



CHANDLER-GILBERT
COMMUNITY
COLLEGE

480.732.7000
2626 East Pecos Road
Chandler, AZ 85225-2499

ENGINEERING PROGRAM
DIVISION OF SCIENCE

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Electrical Engineering**

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ELECTRICAL ENGINEERING PROGRAM

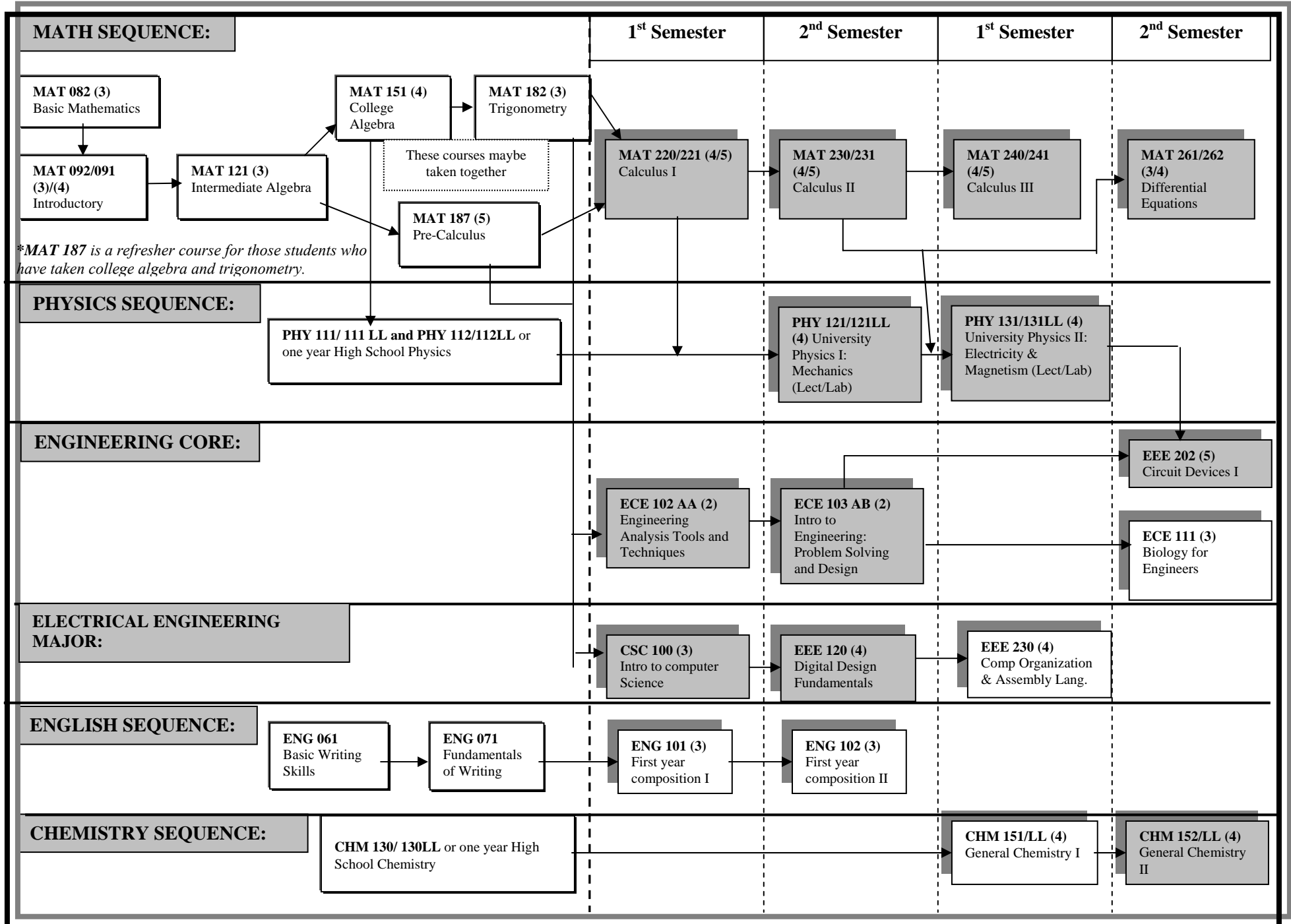
Advisement Packet

The content of this document might change.
Please check with an advisor.

ENGINEERING ASSESSMENTS AND COURSE SEQUENCE ELECTRICAL ENGINEERING

Prerequisite Courses

Required Courses





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ENGINEERING PROGRAM

SUGGESTED SEQUENCING OF COURSES

**Electrical Engineering
Required Courses**

(Equivalent units at ASU are indicated between parentheses)

