

ENGINEERING

Restricted Elective Courses:

ENG CIV	121 & 122, 221 & 222
ENG ELC	220
EET	120
ENG GEN	112, 121, 131, 151, 231, 241 and 242, 272
<i>Subtotal</i> 9	
<i>Total</i> 31	

COMPUTER-AIDED DRAFTING/DESIGN (CADD)

The Engineering and Technology Department offers a Computer-Aided Drafting and Design program leading to a Certificate of Achievement that may enhance employment or promotion within industry. Many students take advantage of the value of this certificate by working part-time providing funding for their education. Successful completion of the required program with a grade-point average of 2.5 or better entitles the student to apply for, and upon approval of the department, be awarded a certificate in Computer-Aided Drafting/Design (CADD). The program may also lead to an Associate in Science degree upon completion of additional courses in general education graduation requirements to total 60 units. The CADD certificate prepares the student for advanced employment in the field of design drafting in industry. Specialization during the coursework is possible in such fields as civil, electrical, mechanical, and structural drafting.

SUBJECT & NO. COURSE	UNITS
ENG GEN 101	Introduction to Science, Engineering and Technology 2
ENG GEN 102	Engineering Problem Solving. 2
ENG GEN 110	Engineering Graphics 3
ENG GEN 111	Introduction to Engineering Drafting . 3
ENG GEN 121	Programming for Engineers 3
ENG GEN 131	Statics 3
ENG GEN 151	Materials of Engineering

OR

ENG GEN 161	Processing of Engineering Materials . . 3
ENG GEN 211	CADD for Engineers I 3
ENG GEN 212	CADD for Engineers II. 3
MATH 115	Elementary Algebra 3

OR

MATH	<i>Any higher-level course</i>
ENGLISH	Any one of English 61, 62, 63, 65, 101 .3
PHYSICS 1	Mechanics of Solids

OR

PHYSICS 6	General Physics I
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OR

PHYSICS 11	Introductory Physics 4
<i>Subtotal</i> 35	

Restricted Elective Courses:

ENG CIV	121 & 122, 221 & 222
ENG ELC	220
EET	120
ENG GEN	121, 131, 151, 231, 241 & 242, 272
<i>Subtotal</i> 8	
<i>Total</i> 43	

ASSOCIATE DEGREE PROGRAMS

COMPUTER-AIDED DRAFTING (CAD)**Associate in Science Degree**

The Engineering and Technology Department offers an Associate in Science Degree in Computer-Aided Drafting. This degree may enhance employment or promotion within industry. Many students take advantage of the value of this degree by working part-time providing funding for their education at the university. In addition to the degree, the student may apply for, and be awarded, a certificate in Computer-Aided Drafting (CAD) upon successful completion of the program (with at least a 2.5 grade-point average) and approval of the department. The program requires that students complete general education requirements in five broad areas, as well as courses for the Computer-Aided Drafting major. This A.S. degree prepares the student for an entry-level drafting position in industry, as well as providing a basis for lifelong learning. Specialization during the coursework is possible in such fields as civil, electrical, mechanical, and structural drafting.

SUBJECT & NO. COURSE	UNITS
ENG GEN 101	Introduction to Science, Engineering and Technology 2
ENG GEN 102	Engineering Problem Solving 2
ENG GEN 110	Engineering Graphics 3
ENG GEN 111	Introduction to Engineering Drafting . 3
ENG GEN 211	CADD for Engineers I 3
ENG GEN 212	CADD for Engineers II. 3
<i>Subtotal</i> 16	

Restricted Elective Courses:

ENG CIV	121 & 122, 221 & 222
ENG ELC	220
EET	120
ENG GEN	121, 131, 151, 231, 241 and 242, 272
<i>Subtotal</i> 8	

General Education Courses Plan B

Area A	Natural Sciences 3
Area B	Social and Behavioral Sciences 3
Area C	Humanities 3
Area D	Language and Rationality 6
Area E	Health and Physical Education. 3
<i>Subtotal</i> 18	

FREE ELECTIVES: **18**

Total 60

COMPUTER-AIDED DRAFTING/DESIGN (CADD)**Associate in Science Degree**

The Engineering and Technology Department offers an Associate in Science Degree in Computer-Aided Drafting and Design. This degree may enhance employment or promotion within industry. Many students take advantage of the value of this degree by working part-time providing funding for their education at the university. In addition to the degree, the student may apply for, and be awarded, a certificate in Computer-Aided Drafting/Design (CADD) upon successful completion of the program (with at least a 2.5 grade-point average) and approval of the department.

