

College of Natural Resources and Environment
Department of Geography – Bachelor of Science in Meteorology
Meteorology Major Checksheet
(For students graduating in calendar year 2016)

Required minimum hours in for the major is 70. Minimum number of hours for the degree is 120.
Satisfactory Progress: The overall and in-major GPA required for graduation is 2.0. To make satisfactory progress towards the Meteorology degree, upon completion of 60 hours, students must have completed 15 hours in Geography/Meteorology including at least three of the four fundamentals courses. Courses for in-major GPA computation include all GEOG courses, and approved physical sciences.

Student _____

Email _____

Major Requirements: Fundamentals

Select at least 6 of 9 credits hours from the following:

1. GEOG 1004: Human Geography (3) _____
2. GEOG 1014: World Regions (3) _____
3. GEOG 1115: Seeking Sustainability (3) _____

6 credit hours required

4. GEOG 1104: Physical Geography (3) _____
5. GEOG 2314: Maps and Mapping (3) _____

Human Systems:

Select 6 credit hours from following—
at least 3 credits at the 3000-4000 level

1. _____
2. _____

- PSCI 1004: Nations and Nationalities (3)
- GEOG 1116: Seeking Sustainability II (3)
- GEOG 2134: Geography of the Global Economy (3)
- GEOG 2214: Geography of North America (3)
- GEOG 3104: Environmental Probs, Population, and Dev. (3)
- GEOG 3224: Geography of Appalachia (3)
- GEOG 3244: The U.S. City (3)
- GEOG 3464: Appalachian Communities (3)
- GEOG 4054: Geography of Wine (3)
- GEOG 4074: Medical Geography (3)
- GEOG 4204: Geography of Resources (3)

Meteorology: 25 credit hours required

- GEOG 1504: Survey of Meteorology (1) _____
- GEOG 2505: Weather Analysis I (3) _____
- GEOG 2506: Weather Analysis II (3) _____
- GEOG 3114: Introduction to Meteorology (3) _____
- GEOG 3504: Severe Weather (3) _____
- GEOG 3515: Dynamic Meteorology I (3) _____
- GEOG 3516: Dynamic Meteorology II (3) _____
- GEOG 4504: Synoptic Meteorology (3) _____
- GEOG 4524: Physical Meteorology (3) _____

Mapping and GIS: 7 credit hours required

- GEOG 4084: Introduction to GIS (3) _____
- GEOG 4354: Introduction to Remote Sensing (3) _____
- GEOG 4554: Remote Sensing of the Atmosphere (1) _____

Field Experience: select at least 3 credit hours from

- MTRG 3524: Meteorology Field Methods* (3) _____
- MTRG 3954: Meteorology Study Abroad (3) _____
- MTRG 2964/4964: Field Study (3) _____
- MTRG 4974: Operational Meteor/Indpnt study (3) _____
- MTRG 4994: Undergrad Research (3) _____

*Field Methods Course topics may vary: e.g. Great Plains Storm Chase, Mountain Weather, Coastal Weather

Math/Statistics: 8 credit hours required

- MATH 1114: Elementary Linear Algebra (2) _____
- MATH 2214: Intro to Differential Equations (3) _____
- STAT 2004: Intro to Statistics ** or _____
- STAT 3604: or Stat for Social Sciences (3) _____

Physical Science Electives: 9 credit hours

Select 9 credits—at least 3 credits of 3000-4000 level

1. _____
2. _____
3. _____

- CS 1044: Introduction to Programming in C (3)
- CS 1064: Introduction to Python (3)
- CS 1114: Introduction to Software Design (3)
- CS 1124: Introduction to Media Computation (3)
- CS 2114: Software Design and Data Structures (3) (Pre: CS 1114 or 1124, MATH 1205)
- CSES 3114: Soils (3) (Pre: CHEM 1036 – Co-req 3124)
- CSES 3124: Soils Laboratory (1) (CO: 3114)
- CSES 3134: Soils in the Landscape (3) (Pre: one year of introductory CHEM, BIOL, or GEOS)
- CSES 3634: Physics of Pollution (3) (Pre: 3114, PHYS 2206, MATH 2016)
- FOR 4114: Information Technologies for Natural Resource Management (Pre: GEOG 2314) (3)
- FOR 4214: Forest Photogrammetry and Spatial Data (3)
- FOR 4374: Forested Wetlands (3) (Pre: CSES 3114 or 3134)
- GEOG 3304: Geomorphology (3)
- GEOG 3404: Mountain Geography (3)
- GEOG 4044: Biogeography (3)
- GEOG 4314: Spatial Analysis in GIS(3)
- GEOG 4324: Algorithms in GIS (3)
- GEOG 4374: Remote Sensing and Phenology (3)
- GEOS 1004 & 1104: Physical Geology and Lab (4)
- GEOS 1014: Earth and Life through Time (4)
- GEOS 1024: Resources Geology and the Environment (4)
- GEOS 1034: Earth's Natural Hazards (3)
- GEOS 3014: Environmental Geosciences (3) (Pre: 1004 or 1024 or 2104)
- GEOS 3034: Oceanography (3)
- GEOS 4804: Groundwater Hydrology (3) (PRE: MATH 2015, GEOS 1014)

Note: The following minors will also complete the requirements for this area: Astronomy, Computer Science, Geosciences, Chemistry, Math, Physics

**accepted via transfer or AP transfer credit only. Cannot be taken at Virginia Tech.

Free Electives (23 hours)

Curriculum for Liberal Education (CLE) Requirements (36 hours)

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For approved Curriculum for Liberal Education course listings see: <http://www.cle.prov.vt.edu/guides/index.html>

Area 1: Writing and Discourse (0 - 6 credit hours)

ENGL 1105 _____
ENGL 1106 _____
or ENGL H1204 _____

Or COMM 1015 _____
COMM 1016 _____
Or advanced placement

Area 2: Ideas, Cultural Traditions, and Values (6 credit hours)

Approved CLE courses _____

Area 3: Society and Human Behavior (6 credit hours)

The Meteorology major covers this area (if GEOG 1004 and GEOG 1014 are taken)

Area 4: Scientific Reasoning and Discovery (8 credit hours in Physics)

PHYS 2205 and 2215 _____ OR PHYS 2305 _____
PHYS 2206 and 2216 _____ OR PHYS 2306 _____

Area 5: Quantitative and Symbolic Reasoning (6 credit hours)

MATH 1205 _____ MATH 1206 _____

Area 6: Creativity and Aesthetic Experience (1 credit hour)

Approved CLE course _____

Area 7: Critical Issues in a Global Context (3 credit hours)

The meteorology major covers this area (if GEOG 1014 is taken)

Foreign Language: A sequence of two (2) foreign language courses is required for graduation unless two (2) high school credits of the same foreign language or six (6) transfer credit hours of foreign language have been earned. These credits do not count toward graduation. See catalog section on "Graduation Requirements."

Free Elective List:

_____	_____
_____	_____
_____	_____
_____	_____

There are no hidden prerequisites on this check sheet

For more information about the BS in meteorology and meteorology careers contact:
Maureen Deisinger, academic adviser at 231-6886 (mdeising@vt.edu)

Other resources for information include Bill Carstensen, department head at 231-7557 (carstens@vt.edu), David Carroll at 231-5841 (carrolld@vt.edu), and Drew Ellis at 231-8049 (awellis@vt.edu)

NOTE: MTRG students planning to double major in Geography, must complete at least 12 hours of GEOG coursework that is not used to complete their MTRG major. In addition, students must complete two distinct 3 credit field experiences for a total of 15 non-duplicative credits.