FRESHMAN YEAR				SOPHOMORE YEAR			
First Semester		Second Semester		First Semester		Second Semester	
Course	Cr	Course	Cr	Course	Cr	Course	Cr
ECE 102 AA	2	ECE 103 AB	2 (3)	EEE 230	4 (4)	EEE 202	5 (4)
CSC 100	3 (3)	EEE 120	4 (3)	HU/SB	3 (3)	ECE 111	3 (3)
MAT 220/221	4/5 (3)	MAT 230/231	4/5 (3)	MAT 240/241	4/5 (3)	MAT 261/262	3/4 (3)
ECN 111 or 112	3 (3)	PHY 121 & 121LL	4 (4)	PHY 131 & 131LL	4 (4)	HU/SB	3 (3)
ENG 101	3 (3)	ENG 102	3 (3)	CHM 151 & 151LL	4 (0)	CHM 152 & 152LL	4 (4)
Total C.G.C.C. Credits:	15/16	Total C.G.C.C. Credits:	17/18	Total C.G.C.C. Credits:	19/20	Total C.G.C.C. Credits:	18/19
Total ASU Units:	(12)	Total ASU Units:	(16)	Total ASU Units:	(14)	Total ASU Units:	(17)
Total number of credit hours at CHANDLER-GILBERT COMMUNITY COLLEGE:							69/73
Total equivalent units at the ARIZONA STATE UNIVERSITY:							(59)

Note: According to ASU Electrical Engineering advisement sheet:

Humanities & Social Sciences (HU/SB) (15 hrs minimum)

(Required: 1 course upper division; 2 courses from the same dept; 2 depts. or more Represented; plus a minimum of two courses that satisfy three awareness areas: Cultural (C), Global (G), and Historical (H). Double counting is permissible between HU or SB and the awareness areas and also within the awareness areas.)

See attached sheet for available courses at CGCC & recommended sequences of courses from ASU

The following courses meet the general studies requirements:*(Only lower division courses can be taken at Chandler-Gilbert Community College)*

Awareness areas are coded:

(H) = Historical (G) = Global (C) = Cultural**HUMANITIES & FINE ARTS (HU):**

AJS Administration of Justice	123
ARH Art Humanities	100/101(H)/102(H) 115/118(G)/145(C)/201(G, H)
ASB Anthropology	211(G)/221(G)/222(G, H)/223(G, H)
COM Communication	241
DAH Dance Humanities	100(G)/201(G)
EDU Education	291/292(C)/294(C)
ENH English Humanities	110(C)/112(C)/113/114(C)/201(H)/202(G,H)/204/205(C)/206/214/221(H)222(H)/230/ 241/242/250/251(G)/254/255(C)/256/259(C)/260(C)/270/275/284(C)/285(C)/289/291/ 294/295(C)
HUM Humanities	101/105AA-AE(C)*/107/108/120(C)/125/190AA-AI*/201(G)/202(G)/203/205/206/207/ 208(C)/ 209(C,H)/210/211AA-AC(G)/213(G)/214(C)/250(H)/251(H)/260(C)/261(G,H) 292(C)
MHL Music: History/Literature	140(H)/142(H)/143(G)/145(C)/146/147/153(H)
PHI Philosophy	101/102/103/104(G)/105/106/109/201/213/218/224/225(C)/233AA/233AB/234AA/ 243(G,H)/244/245/246
REL Religious Studies	101/201(H)/202(G)/203(C)/205/213/225(C)/243(G,H)/244/246/270/271
THE Theatre	111/205(H)/206/210/220/260

LITERACY & CRITICAL INQUIRY (L):

COM Communication	207/222/225/230/241
CRE Critical Reading	101
ENG English	111/200/213/215/216/217/218
ENH English Humanities	254/255(C)
GPH Physical Geography	211
HUM Humanities	250(H)/251(H)
JRN Journalism	201/212
MCO Mass Communications	220(C)
PHI Philosophy	103/106
POS Political Science	115
PSY Psychology	290AB-AC
REL Religion	203(C)/205
THE Theatre	220
THP Theatre Performance/Prod.	241

SOCIAL & BEHAVIORAL SCIENCES (SB):

AJS Administration of Justice	101/200/225/258(C)/270(C)
ASB Anthropology	102(G)/211(G)/214(G)/222(G,H)/223(G,H)/230/235(C,H)/238(H)/245(C,H)
CFS Child/Family Studies	157/159/176/205/259
COM Communication	100/110/230/250/263(C,G)
ECN Economics	111/112/160(H)/212(G)/250(G)
EDU Education	221/222(C)
GBS General Business	280
HES Health Science	100
HIS History	100(H)/101(H)/102(G,H)/103(H)/104(H)/105(H)/105AA- AC(H)/106(C,H)/109(C,H)/ 135(H)/145(G,H)/170(C,H)173(H)/201(C,H)/203(C,H)/209(C,H)/241(H)/242(G,H)/ 251(H)/252(H)/272(G,H)/273(G,H)/277(G,H)
POS Political Science	100/110/115/120(G)/125(G)/130/140(G)/210/223(C)/285
PSY Psychology	101/132(C,G)/157(C,G)/215/218/235©/240/245/250/258/260/266/270/277/280/281/292
SOC Sociology	101/110/130/140(C)/141(C,H)/143(C)/157/210/212(C)/215/240(C)/245/251/253/ 265/270

