

University of Missouri

Bachelor of Science in Computer Science

Transfer Guide for East Central College

This plan is intended only as a general guide based on requirements in the 2013-2014 University of Missouri undergraduate catalog. Check the following web sites for current course descriptions, prerequisites, course equivalencies and other specific details about the Mechanical Engineering major:

- 1) College Catalog (<http://registrar.missouri.edu>)
- 2) Transfer Equivalencies (<http://transfercourses.missouri.edu> or <http://transfer.org>)
- 3) General Education (<http://generaleducation.missouri.edu>)
- 4) Computer Science (<http://engineering.missouri.edu/cs/degree-programs/>)

Recommendation for Transfer Students - Transfer students interested in the BS in Computer Science are encouraged to take programming courses if available at the community college. Students who transfer to MU without any of the programming courses (CS 1050 and CS 2050) will be at least 3 to 3 ½ years away from graduation at MU.

For more information about the Bachelor of Science in Computer Science, contact the Department of computer Science at 573-884-6342 or WheelerAl@missouri.edu.

University of Missouri		East Central College
COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
English Exposition and Argumentation (3 credits)		
ENGLSH 1000 Exposition and Argumentation	3	EN 1333 English Comp II (3)
Behavioral & Social Science (9 credits) Courses from at least two different departments.		
State Requirement in Government or History	3	Select state requirement from the general education list.
Social Science Elective	3	Select social science from the general education list.
Behavioral Science Elective	3	Select behavioral science from the general education list.
Humanities/Fine Arts (Option 1 – Conventional Track) (9 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Courses from at least two different departments ▪ A maximum of 3 credit hours for skills classes ▪ No foreign language courses may be used for this option		
COMMUN 1200 Public Speaking	3	CT 1103 Public Speaking (3)
Humanity 2	3	Select humanities from the general education list.
Humanity 3	3	
Humanities/Fine Arts (Option 2 - Foreign Language Track) (12 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Minimum of 12 college transcripted hours in a single foreign language ▪ Satisfies the 2000-level requirement		
Foreign Language 1	5	Select foreign language courses from the general education list. You may also take a foreign language in the 12-hour format. If you elect this option, you still must take Comm 1200 Public Speaking to graduate.
Foreign Language 2	5	
Foreign Language 3	3	
Upper Level General Education (3 credits) At least 3 credit hours of behavioral science, social science or humanity must be at the 2000-level or above.		
<input checked="" type="checkbox"/> Upper-level general education courses may also count toward other general education requirements (behavioral sciences, social sciences, or humanities).		
Upper Level Course	3	Select 200/2000-level behavioral science, social science, or humanity course from the general education list. Level is based upon the community college course number, NOT the MU equivalent.
Writing Intensive (6 credits)		
Other writing intensive outside the major	3	Must be taken at MU
CMP SC 4970 Senior Capstone Design I	3	Must be taken at MU
Required Computer Science Courses (42 credits)		
CMP SC 1000 Intro to Computer Science	1	None (not required if student transfers 60 credit hours or more to MU)
CMP SC 1050 Algorithm Design and Programming I	3	None
CMP SC 2050 Algorithm Design and Programming II	3	None
CMP SC 3050 Advanced Algorithm Design	3	None
CMP SC 3270 Intro to Digital Logic	3	None
CMP SC 3280 Computer Organization & Assembly Language	3	None
CMP SC 3330 Object Oriented Programming	3	None
CMP SC 3380 Database Applications & Information Systems	3	None
CMP SC 4050 Design and Analysis of Algorithms I	3	None
CMP SC 4320 Software Engineering I	3	None
CMP SC 4520 Operating Systems I	3	None
CMP SC 4850 Computer Networks I	3	None
CMP SC 4970 Senior Capstone Design I (WI)	3	None
CMP SC 4980 Senior Capstone Design II	2	None

