P1.48 IMPLEMENTATION OF ONLINE WEATHER STUDIES AT HAROLD WASHINGTON COLLEGE, CHICAGO, ILLINOIS

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1. INTRODUCTION

Harold Washington College (HWC) is a community college within the City Colleges of Chicago district, serving the downtown Chicago community. HWC has a diverse student population, with 46% African-Americans, 20% whites, and 19% Hispanics. 45% of the students intended to earn Associate degrees, and over half plan to transfer to a 4-year institution; most students enroll part-time.

The interest in having a meteorology course at HWC originated with the invitation to participate in the *Online Weather Studies* Geosciences Diversity/National Dissemination Project, and I participated in the *Online Weather Studies* Workshop in Kansas City in May 2005. A new course number for a meteorology class is needed in order to formally offer the course at HWC. In my presentation, the process for a new course approval, which was started in Summer 2005 and is still in progress, will be described, in addition to the benefits of offering a meteorology course at HWC.

2. APPROVAL PROCESS FOR COURSE SYLLABUS

Because meteorology has not been offered within the City Colleges of Chicago system, a new course number is needed, a process that involves the submission and review of the course syllabus by several local and district committees before presentation to the City Colleges of Chicago Board of Trustees for approval. In August 2005, the Biology and Physical Sciences Department Chair and the HWC Interim Dean of Instruction approved the syllabus. On November 1, 2005, the HWC Curriculum Committee approved the syllabus, and it will be presented to the HWC Faculty Council on November 18, 2005. Given the semester break through the latter half of December and the first half of January, the syllabus will not be presented to District-wide committees until starting in February 2006.

In Spring 2006, the meteorology course will be offered on a one-time trial basis as one of the sections of the Physical Science – Earth Science course (Phy Sci 111); the *Online Weather Studies* curriculum will be used. If approved, the meteorology course will be offered under its own course number during the 2006 – 2007 academic year.

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3. BENEFITS TO HWC

In addition to the unique opportunity to use the *Online Weather Studies* curriculum, there are several additional reasons an introductory meteorology course would benefit HWC. First, such a course can provide practical information for the general public to better understand weather and atmospheric phenomena, especially for a meteorologically interesting city situated along Lake Michigan. People make daily decisions concerning the weather, including choices about clothing, carrying an umbrella, and mode of transportation, and the sources of weather information are ubiquitous, including the television news channel, The Weather Channel, the newspaper, and the internet. Such sources may display weather maps or satellite imagery, and this course would enable students to better interpret these images. In addition to getting weather information for local, personal lives, weather extremes are newsworthy items. The record-breaking 2005 Atlantic hurricane season has been in the headlines since August, when Katrina struck New Orleans, and recent tornadoes in Wisconsin also topped the news at the time.

A second reason an introductory meteorology course would benefit HWC is because it would enhance the Earth Science course offerings. Currently, HWC offers a general Earth Science course (Physical Science 111), which covers topics in astronomy, geology, meteorology, and oceanography. Moreover, individual courses in astronomy and geology are regularly offered, and oceanography is in the course catalog, although it has not been offered for several years. An individual meteorology course would complete the Earth Science course offerings.

An introductory meteorology course would also benefit HWC because the course objectives satisfy three of HWC's General Education Objectives:

- To think critically and to analyze and solve problems.
- To communicate effectively, orally and in writing, and use information resources and technology competently.
- To understand the major principles of the natural sciences and the application of the scientific method to biological, physical, and environmental systems.

Exercises performed in meteorology courses encourage critical thinking and apply the scientific method; for example, the process of making weather forecasts, verifying them with real data, then determining the accuracy of the forecast is a common exercise that encourages critical thinking in introductory meteorology courses (Kidder, et al., 2002). Moreover,

the multidisciplinary aspect of meteorology involves applications in the core sciences of chemistry and physics, in addition to math.

The *Online Weather Studies* curriculum supports the second General Education Objective listed above, that of communication and technology. Oral and written communication is an integral part of this meteorology course. One method of evaluation is for the student to present a daily weather briefing, in which the student interprets the daily weather maps and presents a weather summary to the class. Written communication is included through the use of writing assignments and a weather journal. The writing assignments are designed to promote research of the latest scientific information on a specific topic, such as air pollution, global warming. The weather journal allows the student to articulate in writing his or her understanding of the elements of weather.

With *Online Weather Studies*, the students use the latest technology in weather analysis (Brey, 2000). The use of technology in an introductory climatology course has been shown to increase student enthusiasm and exam performance (Dewey and Meyer 2000).

4. FUTURE GOALS

One future goal is to offer a completely online version of *Online Weather Studies*, through the Center for Distance Learning, in addition to the classroom course. As the course is offered in the classroom setting annually, the student interest in the course will be monitored to evaluate the need for an online version. Moreover, course information gradually will be added to the Blackboard site, so that eventually a totally online version can be assembled with minimal effort.

A second future goal is the incorporation of *Online Ocean Studies*, a course curriculum developed by the AMS that is similar to *Online Weather Studies*. *Online Ocean Studies* is a course, prepared by an experienced team of oceanographers and science educators, that uses real-time and archived oceanographic data. Because oceanography is already in the HWC course catalog, the process of offering the course would be more efficient than that involved in offering meteorology, which is new to the catalog. Like meteorology, oceanography courses encourage critical thinking (Kidder, et al., 2002).

5. CONCLUSIONS

A new introductory meteorology course is in the midst of the approval process at HWC and the City Colleges of Chicago. The course will use the *Online Weather Studies* curriculum and will address several of HWC's General Education Objectives through the use of oral and written critical thinking exercises and the latest technology in weather analysis.

6. REFERENCES

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