Computer Engineering Curriculum Facts
CNM to UNM

***********IMPORTANT: To assure accuracy based on individual curriculum, student must meet with advisors at CNM and UNM***********

- The course ENGR 2088 is an Engineering Elective course specific to UNM Engineering B.S. curriculum. ENGR 2088 is a course completed at UNM, then transferred back to CNM.
  - Ex. The course ECE 330 is completed at UNM, then transferred to CNM where it becomes ENGR 2088. Course fulfills A.S. and B.S. requirements.

Engineering

Students should contact an Advisor to understand UNM Engineering Curriculum Semester Sequencing upon full transfer.

- IT 1010 IT 1010
  - All CNM students are eligible to challenge IT 1010. IT 1010 is not a UNM B.S. requirement, but is a CNM A.S. requirement. UNM does not accept credit hours for the completion of IT 1010 challenge exam.
- MATH 2910 Applied Ordinary Differential Equations
  - MATH 2910 Applied Ordinary Differential Equations at CNM will satisfy UNM's MATH 316 Applied Ordinary Differential Equations, but will maintain lower level status and will not fulfill upper division degree requirements.
- MATH 2810 Applied Linear Algebra
  - MATH 2810 Applied Linear Algebra at CNM will satisfy UNM's MATH 314 Applied Linear Algebra with Applications, but will maintain lower level status and will not fulfill upper division degree requirements.

Computer Engineering Departmental Requirements:

Please complete at least 18 credit hours from the courses listed below which include Math 162 and 163. Courses must be completed with a minimum GPA of 2.5

- MATH 162 (4) = MATH 1710 (4)
- MATH 163 (4) = MATH 1715 (4)
- PHYC 161 (3) = PHYS 1810 (4)
- ECE 203 (3) = ENGR 2910 (3)
- ECE 131 (3) = CSCI 1151(4)
- PHYC 160 (3) = PHYS 1710 (4)
- PHYC 161 L (1) = PHYS 1892 (1)

For further questions regarding Transfer to UNM in the STEM fields contact:

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Developing STEM Pathways for the Future

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Computer Engineering Curriculum Alignment

CNM Engineering A.S. to UNM Computer Engineering B.S.

Four Year Road Map

Course Subject and Title	Cr. Hrs.	CNM Major	Core	UNM Equivalent/ Prerequisites	UNM Major
Semester One:					
ENG 1101	3	3	3	ENGL 110	3
MATH 1710	4	4	4	MATH 162	4
CSCI 1151	3	3		ECE 131	3
ENGR 2088	1	1		ECE 101	1
ENGR 1010	1	1			
IT 1010	3	3			
Total:	**15**	**15**	**7**		**11**

Course Subject and Title	Cr. Hrs.	CNM Major	Core	UNM Equivalent/ Prerequisites	UNM Major
Semester Two:					
ENG1102	3	3	3	ENGL 120	3
MATH 1715	4	4		MATH 163	4
ENGR 2088	3	3		UNM ECE 231/ Pre-req CSCI 1151	3
ECON 2200	3	3	3	ECON 105	3
PHYS 1710/1792	5	5	5	PHYC 160/160L	4
Total:	**18**	**18**	**11**		**17**

Course Subject and Title	Cr. Hrs.	CNM Major	Core	UNM Equivalent	UNM Major
Summer Semester:					
Fine Arts	3	3	3		3
Humanities	3	3	3		3
Total:	**6**	**6**	**6**		**6**

Semester Three:					
ENG 2219	3	3	3	ENGL 219	3
MATH 2910	3	3		MATH 316	3
PHYS 1810/1892	5	5	5	PHYC 161/161L	4
ENGR 2910	3	3		ECE 203/ Pre-req CSCI 1151/ Pre or Co-Req PHYS 1810 and Math 2910	3
ENGR 2088	4	4		UNM ECE 238L/Pre-req CSCI 1151	4
Total	**18**	**18**	**8**		**17**

Semester Four:					
MATH 2710	4	4		MATH 264	4
MATH 2810	3	3		MATH 314	3
ENGR 2088	3			UNM ECE 330/Pre-req ECE 231	3
ENGR 2915	3	3		ECE 213/Pre-req ENGR 2910 and Math 2910	3
Social/Behavioral	3	3	3		3
Total	**16**	**13**	**3**		**16**

