. One student is located in Tulsa, OK.

4. FUTURE PLANS

Original plans, pending the success of this course, was to offer the AMS Online Oceanography course in spring semesters in the future, beginning in spring 2008, and the AMS Online Weather Studies course in the fall, to coincide with hurricane season. The popularity of the current Online Oceanography course, combined with word-of-mouth endorsements by current students, have caused a revision of those plans. Oceanography will now be offered again this summer, due to student demand, and requests from distance education coordinators at other NMSU campuses. Plans now are to continue to offer both online and traditional sections of both oceanography and weather studies in fall and spring semesters as previously planned, and online only versions of these classes in the summer, alternating between oceanography and weather studies every other summer. We will also petition the NMSU Distance Education Department to list these NMSU-G courses on their website and class listing of available distance education classes, with the purpose of drawing additional enrollment from the entire NMSU system.

The NMSU system uses a "G" suffix to indicate that courses are general education courses. General education courses are required

to have a writing component, stress critical thinking skills, and demonstrate the seamless multi-disciplinary aspect of education, among other requirements. Plans are to institute course change forms to convert both Online Oceanography and Online Weather Studies to "G" designated courses.

5. LESSONS LEARNED

Probably the most important lesson learned is to start early, especially if catalog additions or modifications are required. Also important is to publicize the course to the maximum extent possible. AMS provided news releases are a valuable tool in that endeavor. Use any resources or personnel available to spread the word about your course, including students. Most administrators and support personnel will share your excitement about the new offering, and will be more than happy to be a part of the team. Be innovative in attempting to meet the needs of non-traditional learners. The very nature of these courses promotes a non-traditional approach. Innovate ways to meet scheduling needs of students trying to multitask, and at the same time maintain your high standards of performance. Use the material provided by AMS. It is high quality, and professionally prepared. Higher education instructors do not have the time and resources available to create high quality material such as provided by AMS. Finally, listen to your students. Most are serious about their education, and can provide useful feedback for course improvement. Use this feedback, as well as what is learned personally from instructing the course, to continually improve the presentation and student understanding of the material. Do not hesitate to ask AMS for guidance or assistance.