

**EARTH SYS SC & ENG BSE
Plan Requirements**

Campus: UMICH
Career: UENG
Program:
Plan: 2610BSE

RG = Requirement Group
RQ = Requirement
LN = Line

RG 6220 **EARTH SYSTEM SCIENCE AND ENGINEERING MAJOR REQUIREMENTS**
Effective FA05/1560 (09/06/2005)

RQ 4708 **Program Subjects**

Effective FA09/1760 (09/08/2009)

- LN 0010 AOSS 320, 321, 323, 370, 380, 410 (C- or higher)
- LN 0020 AOSS 350 or MECHENG 235 or CHE 330
- LN 0030 Less than Minimum Grade (make no exceptions here)

RQ 4708 **Program Subjects**

Effective FA05/1560 (09/06/2005)

- LN 0010 AOSS 320, 321, 323, 350, 380, 401, 410, 475 (C- or higher)
- LN 0020 Less than Minimum Grade (make no exceptions here)

RG 9134 **ESSE RESIDENCY, GPA REQUIREMENTS**

Effective FA05/1560 (09/06/2005)

RQ 5758 **ESSE Residency and GPA requirements**

Pre-Condition: Academic Subplans NOT IN 000206 (CLIMPHY, METEOR, SPWEA)

Effective FA05/1560 (09/06/2005)

- LN 0010 Minimum 30 units of technical courses at the 300 level or higher
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

**EARTH SYS SC & ENG BSE
Plan Requirements**

Campus: **UMICH**
Career: **UENG**
Program:
Plan: **2610BSE**
Sub-Plan: **CIE**

RG = Requirement Group
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RG 10271 **CLIMATE IMPACT CONCENTRATION REQUIREMENTS**
Effective [FA09/1760 \(09/08/2009\)](#)

RQ 6676 **Climate Impact Sets - Complete 2 sets (4 courses)**
Effective [FA09/1760 \(09/08/2009\)](#)

- LN 0010 AOSS 414 and AOSS 422
- LN 0020 AOSS 463 and AOSS 479
- LN 0030 ENVIRON 408 and CMPLXSYS 250
- LN 0040 CEE 230 and CEE 260
- LN 0050 NAVARCH 420 and NAVARCH 455
- LN 0060 NRE 541 and NRE 531
- LN 0070 NRE 558 and NRE 559
- LN 0080 EEB 320 and EEB 380
- LN 0090 EARTH 284 and EARTH 325
- LN 0100 ENVIRON 367 and NRE 550
- LN 0110 ENVIRON 312 and 521

RQ 6675 **CIE Concentration Courses, Experiential course, Technical Electives**
Effective [FA09/1760 \(09/08/2009\)](#)

- LN 0010 AOSS 480 & ENGR 450
- LN 0020 Experiential Course - Choose one from AOSS 462, 475, or 588
- LN 0050 CIE Technical Electives - 9 units

RQ 6677 **ESSE Residency, Total Units and GPA requirements**
Effective [FA09/1760 \(09/08/2009\)](#)

- LN 0010 30 units 300 or higher technical courses taken at UM-AA while enrolled in CoE
- LN 0015 Minimum 25 units required in the Major subplan. (Excludes Technical Electives)
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

EARTH SYS SC & ENG BSE Plan Requirements

Campus: **UMICH**
Career: **UENG**
Program:
Plan: **2610BSE**
Sub-Plan: **CLIMPHY**

RG = Requirement Group
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RG 6221 **CLIMATE PHYSICS CONCENTRATION REQUIREMENTS**

Effective FA09/1760 (09/08/2009)

RQ 4709 **Concentration - CLIMPHY**

Effective FA09/1760 (09/08/2009)

- LN 0010 AOSS 411 and 467
- LN 0020 Experiential course: AOSS 441, 462, 475, ENGR 450, GEOSCI 341, 344 (1 course required)
- LN 0025 Component courses: AOSS 401, 422, 451, 475, (GEOSCI 446 or GEOSCI 452), (AOSS 420 or 476 or GEOSCI 421) (3 courses required)
- LN 0026 GEOSCI 446, 452 limit (make no exceptions here)
- LN 0027 AOSS 476,420,GEOSCI 421 limit (make no exceptions here)
- LN 0040 Excess Concentration courses (make no exceptions here)

RQ 5760 **Technical Electives – CLIMPHY**

Effective FA09/1760 (09/08/2009)

- LN 0010 Concentration Courses
- LN 0050 One Technical Electives: AOSS 414, 420, 422, 440, 442, 450, 451, 462, 463, 479, 480, 498, 499, 605, ENGR 450, GEOSCI 325, 341, 344, 420, 421, 422, 442, 446, MATH 425, 450, STATS 350, 412
- LN 0060 Less than Minimum Grade: Technical Electives (make no exceptions here)

RG 6221 **CLIMATE PHYSICS CONCENTRATION REQUIREMENTS**

Effective FA05/1560 (09/06/2005)

RQ 4709 **Concentration - CLIMPHY**

Effective FA05/1560 (09/06/2005)

- LN 0010 AOSS 411, 467, and 470
- LN 0020 One course from STATS 350, 412, or MATH 425
- LN 0030 Less than Minimum Grade: Concentration Courses (make no exceptions here)
- LN 0040 Excess STATS/MATH courses (make no exceptions here)
- LN 0050 Technical Electives: AOSS 442, 463, 479, 498, 499, 605, ENGR 450, GEOSCI 325, 420, 422, 442, MATH 425, 450, NRE 441, STATS 350, 412
- LN 0060 Less than Minimum Grade: Technical Electives (make no exceptions here)
- LN 0070 Excess Technical Electives courses (make no exceptions here)

