

INTEGRATING ONLINE WEATHER STUDIES INTO A UNIVERSITY FLIGHT TRAINING PROGRAM AT SOUTHEASTERN OKLAHOMA STATE UNIVERSITY

Gene A. Hetsel
Southeastern Oklahoma State University, Durant, Oklahoma

1.0 Introduction

Southeastern Oklahoma State University (SOSU) is located in the southeastern part of Oklahoma in the city of Durant. SOSU is 15 miles from the Oklahoma/Texas border; 90 miles north of Dallas, Texas; 148 miles southeast of Oklahoma City; and 12 miles east of Lake Texoma (one of the largest manmade lakes in the world). In this paper background information about the University, local weather and methods being used to implement two courses in weather using the online weather studies material are discussed.

2.0 Background

2.1 Southeastern Oklahoma State University

Southeastern Oklahoma State University, SOSU is a regional university in the Oklahoma State system of higher education. Although new programs have produced many changes in the geographic origins and ethnic backgrounds of the student body, they are still primarily products of small towns and rural communities in Oklahoma and Texas. While the University does offer three graduate level degrees the major emphasis continues to be a quality undergraduate education.

2.2 Student Enrollment

The resident student body numbers just over 4,000 representing 35 states and 32 foreign countries. SOSU serves a very diverse student population, including a large Native American population. Many of the students at Southeastern are first generation college students.

2.3 Local Weather

The southern Oklahoma/north Texas region is a very interesting area for weather studies. This region offers some of the most dramatic weather produced in the United States. In the spring Squall line thunderstorms developing along or ahead of rapidly moving dry lines often build with tops in excess of 60,000 ft. SOSU is located in the area often called "tornado alley". Every spring we can expect several outbreaks of severe weather that will produce tornados. Winter often brings large areas of moderate to severe in-flight icing. Anyone who lives in the area has at least some interest in weather.

3.0 The Aviation Science Institute

The Aviation Science Institute (ASI), which is housed the John Massey School Business, at SOSU, offers four undergraduate degrees and one Master's of Science degree in aviation administration. The ASI offers programs on three campuses, including Oklahoma City and Tinker Air Force Base.



3.1 ASI Facilities

The ASI's main facilities are located on Eaker Field, the Durant public airport. The pilot training program is supported by a fleet of 18 aircraft including, single engine fixed gear, single engine retractable gear and multiengine airplanes. The facilities include, office space, aircraft storage and

Corresponding author address: Gene A. Hetsel, Aviation Science Institute, John Massey School of Business, Southeastern Oklahoma State University, Durant, Ok 74701-0609, e-mail ghetsel@sosu.edu

maintenance space and an advanced aircraft simulator for pilot training. The airport has AWAS weather reporting system and the ASI subscribes to WSI Pilotbrief® satellite weather services for pilots. A pilot briefing room is also provided with access to the Internet for alternative weather sources.

3.2 ASI Weather Course Requirements

Every pilot training course includes a section of meteorology. The professional pilot degree program has always included an additional 3 credit hour course in meteorology. This course covers basic weather theory with special emphasis on the needs of the commercial pilot. This includes study of FAA approved weather sources, required briefings and aviation specific topics such as in-flight icing.

4.0 Course Development

Professor Hetsel attended the on-line weather studies faculty workshop during May of 2006. Our initial plan was to offer the first class of general meteorology in the fall of 2006 and then offer the aviation version in the spring of 2007.

4.1 Aviation Weather course

The aviation weather course has been taught as a traditional classroom course for many years. This course has very specific outcomes relating to the needs of commercial pilots. Our goal is use the on-line weather studies material as the theoretical portion of the course and supplement it with locally developed material in the aviation specific areas, such as weather briefings and FAA approved information sources.

This course will be taught in the spring of 2007 as a mixed mode course including both on-line and traditional classroom components. After completing the first section we will move to a fully on-line version of the aviation course in spring of 2008.

4.2 General Weather Course

SOSU, like many institutions, is moving toward offering degree programs fully on-line. This is especially important to the ASI as many of our students are in the military and need to be able to access educational opportunities while deployed. At present SOSU has no on-line course that will meet the general education laboratory science

requirement. Many students at SOSU have an interest in meteorology because of their rural/agricultural background. Because of the frequent occurrence of severe weather in our area the student body has a heightened awareness of and interest in meteorology. We feel that the on-line meteorology course will be a very popular science option for many of our non-science majors.

5.0 Progress to date

Because of the course approval requirements that was not realistic. We have elected to delay the implementation and offer the Aviation Meteorology as a mixed mode course in the spring of 2007 and the fully online General Meteorology course in the fall of 2007.

5.1 Implementation of Aviation Weather for spring

The first offering of aviation weather using the on-line weather course materials is scheduled for spring 2007. This course was already in our catalog and did not require committee approval for implementation. We already have students enrolled for this course.

5.2 Approval process for General Weather

We have developed a syllabus for the general weather course and have started the course approval process. On our campus offering a new course requires approval from several committees. We are on schedule to be able to offer the on-line general weather course in fall of 2007.

In addition to approval of the course as a lab science we would like the course to receive general education credit. Our initial discussion with committee members has been favorable.

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