

# B.S. in Earth Science: Meteorology Concentration

## Program Description

The meteorology concentration of the Bachelor of Science in Earth Science builds weather analysis and forecasting skills. Concentration courses comply with recommendations from the American Meteorological Society (AMS) and the National Weather Association.

## Delivery Mode

Traditional (on campus)

## Curriculum

Course	Credits
<b>General Education Courses</b>	<b>41</b>
<i>Building a Sense of Community</i> <b>UNI 100</b> First-Year Seminar	1
<i>Composition</i> <b>ENG 101</b> English Composition I	3
<i>Public Speaking</i> <b>CDC 101</b> Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> <b>MAT 281</b> Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> <b>CSC 124</b> Computer Programming	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> <b>PHY 101</b> College Physics I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> <li>• <b>EAS 469</b> Global Climate Change</li> <li>• <b>ENG 217</b> Scientific and Technical Writing</li> <li>• <b>CSC 120</b> Problem Solving and Programming Constructs</li> <li>• <b>MAT 282</b> Calculus II</li> </ul>	12

## Department of Mathematics and Physical Sciences

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Course	Credits
<b>Required Major Courses</b>	<b>45</b>
<b>EAS 104</b> Introduction to Meteorology	4
<b>EAS 142</b> Introduction to Climate Science	3
<b>EAS 245</b> Weather Analysis and Forecasting I	4
<b>EAS 323</b> Atmos Instruments and Measurements	3
<b>EAS 342</b> Dynamic Meteorology I	3
<b>EAS 365</b> Radar and Satellite Meteorology	3
<b>EAS 369</b> Climate Dynamics	3
<b>EAS 431</b> Digital Media for Weather and Climate Apps	3
<b>EAS 442</b> Dynamic Meteorology II	3
<b>EAS 445</b> Weather Analysis and Forecasting II	4
<b>EAS 449</b> Mesoscale Meteorology	3
<b>EAS 452</b> Atmos Thermodynamics and Radiation	3
<b>EAS 453</b> Cloud Physics	3
<b>EAS 465</b> Seminar in Atmos. Science OR <b>EAS 419</b> Applied Climatology	3
<b>Related Electives</b>	<b>13</b>
<b>MAT 381</b> Calculus III	3
<b>MAT 382</b> Calculus IV	3
<b>MAT 215</b> Statistics	3
<b>PHY 202</b> College Physics II	4
<b>Recommended Free Electives</b>	<b>21</b>
The following are recommended free electives: <ul style="list-style-type: none"> <li>• <b>EAS 105</b> Extreme Weather (3 credits)</li> <li>• <b>GLG 303</b> Hydrology (3 credits)</li> <li>• <b>CIS 120</b> Application Programming I (3 credits)</li> <li>• <b>COM 106</b> Introduction to Mass Communication (3 credits)</li> <li>• <b>COM 336</b> Broadcast Reporting (3 credits)</li> <li>• <b>CSC 306</b> Fortran (3 credits)</li> <li>• <b>CSC 308</b> Python (3 credits)</li> </ul>	21

## Department of Mathematics and Physical Sciences

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Course	Credits
<ul style="list-style-type: none"><li>• <b>CSC 420</b> Artificial Intelligence (3 credits)</li><li>• <b>ENS 440</b> Environmental Pollution Control (3 credits)</li><li>• <b>GIS 311</b> Geographic Information Systems (3 credits)</li><li>• <b>MAT 406</b> Differential equations (3 credits)</li><li>• <b>MAT 462</b> Statistical Analysis I (3 credits)</li></ul>	
<b>Total</b>	<b>120</b>

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** EAS 431 Digital Media Meteorology
- **Writing-Intensive Component Courses (2 courses required):** EAS 323 AND EAS 465
- **Laboratory Course (1 course required):** EAS 104 Intro to Meteorology

## Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/meteorology/index.aspx>