RG 6224 **EARTH SYSTEM SCIENCE & ENG RESIDENCY, GPA REQUIREMENTS**

Effective FA05/1560 (09/06/2005)

RQ 4713 **ESSE Residency and GPA requirements**

Effective FA09/1760 (09/08/2009)

- LN 0010 Minimum 30 units of technical courses at the 300 level or higher
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

EARTH SYS SC & ENG BSE Plan Requirements

Effective FA05/1560 (09/06/2005)

- LN 0010 Minimum 30 units of technical courses at the 300 level or higher
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

EARTH SYS SC & ENG BSE Plan Requirements

Campus: **UMICH**
Career: **UENG**
Program:
Plan: **2610BSE**
Sub-Plan: **METEOR**

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RG 6300 **METEOROLOGY CONCENTRATION REQUIREMENTS** Effective FA05/1560 (09/06/2005)

RQ 4903 **Concentration - METEOROLOGY**

Effective FA09/1760 (09/08/2009)

- LN 0010 AOSS 401, 411, 414, 422, 440, 462
- LN 0030 Less than Minimum Grade: Concentration Courses (make no exceptions here)
- LN 0050 Technical Electives: AOSS 420, 441, 442, 450, 463, 467, 470 (prior to Fall 2009), 479, 498, 499, 605, ENGR 450, MATH 425, 450, STATS 350, 412, NRE 441, GEOSCI 325, 341, 420, 421, 422, 442
- LN 0060 Less than Minimum Grade: Technical Electives (make no exceptions here)
- LN 0070 Excess Technical Electives courses (make no exceptions here)

Effective FA05/1560 (09/06/2005)

- LN 0010 AOSS 414, 440, 451, 462
 - LN 0020 One course from STATS 350, 412, or MATH 425
 - LN 0030 Less than Minimum Grade: Concentration Courses (make no exceptions here)
 - LN 0040 Excess STATS/MATH courses (make no exceptions here)
 - LN 0050 Technical Electives: AOSS 411, 442, 450, 463, 467, 470, 479, 498, 499, 605, ENGR 450, MATH 425, 450, STATS 350, 412, NRE 441
 - LN 0060 Less than Minimum Grade: Technical Electives (make no exceptions here)
 - LN 0070 Excess Technical Electives courses (make no exceptions here)
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RG 6299 **EARTH SYSTEM SCIENCE & ENG RESIDENCY, GPA REQUIREMENTS** Effective FA05/1560 (09/06/2005)

RQ 4904 **ESSE Residency and GPA requirements**

Effective FA09/1760 (09/08/2009)

- LN 0010 Minimum 30 units of technical courses at the 300 level or higher
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

Effective FA05/1560 (09/06/2005)

- LN 0010 Minimum 30 units of technical courses at the 300 level or higher
- LN 0020 Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00.
- LN 0030 General Electives
- LN 0040 Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades

EARTH SYS SC & ENG BSE
Plan Requirements

Campus: UMICH
Career: UENG
Program:
Plan: 2610BSE
Sub-Plan: SPWEA

RG = Requirement Group
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RG 6310 **SPACE WEATHER CONCENTRATION REQUIREMENTS**
Effective FA09/1760 (09/08/2009)

RQ 4912 **Concentration – SPACE WEATHER**
Effective FA09/1760 (09/08/2009)

- LN 0010 AOSS 477, PHYSICS 405
- LN 0020 Less than Minimum Grade: Concentration Courses
- LN 0040 Experiential course: AOSS 462 or ENGR 450 (1 course required)
- LN 0045 Component courses: AEROSP 305, AOSS 401, (AOSS 462 or ENGR 450), AOSS 475, EECS 314, MATH 450, NERS 471 (3 courses required)
- LN 0050 Less than Minimum Grade: Experiential and Component courses
- LN 0060 Excess Component courses (make no exceptions here)

RQ 5762 **Concentration Courses + Technical Electives - SPWEA: (34 units are required)**
Effective FA09/1760 (09/08/2009)

- LN 0010 Concentration Courses
- LN 0050 Technical Electives: AEROSP 325, 421, AOSS 462, 495, EECS 320, 430, NERS 471, PHYSICS 451, 452, STATS 315, 412, STATS/MATH 425
- LN 0060 Less than Minimum Grade: Technical Electives (make no exceptions here)
- LN 0070 Excess Technical Electives courses (make no exceptions here)

RG 6310 **SPACE WEATHER CONCENTRATION REQUIREMENTS**
Effective FA05/1560 (09/06/2005)

RQ 4912 **Concentration – SPACE WEATHER**
Effective FA05/1560 (09/06/2005)

- LN 0010 AOSS 450, 464, 470, ENGR 450
- LN 0020 MATH 450
- LN 0030 Less than Minimum Grade: Concentration Courses (make no exceptions here)
- LN 0040 Technical Electives: AOSS 467, 479, 498, 499, 605, ENGR 450, GEOSCI 420, 422, 442, NERS 471, NRE 441, PHYSICS 406, 451, 452
- LN 0050 Less than Minimum Grade: Technical Electives (make no exceptions here)
- LN 0060 Excess Technical Electives courses (make no exceptions here)