ALLEN COMMUNITY COLLEGE
COMMON COURSE OUTLINE
PSC 100 INTRODUCTION TO METEOROLOGY

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I. COURSE INFORMATION

A. Physics 100 Introduction to Meteorology
B. 5 credit hours
C. Ahrens, C.D. & Henson, R. *Meteorology Today: An Introduction to Weather, Climate and the Environment*. 12th ed. Boston, MA: Cengage, 2019
D. Prerequisites: None
E. KRSN: PSI 2010 Meteorology Lecture and Lab

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

II. COURSE DESCRIPTION

This course is an integrated lecture and lab that covers a wide array of topics including the composition of the Earth's atmosphere, the forces governing air motion, atmospheric stability, and the development of weather systems. The course emphasizes key atmospheric concepts that enable students to understand how science can explain a wide range of regional and local weather events, how they impact society and their daily lives, and how these influence long-term climate connections.

III. LEARNING OUTCOMES

A. Explain meteorological phenomena in terms of basic physical and dynamic process over a broad range of spatial and temporal scales, including thunderstorms, and synoptic weather systems
B. Identify common features and impacts of severe and hazardous weather
C. Summarize how clouds form and describe the mechanisms that lead to precipitation
D. Describe the behavior of heat and radiation, their distribution in the atmosphere, and their relationship to the global energy budget and climate
E. Interpret basic meteorological charts including surface analyses, thermodynamic diagrams, radar images, and satellite images
F. Demonstrate critical and analytical skills to predict weather systems using several forecasting tools and techniques
G. Use appropriate tools to investigate and analyze meteorology problems

IV. MAJOR CONTENT AREAS

A. Earth and its atmosphere
B. Air pressure, winds, air masses
C. Weather forecasting
D. Extreme weather
E. Global climate

V. ASSIGNMENTS (may include but are not limited to)

A. Written assignments
B. Discussion
C. Projects
D. Labs

VI. EVALUATION METHODS (may include but are not limited to)

A. Written assignments
B. Projects
C. Labs
D. Quizzes, tests