Summer Semester:					
Humanities	3	3	3		3
Total	**3**	**3**	**3**		**3**
A.S. Total	**76**	**73**	**38**		**70**

Semester Five:	Major	Minor	UD Hrs	Notes
ECE 321L	4		4	Pre-req ECE 231(CNM's ENGR 2915)
MATH 327	3		3	Pre-req Math 162 and 163 (CNM's Math 1710 and 1715)
ECE 314	3		3	Pre-req ECE 213 and Math 264(CNM's Math 2710)
ECE 337L	3		3	Pre-req ECE 231 and 238L
ECE 206	2			Pre-req ECE 203 and ENGL 102 (CNM's ENG 1102)
Total	**15**		**13**	

Semester Six:	Major	Minor	UD Hrs	Notes
ECE 331	3		3	Pre-req ECE 231 and Math 327/ Co-req ECE 340
ECE 344L	4		4	Pre-req ECE 206L and, 238L and 321L
ECE 340	3		3	Pre-req ECE 314 and Math 314(CNM's Math 2810)
ECE 440	3		3	Pre-req ECE 330 and 337/ Co-req ECE 340
Total	**13**		**13**	

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Semester Seven:	Major	Minor	UD Hrs	Notes
ECE 419	3		3	Restriction: ECE major and senior standing
ECE 437L	3		3	Pre-req ECE 330 and 337 or CS 341L
ECE Track Elective	3		3	
Technical Elective	3		3	
Technical Elective	3		3	
Total	**15**		**15**	

Semester Eight:	Major	Minor	UD Hrs	Notes
ECE 420	3		3	
Technical Elective	3		3	
***Foreign Language**	3			
ECE Track Elective	3		3	
Total	**12**		**9**	
	131		**53**	

*Asterisk information is noted on the Curriculum Facts.

**********IMPORTANT: To assure accuracy based on individual curriculum, student must meet with advisors at CNM and UNM. Roadmap is a suggested degree plan**********

Revised on 2.25.14 by the STEM UP Joint Advisory Council

Degree Transfer Agreement Fall 2013 – Summer 2016 based on 2013-2014 CNM and UNM Catalogs

Central New Mexico Community College A.S. Engineering

For transfer into

University of New Mexico B.S. Engineering

- This Degree Transfer Agreement fulfills all A.S. Engineering requirements at CNM and Admission requirements to UNM's School of Engineering.
- This Degree Transfer Agreement goes into effect beginning Fall 2013 and will be valid for admission into UNM's School of Engineering through Summer 2016.
- Please speak with your STEM Advisor if you have AP or CLEP credit, which could fulfill certain course requirements below.
- **Pay attention to prerequisite course requirements** and plan courses accordingly. Prerequisites may be different at each institution. Please speak with your STEM Advisor.
- Be sure to review Engineering department admission requirements for the GPA requirement of your major at UNM, as they vary by major. Speak to an advisor before enrolling in coursework.
- All course work required for graduation from UNM must be successfully completed with a 'C' or better within three (3) attempts.

CNM	UNM
A.S. Engineering	B.S. Chemical Engineering B.S. Civil Engineering B.S. Computer Engineering B.S. Construction Engineering B.S. Electrical Engineering B.S. Mechanical Engineering B.S. Nuclear Engineering

