

## METEOROLOGY PROGRAM

### Department of Earth and Atmospheric Sciences

Meteorology is the science of the atmosphere. Meteorologists are employed in operational meteorology, meteorological research, applied meteorology, and the media. Meteorologists study global weather and climate, and investigate the influence that human beings exert on earth's climate. The Meteorology Computer Laboratory provides access to real-time weather data and analysis software supported by the UNIDATA Program. The Bachelor of Science degree conforms to the American Meteorological Society and National Weather Service recommendations for an undergraduate meteorology degree. Students should contact a meteorology faculty member to discuss degree programs, career opportunities, and graduate school options. Contact the Earth and Atmospheric Sciences Department for additional information.

### Minor in Meteorology

#### Required Meteorology Courses – 8 hours

| Semester | Credit Hours |   | Prerequisites |     |
|----------|--------------|---|---------------|-----|
| _____    | MTR 2400     | Intro. to Atmospheric Science (required) (None) | F, S, SS      | 4   |
| _____    | MTR 3400     | Synoptic Meteorology                            | MTR 2400      | F 4 |

#### Approved Electives\* – 12 hours

|       |          |                                   |                                  |          |       |
|-------|----------|-----------------------------------|----------------------------------|----------|-------|
| _____ | MTR 2410 | Weather Observing Systems         | MTR 2400                         | S        | 3     |
| _____ | MTR 3100 | Air Pollution                     | MTR 2400 OR ENV 1200             | F        | 3     |
| _____ | MTR 3410 | Weather Analysis Techniques       | MTR 3400                         | S        | 2     |
| _____ | MTR 3420 | Radar and Satellite Meteorology   | MTR 2410, MTH 1120 or 1400       | F        | 3     |
| _____ | MTR 3500 | Hazardous Weather                 | MTR 1400 or MTH 2400 or AES 1400 | S        | 3     |
| _____ | MTR 3710 | Meteorological Co-op. Education I | See MTR Advisor                  | F, S, SS | 3 – 6 |
| _____ | MTR 4210 | Forecasting Laboratory I          | MTR 3410                         | F, S     | 1     |
| _____ | MTR 4220 | Forecasting Laboratory II         | MTR 4210                         | F, S     | 1     |
| _____ | MTR 4230 | Forecasting Laboratory III        | MTR 4210                         | F, S     | 1     |
| _____ | MTR 4240 | Forecasting Laboratory IV         | MTR 4210                         | F, S     | 1     |
| _____ | MTR 4440 | Climatology                       | MTR 3400                         | F        | 3     |
| _____ | MTR 4500 | Mesometeorology                   | MTR 3400 and MTR 3410            | S        | 3     |
| _____ | AES 3460 | Weather and Aircrews**            | see AES Dept.                    | F, S     | 3     |

\*Some Calculus-based courses are also available (see below).

\*\*This course is required for some aviation technology majors. For this course to count towards the meteorology minor, students must consult with an advisor in the Aviation and Aerospace Science Department.

The following courses may also be used as electives, but have additional Math and Physics pre-requisites:

|       |          |                               |                                    |             |   |
|-------|----------|-------------------------------|------------------------------------|-------------|---|
| _____ | MTR 3430 | Atmospheric Thermodynamics    | MTR 3400, MTH 2410, PHY 2311, 2321 | S           | 3 |
| _____ | MTR 3440 | Physical Meteorology          | MTR 3430, CHE 1800                 | S           | 3 |
| _____ | MTR 3450 | Dynamic Meteorology           | MTR 3430, MTH 2420 PHY 2331, 2341  | F           | 3 |
|       |          |                               | Corequisite: MTH 3420              |             |   |
| _____ | MTR 4400 | Advanced Synoptic Meteorology | MTR 3450, MTH 3420, PHY 2331       | S           | 3 |
| _____ | MTR 4410 | Numerical Weather Prediction  | MTR 3450, MTH 3420, 1510           | alternate S | 3 |

### TOTAL HOURS – 20

### IMPORTANT CONSIDERATIONS FOR METEOROLTY MINORS:

- Students considering a Meteorology Minor must consult with a Meteorology advisor to develop an academic plan.
- The normal time for completion of the Meteorology Minor is two years (4 semesters). This may vary depending on a student's Meteorology background such as approved transfer courses, professional experience or military training.
- AES 1400 Aviation Weather is *not* an approved Meteorology Minor elective.
- AES 3460 Weather for Aircrews *is* an approved Meteorology Minor elective.
- MTR 1400 Introduction to Meteorology is *not* an approved Meteorology elective.
- MTR 2400 Introduction to Atmospheric Sciences and MTR 3400 Synoptic Meteorology may *not* be taken concurrently.