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 130.
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

Major Requirements: Fundamentals
Select at least 6 of 9 credits hours from the following:
1. GEOG 1004: Human Geography (3) 6 0 2 1 6
2. GEOG 1014: World Regions (3) 6 0 2 2 0
3. GEOG 1115: Seeking Sustainability (3) 

6 credit hours required
4. GEOG 1104: Physical Geography (3) 6 0 2 0 0
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 Prosbs, 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 Atmospheric (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/Indpt study (3)
MTRG 4994: Undergrad Research (3)

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

Email

Math/Statistics: 8 credit hours required
MATH 1114: Elementary Linear Algebra (2) MATH 177
MATH 2214: Intro to Differential Equations (3) MATH 279 or 291
STAT 2004: Intro to Statistics *** or
STAT 3604: or Stat for Social Sciences (3) MATH 157 or 248

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 210
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 2114 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 Pheno (3)
GEOG 1004 & 1104: Physical Geology and Lab (4)
GEOG 1014: Earth and Life through Time (4)
GEOG 1024: Resources Geology and the Environment (4)
GEOG 1034: Earth's Natural Hazards (3)
GEOG 3014: Environmental Geosciences (3) (Pre: 1004 or 1024 or 2104)
GEOG 3034: Oceanography (3)
GEOG 4804: Groundwater Hydrology (3) (PRE: MATH 2015, GEOG 1014)

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

***accept 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)

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 111 | Or | COMM 1015 |
| ENGL 1106 | ENGL 112 | or ENGL H1204 | COMM 1016 |

**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 | PHYS 2305 |
| PHYS 2206 and 2216 | 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:**

|  |  |  |
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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 Carlsten, department head at 231-7557 (carstens@vt.edu), David Carroll at 231-5841 (carrold@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.