Computer and Engineering Courses						
ENGR 1010 IT 1010	Survey of Engineering Introduction to Computers	(1) (3)		**Not required for Engineering majors at UNM, but meets A.S. requirement at CNM**		
For Electrical & Computer Engineering Majors only: CSCI 1151 **OR** ***For all other Engineering Majors:*** CSCI 1153	Intro to Programming for Non-Majors Programming in MATLAB	(4) (4)		***For Electrical & Computer Engineering Majors only:*** ECE 131 **OR** ***For all other Engineering Majors:*** CS 151L	Programming Fundamentals Computer Programming Fundamentals for Non-Majors	(3) (3)
Mathematics Courses **Math placement is determined by Accuplacer exam, ACT or SAT scores. Speak with your STEM advisor to find out which Math course(s) you may need to complete *BEFORE* taking Calculus.**						
MATH 1710	Calculus I	(4)		MATH 162	Calculus I	(4)
MATH 1715	Calculus II	(4)		MATH 163	Calculus II	(4)
MATH 2710	Calculus III	(4)		MATH 264	Calculus III	(4)
[1]MATH 2910 See your STEM Advisor about this course.	Applied Ordinary Diff Equations	(3)		[1]MATH 316/MATH 2T Applied Ord Diff Equations See your STEM Advisor about this course.		(3)
Science Courses **Take the Chemistry and Physics course sequences as listed below:**						
CHEM 1710 CHEM 1792	General Chemistry I General Chemistry I Lab	(3) (1)		CHEM 121 CHEM 123L	General Chemistry I General Chemistry I Lab	(3) (1)
PHYS 1710 PHYS 1792	Physics for Scientists I Physics for Scientists I Lab	(4) (1)		PHYC 160 PHYC 160L	General Physics I General Physics I Lab	(3) (1)
PHYS 1810 PHYS 1892	Physics for Scientists II Physics for Scientists II Lab	(4) (1)		PHYC 161 PHYC 161L	General Physics II General Physics II Lab	(3) (1)

Communications Core						
ENG 1101	College Writing	(3)		ENGL 110	Composition I: Exposition	(3)
ENG 1102	Analytic & Argumentative Writ	(3)		ENGL 120	Composition II: Analysis & Argum	(3)
ENG 2219	Technical Communications	(3)		ENGL 219	Technical Writing	(3)
Humanities Core **Choose two courses below from two different disciplines:**						
ENG 2262	Survey of Early World Lit	(3)		ENGL 292	World Lit: Ancient to 16th C	(3)
ENG 2263	Survey of Later World Lit	(3)		ENGL 293	World Lit: 17th Century-Pres	(3)
HIST 1101 or HUM 1111	Western Civilization I	(3)		HIST 101L	Western Civilization to 1648	(3)
HIST 1102 or HUM 1112	Western Civilization II	(3)		HIST 102L	Western Civilization Post 1648	(3)
HIST 1161	History of the United States I	(3)		HIST 161	History of the U.S. to 1877	(3)
HIST 1162	History of the United States II	(3)		HIST 162	History of the U.S. Since 1877	(3)
HIST 1182	Modern Latin American History	(3)		HIST 182	Modern Latin American History	(3)
PHIL 1110	Intro. to Philosophical Thought	(3)		PHIL 101	Introduction to Philosophy	(3)
RLGN 1107	Living World Religions	(3)		RELG 107	Living World Religions	(3)
RLGN 2263	Eastern Religions	(3)		RELG 263	Eastern Religions	(3)
Fine Arts Core **Choose one course below:**						
ARTH 1101	Introduction to Art	(3)		ARTH 101	Introduction to Art	(3)
ARTH 2201	History of Art I	(3)		ARTH 201	History of Art I	(3)
ARTH 2202	History of Art II	(3)		ARTH 202	History of Art II	(3)
ENG 2210	Film as Literature	(3)		MA 210	Introduction to Film Studies	(3)
MUS 1139	Early Music Appreciation	(3)		MUS 139	Music Appreciation	(3)
THEA 1122	Introduction to Theater	(3)		THEA 105	Theatre Appreciation	(3)
Social/Behavioral Sciences Core ***Take ECON 2200 and choose one additional course below:***						
ECON 2200	Macroeconomics (required)	(3)		ECON 105	Introductory Macroeconomics	(3)
ANTH 1101	Introduction to Anthropology	(3)		ANTH 101	Introduction to Anthropology	(3)
ANTH 1130	Cultures of the World	(3)		ANTH 130	Cultures of the World	(3)
ECON 2201	Microeconomics	(3)		ECON 106	Introductory Microeconomics	(3)
GEOG 1102	Human Geography	(3)		GEOG 102	Human Geography	(3)
PSCI 1110	The Political World	(3)		POLS 110	The Political World	(3)
PSCI 2200	US Politics	(3)		POLS 200	American Politics	(3)
PSCI 2220	Comparative Government	(3)		POLS 220	Comparative Politics	(3)
PSCI 2240	International Politics	(3)		POLS 240	International Politics	(3)
PSY 1105	Introduction to Psychology	(3)		PSY 105	General Psychology	(3)
SOC 1101	Introductory to Sociology	(3)		SOC 101	Introduction to Sociology	(3)
Engineering Electives ***Select 12-13 credits from the courses below according to your specific Engineering major:***						
ACCT 1110	Accounting I	(6)		MGMT 202	Principles of Financial Acctg	(3)
BIO 1010	Biology for Non-Majors	(3)		BIOL 110	Biology for Non-Majors	(3)
BIO 1510	Molecular and Cell Biology	(4)		BIOL 201	Molecular and Cell Biology	(4)
CHEM 1810	General Chemistry II	(3)		CHEM 122	General Chemistry II	(3)
CHEM 1892	General Chemistry II Lab	(1)		CHEM 124L	General Chemistry II Lab	(1)
[3]CHEM 2710	Organic Chemistry I	(3)		[3]CHEM 301/CHEM 3T	Organic Chemistry I	(3)
[3]CHEM 2792	Organic Chemistry I Lab	(1)		[3]CHEM 303L	Organic Chemistry I Lab	(1)
EPS 1101	Introduction to Geology	(3)		EPS 101	Introduction to Geology	(3)
ENGR 2910	Circuit Analysis I	(3)		ECE 203	Circuit Analysis I	(3)
ENGR 2915	Circuit Analysis II	(3)		ECE 213	Circuit Analysis II	(3)
[3]ENGR 2710	Thermodynamics	(3)		[3]ME 301	Thermodynamics	(3)
ENGR 2810	Engineering Statics	(3)		CE 202	Engineering Statics	(3)
[3]ENGR 2815	Engineering Dynamics	(3)		[3]ME 306	Dynamics	(3)
[4]MATH 2810	Applied Linear Algebra	(3)		[4]MATH 314/MATH 2T	Applied Linear Algebra	(3)

