Student’s Name: _________________________ University: _________________________

Undergraduate Study Plan (For students taking new math sequence that includes APMA E2000 + math elective)
Dept. of Chemical Engineering, Columbia University (Revision 12/7/2018 DVE)

All Chemical Engineering undergraduates must complete this form and have it approved by an Undergraduate Committee advisor. This form is to be completed before meeting with your advisor.

Instructions:
1) Fill in all courses that you have taken, and those courses that you plan to take during the remainder of your time at Columbia.
2) Where course numbers are listed, circle the course numbers corresponding to courses you have already completed.
3) Where blanks are provided, write in the course number (and name, if requested). For these entries, circle the course numbers for courses you have completed, and write “IP” next to courses that are currently in progress.
4) If you placed out of any courses, circle the course number and write “AP” next to the circle to indicate advanced placement.

1. Non-Technical Course Requirements* Points
   a. University Writing: ENGL CC1010(3) ________
   b. Economics: ECON UN1105(4) and UN1155(0) Recitation ________
   c. Art/Music Humanities (choose one): HUMA UN1121(3) or HUMA UN1123(3) ________

2. Core Humanities Requirement* (choose one two-course sequence):
   Sequence 1: Literature Humanities: HUMA CC1001(4) and HUMA CC1002(4) ________
   Sequence 2: Contemporary Civilization: COCI CC1101(4) and COCI CC1102(4) ________
   Sequence 3: Choose two Global Core courses from list of approved courses in Columbia College Bulletin (6-8 points)

   Course #:__________ Course #:__________ ________

3. Non-Technical Electives* (List of approved courses in SEAS Bulletin, total 9-11 points)

   Course #:__________ Course #:__________ Course #:__________ ________

*Note: the total credits from sections 1., 2., and 3. must add up to at least 27 credits

4. Engineering Fundamentals
   a. The Art of Engineering: ENGI E1102(4) ________
   b. Intro to Comp for Eng/App Sci (Python-based): ENGI E1006 (3) ________

5. Physical Education: PHED UN1001(1) and PHED UN1002(1) ________

6. Mathematics Requirement
   a. Calculus: MATH UN1101(3) UN1102(3) APMA E2000 (4) ________
   b. ODE (choose one course): MATH UN2030(3) or APMA E2101(3) ________
   c. Math Elective*: Course #:__________ ________
*Choose from ORCA 2500, APMA(E3101, E3102, E4001, E4150, or E4300), MATH UN2010, , STAT GU 4001, or another course approved by the major advisor.

7. Chemistry Requirement (Choose one track) (note: the university division designator for all of these courses is UN)

   Track C1: 1403(4) 1404(4) 1500(3) 2443(4) 2495(1.5)* 2496(1.5)* ________

   Track C2: 1604(4) 1507(3) 2443(4) 2495(1.5)* 2496(1.5)* ________
   Int. Chem Int. Chem Lab Orgo I. Orgo Lab I Orgo Lab II ________

   Track C3: 2045(4) 2046(4) 1507(3) UN2545(3) ________
   Int. Orgo Int. Orgo Int. Chem Lab. Int. Orgo Lab ________

*note on orgo lab: if you are a senior, then you may have taken the 3 credit course UN3543 and you can circle both 2495 and 2496 in this form. Also note that the intensive organic chemistry lab course UN2545(3) can count in place of 2495 and 2496.
8. **Physics Requirement: (Choose one track)**
   - **Track P1:** PHYS UN1401(3)  UN1402(3)  Lab-UN1493(3)  
   - **Track P2:** UN1601(3.5)  UN1602(3.5)  Lab-UN1493 (3)  
   - **Track P3:** UN2801(4.5)  UN2802(4.5)  Lab-W3081(2)  

9. **Chemical Engineering Requirements:**
   - **Second Year:**
     - **Fall:** CHEN E2100(3)  
   - **Third Year:**
     - **Fall:** CHEN E3110(3)  CHEE E3010(3)  CHEN E3020(3)  
     - **Spring:** CHEN E3120(3)  CHEN E3210(3)  CHEN E4230(3)  
   - **Fourth Year:**
     - **Fall:** CHEE E4140(3)  CHEN E4300(3)  CHEN E4500(4)  
     - **Spring:** CHEN E3810(3)  

10. **Required Technical Electives: (7 courses total)**
    a. **Engineering courses within chemical engineering (CHEN, CHEE, or CHAP)**
       1. Course name: ____________________________  2. Course name: ____________________________  
          Course #: ____________________________  Course #: ____________________________  
    b. **Engineering course outside chemical engineering (not CHEN, CHEE, or CHAP)**
       3. Course name: ____________________________  
          Course #: ____________________________  
    c. **Engineering courses (anywhere in SEAS)**
       4. Course name: ____________________________  5. Course name: ____________________________  
          Course #: ____________________________  Course #: ____________________________  
    d. **Advanced Science courses (Chemistry, Physics or Biology content– one must be outside of SEAS)**
       6. Course name: ____________________________  7. Course name: ____________________________  
          Course #: ____________________________  Course #: ____________________________  

11. **Additional Courses (enter course numbers only):**
    ____________________________  ____________________________  ____________________________  
   ____________________________  ____________________________  ____________________________  

   **TOTAL POINTS**: ____________________________  

   *Total points must be ≥120 credits for the normal 4 year track, or ≥60 credits for Combined Plan students*  

   Advisor Signature ____________________________  Date ____________________________  
   Student Signature ____________________________  Date ____________________________