

**Proposal for Dual Degree Requirements
between
College of Engineering and College of Science**

Approved by the College Councils of the Colleges of Engineering and Science in 2012-13

This proposal sets out the guidelines for students who intend to pursue a Bachelor of Science degree in one of the disciplines offered by the College of Engineering and a Bachelor of Science degree from the College of Science. It is intended to clarify the credit-hour and course requirements to enable students who want to pursue the two degrees to do so with a minimum of curricular overlap.

1. Students must complete the degree requirements of both colleges, including University requirements (satisfied only once for both degrees), College requirements (with liberal appropriate substitutions for similar courses), and Major requirements (with limited appropriate substitutions for similar content).

This contemplates double-counting more than one course (apart from University requirements) between both degrees but is intended to eliminate unnecessary duplication in course content.

2. Students must earn 30 useable credits past engineering degree requirements.

Usable credits are defined as credits – including AP, IB, credit-by-examination and course credits – that are of a high enough level that they could be applied to degree requirements. For example, additional AP credits in Economics could be used to satisfy a Free Elective credit in a degree program, but AP credit for Statistics (ACMS 10145) cannot be used in either degree program because the class level is lower than the Statistics requirements for any degree program in Science or Engineering.

3. Students must complete sequences of courses in mathematics, chemistry and physics, and may not bounce around among approved sequences.

This is to ensure that all necessary material is covered through a sequence of classes. Students who bounce around may miss some material, and may cover some material twice.

Approved Math Sequences

1. MATH 10550, 10560, 20550, 20580, 30650 *CE, CHEG, EE*
- 1a. MATH 10550, 10560, 20550, 20580 *AERO, CPEG, CS, EVEG, EVES, ME*
2. MATH 10550, 10560, 20550, 20610, 20750
3. MATH 10550, 10560; ACMS 20550, 20750, 20620
4. MATH 10550, 10560, 20550; PHYS 20451, 20452

Approved Chemistry Sequences

1. CHEM 10171/11171, 10122 *All EG (except CHEG)*
2. CHEM 10171/11171, 10122, 10172/11172, 20273 *CHEG*
3. CHEM 10171/11171, 10172/11172
4. CHEM 10181/11181, 10182/11182, 20283/22283, 20284/22284

Approved Physics Sequences

1. PHYS 10310, 10320 *All EG (except EE)*
2. PHYS 10310, 10320, 20330 *EE*
3. PHYS 10411, 10424, 20435, 20464

	ACMS/Statistics	Mathematics	Physics	Chemistry	Other Science
AERO ME	Math 3* Chem 1 or 3 Phys 1	Math 1 or 2* Chem 1 or 3 Phys 1	Math 1a, 2*, 3* or 4 Chem 1 or 3 Phys 3	Math 1a, 2* or 3* Chem 4 Phys 1	Math 1a, 2* or 3* Chem 1 or 3 Phys 1
CE	Math 3 Chem 1 or 3 Phys 1	Math 1 or 2 Chem 1 or 3 Phys 1	Math 1, 2, 3 or 4 Chem 1 or 3 Phys 3	Math 1, 2 or 3 Chem 4 Phys 1	Math 1, 2 or 3 Chem 1 or 3 Phys 1
CHEG	Math 3 Chem 2 or 4 Phys 1	Math 1 or 2 Chem 2 or 4 Phys 1	Math 1, 2, 3 or 4 Chem 2 or 4 Phys 3	Math 1, 2 or 3 Chem 4 Phys 1	Math 1, 2 or 3 Chem 2 or 4 Phys 1
CPEG CS EVEG EVES	Math 3 Chem 1 or 3 Phys 1	Math 1 or 2 Chem 1 or 3 Phys 1	Math 1a, 2, 3 or 4 Chem 1 or 3 Phys 3	Math 1a, 2 or 3 Chem 4 Phys 1	Math 1a, 2 or 3 Chem 1 or 3 Phys 1
EE	Math 3 Chem 1 or 3 Phys 2	Math 1 or 2 Chem 1 or 3 Phys 2	Math 1, 2, 3 or 4 Chem 1 or 3 Phys 3	Math 1, 2 or 3 Chem 4 Phys 2	Math 1, 2 or 3 Chem 1 or 3 Phys 2

* AERO and ME students need not take AME 30314 because it duplicates content of MATH/ACMS 20750. However, they must take the 0-credit Vibrations and Controls make-up sequences.