ROCHESTER COMMUNITY AND TECHNICAL COLLEGE COMMON COURSE OUTLINE

Course discipline/number/title: AVIA 1300: Aviation Weather

A. CATALOG DESCRIPTION

1. **Credits: 3**
2. **Hours/Week: 3**
3. **Prerequisites (Course discipline/number):** None
4. **Other requirements:** None
5. **MnTC Goals (if any):** NA

B. COURSE DESCRIPTION: This course covers weather elements, how weather is produced, and how weather affects aviation. A climatological approach is used to develop an understanding of the weather elements and their distribution over the Earth. Aviation specific hazards including convective weather, icing, visibility, and wind are also studied.

C. DATE LAST REVISED (Month, year): November, 2022

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Basic weather concepts
2. Weather theory
3. Weather hazards
   a) Thunderstorms
   b) Turbulence
   c) Wind shear
   d) Restrictions to visibility
   e) Icing
   f) Hydroplaning
4. Weather services
5. Coded weather reports
   a) Forecasts
   b) Weather charts
   c) Prognostic charts

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Describe general atmospheric characteristics that influence meteorology and aviation.
2. Describe major meteorological processes and how they influence local weather (evaporation, condensation, adiabatic processes, air mass movements, etc.).
3. Forecast expected weather for an area, utilizing meteorological data.
4. Identify aviation weather hazards.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Quizzes
2. Exams

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

I. SPECIAL INFORMATION (if any): None