1. **DU Common Curriculum (44 credits)**
   - First-Year Seminar (4 credits)
   - Writing and Rhetoric (8 credits)
   - Foreign Language (12 credits or demonstrated proficiency)
   - Ways of Knowing (16 credits), including
     - Analytical Inquiry: Society and Culture (AI-S; 8 credits)
     - Scientific Inquiry: Society and Culture (SI-S; 8 credits)
   - Advanced Seminar (4 credits)

2. **Mathematics (15 credits)**
   - Calculus I, II, and III (MATH 1951, 1952, 1953; 12 credits)
   - Introduction to Differential Equations (MATH 2070; 4 credits)


3. **Introductory Physics (17 credits)**
   - Physics Preparatory (PHYS 1200; 2 credits) **recommended but not required**
   - University Physics I, II, III, each with lab (PHYS 1211, 1212, 1213; 15 credits)

   The PHYS 1211/2/3 sequence fulfills the Scientific Inquiry: Natural and Physical World (SI-N) Common Curriculum requirement.

4. **Advanced Physics (35+ credits)**
   BA students must complete at least 35 quarter hours of physics coursework at 2000 level or above. This program must include the following:
   - Modern Physics I and II (PHYS 2251, 2252; 4 credits each; yearly)
   - Modern Lab (PHYS 2260; 1 credit; yearly)
   - Uncertainty and Error Analysis (PHYS 2259; 2 credits; yearly)
   - Analytical Mechanics I (PHYS 3510; 4 credits; alternate years)
   - Quantum Physics I (PHYS 3111; 4 credits; alternate years)
   - Electromagnetism I (PHYS 3611; 4 credits; alternate years)
   - Thermal Physics (PHYS 3841; 4 credits; alternate years)
   - Senior Seminar (PHYS 3100; 2 credits; yearly)

   These required courses total 29 credits. Thus the student must complete at least 6 additional elective credits in physics at the 2000+ level. Recommended electives include PHYS 2311 Intermediate Lab I, PHYS 3112 Quantum Physics II, PHYS 3520 Analytical Mechanics II, and PHYS 3612 Electricity & Magnetism II. PHYS 3991 Independent Study and PHYS 3995 Independent Research count toward this total, as do graduate-level courses in physics and biophysics (BIOP) with special permission.
5. Minor

BA students must complete at least one minor.

Junior/senior timeline

- Fall quarter of junior year: Enroll in Senior Seminar (PHYS 3100, offered each fall) if planning to study abroad in senior fall. This capstone course provides background in research methods and scientific writing.

- Fall quarter of senior year:
  - Enroll in Senior Seminar (PHYS 3100, offered each fall) if you did not take it as a junior. This capstone course provides background in research methods and scientific writing.
  - Apply for spring graduation: [http://www.du.edu/registrar/graduation/graduationapp.html](http://www.du.edu/registrar/graduation/graduationapp.html).

- Winter quarter of senior year: If you have conducted research, consider registering to present a poster or talk at the undergraduate Symposium in early May (this is required for completion of a PINS award).
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<th>Fall</th>
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| **Fr** | PHYS 1200 *Physics Prep* (2)  
MATH 1951 *Calculus I* (4)  
FSEM 1111 *First Year Seminar* (4)  
*Foreign Language* (4)  
  
  **Total Credits** _____ | PHYS 1211 *Univ. Phys. I* (5)  
MATH 1952 *Calculus II* (4)  
WRIT 1122 *Acad. Writing* (4)  
*Foreign Language* (4)  
  
  **Total Credits** _____ | PHYS 1212 *Univ. Phys. II* (5)  
MATH 1953 *Calculus III* (4)  
WRIT 1133 *Acad. Writing* (4)  
*Foreign Language* (4)  
  
  **Total Credits** _____ |
| **So** | PHYS 1213 *Univ. Phys. III* (5)  
  
  *AI-S* (4)  
  
  *SI-S* (4)  
  
  **Total Credits** _____ | PHYS 2251 *Mod. Phys. I* (4)  
PHYS 2259 *Uncertainty* (2)  
MATH 2070 *Diff. Eqns.* (4)  
  
  *AI-S* (4)  
  
  **Total Credits** _____ | PHYS 2252 *Mod. Phys. II* (4)  
PHYS 2260 *Modern Lab* (1)  
  
  *SI-S* (4)  
  
  **Total Credits** _____ |
| **Ju** | ASEM *Advanced Seminar* (4)  
  
  *Minor requirements as needed*  
  
  *This is the best quarter for physics majors to study abroad.*  
  
  **Total Credits** _____ | PHYS 3510 *Analyt. Mech. I* (4)  
  
  *2*  
  
  PHYS 3611 *E&M I* (4)  
  
  *2*  
  
  *Minor requirements as needed*  
  
  **Total Credits** _____ | PHYS *Elective* (4)  
  
  *3*  
  
  *Minor requirements as needed*  
  
  **Total Credits** _____ |
| **Se** | PHYS 3100 *Senior Seminar* (2)  
  
  *Minor requirements as needed*  
  
  **Total Credits** _____ | PHYS 3111 *Quantum Physics I* (4)  
  
  *2*  
  
  *Minor requirements as needed*  
  
  **Total Credits** _____ | PHYS 3841 *Thermal Physics* (4)  
  
  *2*  
  
  *Elective* (4)  
  
  *3*  
  
  *Minor requirements as needed*  
  
  **Total Credits** _____ |

1 *AI-S* and *SI-S* courses may be taken in any order.

2 PHYS 3510 *Analytical Mechanics I* and PHYS 3611 *Electromagnetism I* are offered every other year. PHYS 3111 *Quantum Physics I* and PHYS 3841 *Thermal Physics* are offered in the alternating years. Either set of courses may be taken first.

3 Recommended electives include PHYS 2311 *Intermediate Lab I*, PHYS 3112 *Quantum Physics II*, PHYS 3520 *Analytical Mechanics II*, and PHYS 3612 *Electricity & Magnetism II*. BA students may also enroll in PHYS 3991 *Independent Study* or PHYS 3995 *Independent Research* as electives; credits for these courses are variable. Graduate-level courses in physics and biophysics (BIOP) may also count as physics electives.