The program requires that students complete general education requirements in five broad areas, as well as courses for the Computer-Aided Drafting/Design major. This A.S. degree prepares the student for advanced employment in the field of design drafting in industry, as well as providing a basis for lifelong learning. Specialization during the coursework is possible in such fields as civil, electrical, mechanical, and structural drafting.

SUBJECT & NO.	COURSE	UNITS
ENG GEN 101	Introduction to Science, Engineering and Technology . . . . .	.2
ENG GEN 102	Engineering Problem Solving . . . . .	.2
ENG GEN 110	Engineering Graphics . . . . .	.3
ENG GEN 111	Introduction to Engineering Drafting . . . . .	.3
ENG GEN 121	Programming for Engineers . . . . .	.3
ENG GEN 131	Statics . . . . .	.3
ENG GEN 151	Materials of Engineering	
ENG GEN 211	CADD for Engineers I . . . . .	.3
ENG GEN 212	CADD for Engineering II . . . . .	.3
PHYSICS 1	Mechanics of Solids	
OR		
PHYSICS 6	General Physics I	
OR		
PHYSICS 11	Introductory Physics . . . . .	.4
	<i>Subtotal</i> . . . . .	.29
Restricted Elective Courses:		
ENG CIV	121 & 122, 221 & 222	
ENG ELC	220	
EET	120	
ENG GEN	121, 131, 151, 231, 241 & 242, 272	
	<i>Subtotal</i> . . . . .	.7
General Education Courses Plan B		
Area A	Natural Sciences . . . . .	.3
Area B	Social and Behavioral Sciences . . . . .	.3
Area C	Humanities . . . . .	.3
Area D	Language and Rationality . . . . .	.6
Area E	Health and Physical Education . . . . .	.3
	<i>Subtotal</i>	18
FREE ELECTIVES:		6
	<i>Total</i>	60

TRANSFER CURRICULUM

Transfer requirements are subject to change. Students should check with a counselor for current transfer information.

ENGINEERING

ELAC offers lower division Engineering University Transfer Curriculum, which can lead to a Bachelor of Science Degree in the following engineering disciplines:

- **Aeronautical Engineering**
- **Aerospace Engineering**
- **Biochemical Engineering**
- **Biomedical Engineering with options in Electrical and Biomedical**
- **Chemical Engineering**
- **Civil Engineering**

- **Computer Engineering**
- **Electrical/Computer Engineering**
- **Electrical Engineering**
- **Electronics/Computer Engineering**
- **Electronics Engineering**
- **Environmental Engineering**
- **Industrial Engineering**
- **Manufacturing Engineering**
- **Materials Engineering**
- **Mechanical Engineering**
- **Metallurgical Engineering**
- **Naval/Offshore Engineering**
- **Nuclear Engineering**
- **Ocean Engineering**
- **Petroleum Engineering**
- **Surveying Engineering**
- **Systems Engineering**

There are two types of articulation in the Engineering and Technology program at ELAC: 2+2 articulation agreements and general articulation.

The 2+2 articulation agreements are contracts with CSULA that outline specific courses the community college student can take over a period of two years and then transfer to that particular university with junior-level status in the school of engineering.

The general articulation only specifies that the particular university of interest to the community college student has the option of accepting certain courses taken at ELAC. This does not guarantee that all courses taken at ELAC will be accepted, nor will the student obtain junior-level status at the university of interest. It is advised that the ELAC student contact the Engineering Technology Department office, the counseling office, and also the university of choice to obtain the specific requirements.

Due to the high unit demand placed on engineering students at ELAC (and at the universities), they complete only certain areas of the General Education requirements while at ELAC, including:

- ENGLISH 101
- ENGLISH 103
- POLITICAL SCIENCE 1
- HISTORY 12

The laboratory science general education requirements are automatically met through completion of the major courses in Engineering.

ENGINEERING 2+2 PROGRAMS

East Los Angeles College and selected Southern California universities have entered into 2+2 articulation agreements which:

1. Guarantee the students completing the required courses at ELAC will enter those universities as Juniors and will be able to graduate in two years.