Student's Name: _____ **Uni** _____

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) Gen. Chem I	1404(4) Gen. Chem II	1500(3) Chem. Lab	2443(4) Orgo I.	2495(1.5)^ Orgo Lab I	2496(1.5)^ Orgo Lab II	_____
Track C2:	1604(4) Int. Chem	1507(3) Int. Chem Lab		2443(4) Orgo I.	2495(1.5)^ Orgo Lab I	2496(1.5)^ Orgo Lab II	_____
Track C3:	2045(4) Int. Orgo	2046(4) Int. Orgo	1507(3) Int. Chem Lab.		UN2545(3) 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**