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COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
Computer Science Electives (21 credits)		
Select two 4000-level courses from: CMP SC 4410 Theory of Computation I CMP SC 4430 Compilers I CMP SC 4450 Principles of Programming Languages	6	None
Additional 4000-level CMP SCI courses	9	None
Other CMP SC course (2000-level or higher)	3	None
Mathematics (19 credits)		
MATH 1500 Analytic Geometry and Calculus I	5	MT 1605 Analy Geom & Calc I (5)
MATH 1700 Calculus II	5	MT 2105 Analy Geom & Calc II (5)
MATH 2300 Calculus III	3	MT 2205 Analy Geom & Calc III (5)
MATH 2320 Discrete Mathematical Structures	3	None
STAT 4710 Intro to Mathematical Statistics	3	None
Technical Elective (3 credits)		
2000-level or above CMP SC course, 4000-level MATH course, 2000-level or above engineering course, MANGMT 3000, FINANC 3000, or 2000-level INFOTC course	3	Check the computer science and transfer equivalency web sites for course options.
Sciences (12 credits) Select one science sequence (Physics, Chemistry, Biology, or Geology)		
Select one two-semester science sequence:		
PHYSCS 2750 University Physics I and PHYSCS 2760 University Physics II	10	PH 2103 & PH 2112 Gen Physics I (5) and PH 2203 & PH 2212 Gen Physics II (5)
PHYSCS 1210 College Physics I and PHYSCS 1220 College Physics II	8	PH 1703 & PH 1712 College Physics I (5) and PH 1803 & PH 1812 College Physics II Lec (5)
CHEM 1320 College Chemistry I and CHEM 1330 College Chemistry II	8	CH 1305 Gen Chemistry I Lec & Lab (5) and CH 1405 Gen Chemistry II Lec & Lab (5)
BIO SC 1010 General Princ & Concepts of Biology and BIO SC 1020 General Biology Laboratory AND BIO SC 1200 General Botany with Lab or BIOCHM 2110 The Living World: Molecular Scale or BIOCHM 2112 Biotechnology in Society or ANTHRO 2050 Intro to Biological Anthropology or ANTHRO 2051 & 2052 Intro to Biological Anthro or BIO SC 2100 Infectious Diseases or or BIO SC 2600 Ornithology or BIO SC 3050 Genetics and Society or BIOCHM 3630 General Biochemistry or BIO SC 3210 Plant Systematics	8-10	BI 1305 Gen Biology Lec & Lab (5) AND Other Biological Science at MU
GEOL 1100 Principles of Geology with Laboratory or GEOL 1200 Environmental Geology with Lab AND GEOL 2150 The Age of the Dinosaurs or GEOL 2200 Oceanography or GEOL 2300 Earth Systems and Global Change or GEOL 2350 Historical Geology or GEOL 2400 Surficial Earth Processes and Products or GEOL 3100 & 3115 Geology of Missouri	7-8	GL 1103 & 1112 Intro Phys Geol Lec (5) AND Other Geology Course at MU
Select other courses to complete 12 credits in science:		
ASTRON 1010 Intro to Astronomy	4	None
ASTRON 1020 Intro to Lab Astronomy	2	None
CHEM 1100 Atoms and Molecules with Lab	3	CH 1105 Intro Chemistry Lec & Lab (5)
CHEM 1330 General Chemistry III with Lab	3	CH 1405 Gen Chemistry II Lec & Lab (5)
Science sequence courses outside the selected sequence	3-5	Choose science sequence courses outside the selected sequence
BIO SC, BIOCHM, CHEM, GEOL, or PHYSCS courses beyond the levels listed above	3-5	Select sciences (biology, biochemistry, chemistry, geology) courses <i>beyond the levels listed above</i> from the general education list.
Non-Science Electives (9 credits)		
Courses in business, education, or additional humanities, social, or behavioral sciences beyond what is required in those categories. <u>Not</u> courses in CS, IT Engineering, Math, or Science.	9	Check the transfer equivalency web site for options.
Free Electives (4 credits) if needed to reach 126 hours NOTE: Additional free electives may be required if a course transfers with fewer credits than the MU equivalent.		
Total Hours for Bachelor of Science in Computer Science	126	