EQUIVALENCY INFORMATION for ELECTRICAL ENGINEERING

For transfer from CGCC to ASU

<i>CHANDLER-GILBERT COMMUNITY COLLEGE</i>			<i>Arizona State University</i>	
<i>Course</i>	<i>Cr</i>	<i>Title</i>	<i>Course</i>	<i>Cr</i>
ECE 111	3	Biology for Engineers	BME 111	3
CHM 151	3	General Chemistry I	CHM 113	3
CHM 151LL	1	General Chemistry I Lab	CHM 113	1
CHM 152	3	General Chemistry II	CHM 114 or 116	3
CHM 152LL	1	General Chemistry II Lab	CHM 114 or 116	1
ECE102 & 103	2,2=4	Intro to Engineering	EEE 101	3
EEE 202	5	Circuit Devices I	EEE 202	4
EEE 120	4	Digital Design Fundamentals	EEE 120	3
EEE 230	4	Computer Organization & Assembly Language	EEE 230	4
CSC 100	3	Principles of Programming C++	CSE 100	3
				3
MAT 220/221	4/5	Calculus I	MAT 265	3
MAT 230/231	4/5	Calculus II	MAT 266	3
MAT 240/241	4/5	Calculus III	MAT 267	3
MAT 261/262	3/4	Differential Equations	MAT 275	3
PHY 121 & 121LL	4	Physics I & Lab	PHY 121 & 122	
PHY 131 & 131LL	4	Physics II & Lab	PHY 131 & 132	4
				4
ENG 101	3	First Year Comp. (ENGLISH)	ENG101	
ENG 102	3	First Year Comp. (ENGLISH)	ENG102	3
				3



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***ELECTRICAL
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PERSONAL ENGINEERING SCHEDULE

FRESHMAN YEAR				SOPHOMORE YEAR			
First Semester		Second Semester		First Semester		Second Semester	
Course	Cr	Course	Cr	Course	Cr	Course	Cr
Total C.G.C.C. Credits:		Total C.G.C.C. Credits:		Total C.G.C.C. Credits:		Total C.G.C.C. Credits:	
Total ASU Units:	()	Total ASU Units:	()	Total ASU Units:	()	Total ASU Units:	()
Total number of credit hours at CHANDLER-GILBERT COMMUNITY COLLEGE:							
Total equivalent units at ARIZONA STATE UNIVERSITY:							()

Electrical Engineering Skill Set

Course	Credits	Course Name	Course Description
CHM 152+152LL	4	General Chemistry II (L+L)	A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Completion of CHM152LL required to meet the Natural Science requirement. Prerequisites: CHM151 and CHM151LL.
CSC 100	3	Principles of Programming C++ (L+L)	Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120, or MAT121, or MAT122.
ECE 102AA	2	Engineering Analysis Tools and Techniques	Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: Two years of high school algebra or MAT122 or departmental approval. Corequisites: MAT151 or MAT182 or MAT187.
ECE 103AB	2	Engineering Problem Solving and Design	Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: ECE102 and (high school physics or PHY111).
CSC/EEE 120	4	Digital Design Fundamentals (L+L)	Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: CSC100, or CSC110, or CSC181, or ELE181, or NET181, or equivalent, or permission of instructor.
EEE 202	5	Circuit Devices I (L+L)	Introduction to electrical networks. Component models, transient and steady state analysis. Analysis of linear and nonlinear networks. Analytical and numerical methods. Prerequisites: ECE103. Prerequisites or Corequisites: MAT262, and (PHY115 and PHY116) or (PHY121 and PHY131).
MAT 220/221	4/5	Calculus with Analytic Geometry I (LEC)	Real numbers, limits, continuity, differential and integral calculus of functions of one variable. May receive credit for only one of the following: MAT220 or MAT221. Prerequisites: Grade of "C" or better in (MAT150 or MAT151 or MAT152) and (MAT182 or MAT187 or equivalent), or satisfactory score on district placement exam.
MAT 230/231	4/5	Calculus with Analytic Geometry II (LEC)	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, sequences and series. May receive credit for only one of the following: MAT230 or MAT231. Prerequisites: Grade of "C" or better in MAT220, or MAT221, or equivalent.
MAT 240/241	4/5	Calculus with Analytic Geometry III (LEC)	Vector-valued functions of several variables, multiple integration, introduction to vector analysis. Prerequisites: Grade of "C" or better in MAT230 or MAT231.
MAT 261/262	3/4	Differential Equations (LEC)	Ordinary differential equations with applications including Laplace transforms with numerical methods. Prerequisites: Grade of "C" or better in MAT230, or MAT231, or equivalent.
PHY 121+121LL	4	University Physics I: Mechanics (L+L)	Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: MAT220, or MAT221, or department consent. One year of High School physics or PHY111 and PHY112 suggested but not required.
PHY 131+131LL	4	University Physics II: Electricity and Magnetism (L+L)	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: MAT230, or MAT231, or department consent, and PHY121. Corequisites: MAT241 or department consent.

TOTAL CREDITS 43/47

Minimum GPA may vary from semester to semester. See ASU's Electrical Engineering department/website for more details (<http://fulton.asu.edu/ee/students/undergraduate/>).

