

# Engineering

Engineering has been added as a discipline within IMPAC during the 2001-02 year. In December, Professor James F. Shackelford of UC Davis was designated as the Lead Faculty Member for the Engineering Discipline. Professor Shackelford's initial meeting was at the January 5, 2002 Meeting in Sacramento. The only other participant for Engineering at that meeting was Denise Van Horn-Landre, Articulation Officer at Las Positas College in Livermore. Ms. Van Horn-Landre's participation and perspective were most useful.

With the effective introduction to IMPAC provided by the January meeting, Professor Shackelford made an IMPAC presentation to the Engineering Liaison Committee (ELC) at its semi-annual meeting at UC Davis on March 14, 2002. He encouraged those involved in the articulation function for engineering (the core mission of the ELC) to become aware of the parallel efforts of IMPAC and to become involved in the IMPAC activities. There was a good core group of people attending the April IMPAC meeting at LAX, including Ms. Van Horn-Landre, other participants from community colleges, and some from the UC. There were unfortunately no CSU participants, and CSU involvement will be a priority for the coming year.

Professor Shackelford has prepared a copy of the historical "Summit Agreement" of the ELC and circulated it at the March ELC meeting and the April IMPAC meeting (Appendix A). This is a long-established, general description of the lower-division program for a typical engineering student at either a community college or a four-year institution. Various forms of the Summit Agreement have guided articulation in engineering for roughly half of the ELC's 55-year history. Professor Shackelford translated the Summit Agreement into a format similar to that developed by Professor Schiffman for a Science-alternative to IGETC (Appendix B).

The consensus of the engineering group at the April meeting was that expanded dialogue between IMPAC and the ELC would be mutually beneficial and that a meeting of at least the engineering group within IMPAC should be held in conjunction with the Fall Meeting of the ELC. (The dialogue at the April meeting benefited substantially by having the participation of Darlene Mathias of Cosumnes River College, Chair of the Community College Segment of the ELC.) We also felt that IMPAC—Engineering is a valuable advising tool but should not be codified in the way that IGETC has been. We also felt that at least two versions of IMPAC—Engineering would be appropriate for a) mechanical/civil engineering and b) electrical/computer engineering.

## CURRENT ELC SUMMIT AGREEMENT OF MARCH 13, 1987

The following constitutes the recommendation of the ELC with regard to articulation between two-year and four-year engineering programs in the State of California, commonly referred to as the “Summit Agreement.”

A. THE ENGINEERING CORE (MINIMUMS)	SEMESTER UNITS/QUARTER UNITS
Math (beginning with Anal. Geom. & Calc. including Differential Equations)	16/24
Chem (for engineers) one term with lab	8/12
Physics (for engineers) full lab sequence	12/18
Statics	3/4
Graphics (inc. descrip. geom. & computer graphics)	3/4
Computer Prog. (Fortran or Pascal)	2/3
Orientation, Motivation, & Introduction	1/1
Properties of Materials	3/4
Electrical Circuits & Devices	3/4
Freshman English Composition	3/4
Electives*	11-15/17-23
<b>TOTAL</b>	<b>62-66/91-97</b>

\* Possible courses include but are not limited to the following. Choice would depend upon the engineering major requirements (including general education) at the school where graduation is expected.

linear algebra	organic chemistry	quantitative analysis
surveying	manufacturing processes	assembly language
statistics	dynamics	strength of materials
biology	engineering measurement	
	engineering design	

(No order of priority is intended. See your advisor for details.)

### B. THE SUMMIT AGREEMENT AFFIRMATION (REVISED)

“Based on 1974-75 requirements, any student of a California Community College, with a stated major in engineering, who presents a transcript showing satisfactory completion of the engineering Core program in lower division will be eligible to enroll in any four-year California University or college (which graduates engineers) with regular junior standing; and further, said student can complete an engineering program in four additional semesters (or six additional quarters) and obtain a bachelor’s degree. This assertion is subject to three assumptions:

1. The student makes normal academic progress at the four-year school.
2. The student will have selected appropriate elective courses to match the specific engineering option.
3. The student has total transferable credits equal to at least 50% of the graduation requirements.”

End of 03/13/87 Summit Agreement