General Education Courses

East Central College

<u>East Central College Course</u>	<u>MU Equivalent</u>	<u>East Central College Course</u>	<u>MU Equivalent</u>
Behavioral Sciences		Social Sciences (continued) (◆= State Requirement)	
AN 1003 Intro to Cult Anthro (3)	ANTHRO 2030	◆PS 1203 US Govt I: Natl & St (3)	POL_SC 1100
AN 1103 Intro Phy Anth & Arch (3)	ANTHRO BEH	◆PS 1303 State and Local Government (3)	POL_SC 2100
PY 1103 Gen Psychology (3)	PSYCH 1000	PS 2103 Internat Relations (3)	POL_SC 1400
PY 2103 Pers & Social Adjust (3)	PSYCH BEH	SO 1203 Amer Social Prob (3)	SOCIOL 3010
PY 2203 Child Psychology (3)	PSYCH 2410		
PY 2213 Abnormal Psychology (3)	PSYCH 2510		
PY 2303 Social Psychology (3)	PSYCH 2310		
PY 2403 Human Development (3)	PSYCH BEH		
PY 2503 Adolescent Psych (3)	PSYCH BEH		
SO 1103 Gen Sociology (3)	SOCIOL 1000		
SO 2103 Human Relations (3)	SOCIOL 3310		
SO 2203 Marriage & Family (3)	SOCIOL 3420		
Humanities		Foreign Language	
AR 1203 Art Appreciation I (3)	ART_GNR1020	AB 1104 Elem Standard Arabic I (4)	ARABIC 1100A
AR 1703 Art History I (3)	AR_H_A 1110	AB 1204 Elem Standard Arabic II (4)	ARABIC 1100B
AR 1713 Art History II (3)	AR_H_A 1120	FR 1104 Elem French I (4)	FRENCH 1100
CT 1033 Intro to Mass Comm (3)	COMMUN 2100	FR 1204 Elem French II (4)	FRENCH 1200
CT 1103 Public Speaking (3)	COMMUN 1200	FR 2104 Interm French I (4)	FRENCH 2100
CT 1303 Theatre Appreciation (3)	THEATR 1100	GR 1003 Beg German I (3)	GERMAN 1100A
CT 1403 Beginning Acting (3)	THEATR 1400	GR 1103 Elem German I (3)	GERMAN 1100A
CV 2023 Islamic Civilization (3)	REL_ST 2700	GR 1104 Elem German I (4)	GERMAN 1100
CV 2603 Japanese Civil (3)	JAPNSE 2320	GR 1203 Elem German II (3)	GERMAN 1100B
EN 1413 World Lit I (3)	ENGLISH LIT	GR 1204 Elem German II (4)	GERMAN 1200
EN 1423 World Lit II (3)	ENGLISH LIT	GR 2113 Interm German I (3)	GERMAN 1100B
EN 1503 Poetry (3)	ENGLISH LIT	GR 2114 Interm German I (4)	GERMAN 2100
EN 1603 Fiction (3)	ENGLISH LIT	SP 1104 Elem Spanish I (4)	SPAN 1100
EN 1613 World Fiction (3)	ENGLISH LIT	SP 1204 Elem Spanish II (4)	SPAN 1200
EN 1703 Drama as Lit (3)	ENGLISH LIT	SP 2114 Interm Spanish I (4)	SPAN 2100
EN 1803 Art of the Novel (3)	ENGLISH LIT		
EN 1813 Fiction into Film (3)	ENGLISH 2870		
EN 1903 Classical Mythology (3)	CL_HUM 1060		
EN 2033 Lit for Children (3)	ENGLISH LIT		
EN 2103 Survey Brit Lit: Beg 1784 (3)	ENGLISH 2200		
EN 2113 Sur Brit Lit: Romntcsm-Pr (3)	ENGLISH 2200		
EN 2203 Sur Amer Lit: Colnl-1865 (3)	ENGLISH 2300		
EN 2213 Surv Amer Lit: 1865-Pres (3)	ENGLISH 2300		
EN 2223 Lit of Mystery (3)	ENGLISH 2150		
EN 2303 Latino/a Literature (3)	ENGLISH 2000		
EN 2323 Women's Literature	ENGLISH 2180		
EN 2403 Lit of Fantasy (3)	ENGLISH 2150		
EN 2503 Lit of Sci Fict (3)	ENGLISH 2150		
EN 2603 Introduction to Shakespeare (3)	ENGLISH 2160		