PHYS 2710	Physics for Engineers III	(4)		PHYC 262	General Physics	(3)
				PHYC 262L	General Physics Lab	(1)
ENGR 2088	Engineering Specialty	(1-16)		CE 160	Civil Engineering Design	(3)
				CE 283	Trans Systems Measurements	(3)
				CE 352	Comp Apps in Civil Engr	(3)
				CHNE 101	Introduction to CHNE	(1)
				CHNE 213	Circuits for CHNE	(3)
				CHNE 230	Principles of Radiation Protection	(3)
				CHNE 231	Principles of Nuclear Engr	(3)
				CHNE 251	Chemical Process Calculations I	(3)
				CHNE 253	Chemical Process Calculations II	(3)
				CHNE 302	Chemical Engr Thermo	(3)
				CHNE 314	Thermo and Nuclear Systems	(3)
				CHNE 372	Nuclear Engr Materials	(3)
				ECE 101	Introduction to ECE	(1)
				ECE 206L	Electrical Engr Lab	(2)
				ECE 231	Intermediate Programming	(3)
				ECE 238L	Computer Logic Design	(3)
				ECE 330	Software Design	(3)
				ME 160	Mechanical Engr Design I	(3)
				[2]ME 217	Energy, Environment and Society	(3)
				ME 260	Mechanical Engr Design II	(3)
				ME 318L	Mechanical Engr Lab	(3)
				PHYC 167	Problems in Gen Physics	(1)
TOTAL CREDITS		**(73-74)**		**TOTAL CREDITS**		**(69-70)**

[1]MATH 2910 at CNM satisfies MATH 316 at UNM in the Engineering major only.

[2]ME 217 is the required 2nd Social Science for the Mechanical Engineering program at UNM but does not fulfill the Social Behavioral Science requirement at CNM.

[3]This course at CNM will meet the requirement for the course at UNM, but it will not transfer as *upper division* credit.

[4]MATH 2810 at CNM satisfies MATH 314 at UNM in the Engineering majors only.

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