MU 1503 World Music (3)	MUSIC_N1313		
MU 1603 Music Appreciation (3)	MUSIC_N1310		
PR 1003 Intro Philosophy (3)	PHIL 1000		
PR 1203 Hist of Mod Phil (3)	PHIL 3200		
PR 1303 Living World Religions (3)	REL_ST 2110		
PR 2103 Cont Ethical Prob (3)	PHIL 1100		
PR 2403 Biblical Lit I: Old Test (3)	REL_ST HUM		
PR 2503 Bibl Lit II: Old Test (3)	REL_ST 2500		
PR 2603 Bibl Lit III: New Test (3)	REL_ST 2510		
Social Sciences (◆= State Requirement)		SCIENTES	
CV 1003 American Civilization (3)	HIST SSC	Biological Sciences (▲= Lab Course)	
CV 2103 European Civil I (3)	HIST 1500	BI 1203 Intro Life Science (3)	BIO_SC BIO
CV 2203 European Civil II (3)	HIST 1510	▲BI 1305 Gen Biology Lec & Lab (5)	BIO SC 1030
CV 2303 Latin Amer Civil (3)	HIST 1850	▲BI 1325 Prin of Biology I Lec & Lab (5)	BIO SC 1500A
CV 2613 East Asian Civ to 1800 (3)	HIST SSC	▲BI 1415 Prin of Biology II Lec & Lab (5)	BIO SC 1500B
CV 2623 East Asian Civ Since 1800 (3)	HIST 1830	▲BI 1804 Intro Hum Anat & Phys Lec & Lab (4)	BIO SC BIOL
EC 2103 Prin of Macroecon (3)	ECONOM 1015	▲BI 2005 Genetics Lec & Lab (5)	BIO SC 2200 & BIO SC 3780
EC 2203 Prin of Microecon (3)	ECONOM 1014	▲BI 2104 Hum Anat & Phys I Lec & Lab (4)	BIO SC BIOL
GE 1003 World Geography (3)	GEOG SSC	▲BI 2115 Hum Anat & Phys il Lec & Lab (5)	BIO SC BIOL
◆HI 1001 US & State Constitution Competency (1)	POL SC SSCST	▲BI 2404 Microbiology Lec & Lab (4)	BIO SC 3750
◆HI 1103 US Hist to 1865 (3)	HIST 1100	ES 1023 Intro to Environ Sci (3)	BIO_SC 1060
◆HI 1203 US Hist 1865-1945 (3)	HIST 1200	HS 1003 Nutrition	NUTR S 1034
HI 1303 US Hist 1945-Present (3)	HIST SSC		
HI 1403 MO & Miss Valley Hist (3)	HIST SSC		
HI 2802 Heritage Studies Lec (3)	HIST SSC		
HI 2903 World Since 1945 (3)	HIST SSC		
◆PS 1103 Intro Political Sci (3)	POL_SC 1700		
		Physical Sciences (▲= Lab Course, +=Math Reasoning Proficiency)	
		CH 1003 Fund of Chemistry (3)	CHEM PSC
		▲CH 1105 Intro Chemistry Lec & Lab (5)	CHEM 1100
		▲CH 1305 Gen Chemistry I Lec & Lab (5)	CHEM 1320
		▲CH 1405 Gen Chemistry II Lec & Lab (5)	CHEM 1330
		CH 2205 Org & Biochem Lec & Lab (5)	CHEM 2030 & 2130
		GL 1103 Intro Phys Geol Lec (3)	GEOL 1100A
		▲GL 1112 Intro Phys Geol Lab (2)	GEOL 1100B
		PH 1103 Intro Physics Lec (3)	PHYSICS PSC
		▲PH 1112 Intro Physics Lab (2)	PHYSICS PSCL
		PH 1113 Survey of Phys Sci (3)	MISC PSC
		▲PH 1122 Survey of Physical Science Lab (2)	MISC PSCL
		+=PH 1703 College Physics I Lec (MRP) (3)	PHYSICS 1210A
		▲PH 1712 College Physics I Lab (2)	PHYSICS 1210B
		+=PH 1803 College Physics II Lec (MRP) (3)	PHYSICS 1220A
		▲PH 1812 College Physics II Lab (2)	PHYSICS 1220B
		PH 2103 Gen Physics I Lec (3)	PHYSICS 2750A
		▲PH 2112 Gen Physics I Lab (2)	PHYSICS 2750B
		PH 2203 Gen Physics II Lec (3)	PHYSICS 2760A
		▲PH 2212 Gen Physics II Lab (2)	PHYSICS 2760B