University of Missouri
Bachelor of Science in Computer Science
Transfer Guide for Ozarks Technical Community 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		Ozarks Technical Community College
COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
English Exposition and Argumentation *(3 credits)*		
ENGLSH 1000 Exposition and Argumentation	3	ENG 102 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	COM 105 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. ☑ *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	MTH 140 Analy Geom/Calc I (5)
MATH 1700 Calculus II	5	MTH 141 Analy Geom/Calc II (5)
MATH 2300 Calculus III	3	MTH 240 Analy Geom/Calc III (3)
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	PHY 220 Physics for Engr & Sci I (5) and PHY 222 Physics for Engr & Sci II (5)
PHYSCS 1210 College Physics I and PHYSCS 1220 College Physics II	8	PHY 120 Gen Physics I (4) and PHY 130 Gen Physics II (4)
CHEM 1320 College Chemistry I and CHEM 1330 College Chemistry II	8	CHM 111 Gen Chemistry I (5) and CHM 112 Gen Chemistry II (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	BIO 100 Life Science (4)
		            AND
		Other Biology Course 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	PHY 110 Intro Geology (4) or
		            AND
		Other Geology Course at MU

Select other courses to complete 12 credits in science:		
ASTRON 1010 Intro to Astronomy	4	PHY 100 Intro to Astronomy (4)
ASTRON 1020 Intro to Lab Astronomy	2	None
CHEM 1100 Atoms and Molecules with Lab	3	CHM 101 Intro Chemistry (4)
CHEM 1330 General Chemistry III with Lab	3	CHM 112 Gen Chemistry II (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 *beyond the levels listed above* 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. Not 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
Ozarks Technical College

Ozarks Technical College Course	MU Equivalent
Behavioral Sciences	
ANT 101 Intro Anthropology (3)	ANTHRO 1000
ANT 220 Cultural Anthro (3)	ANTHRO 2030
COM 200 Interpersonal Comm (3)	COMMUN 3561
PSY 110 Intro Psychology (3)	PSYCH 1000
PSY 100 Psychology of Personal Adjustment (3)	PSYCH BEH
PSY 130 Life Span Dev Psych (3)	PSYCH BEH
PSY 260 Child Psych (3)	PSYCH 2410
PSY 265 Adolescent Psychology (3)	PSYCH BEH
PSY 275 Consumer Psych (3)	PSYCH BEH
PSY 280 Social Psych (3)	PSYCH 2310
PSY 285 Abnormal Psych (3)	PSYCH 2510
SOC 101 Intro to Sociology (3)	SOCIOL 1000
SOC 200 Cultural Diversity (3)	SOCIOL BEH
SOC 225 Soc of Family (3)	SOCIOL 3420
Humanities	
ART 101 Art History I (3)	AR_H_A 1110
ART 105 Art History II (3)	AR_H_A 1120
ART 110 Art & Experience (3)	ART_GNR1020
COM 105 Public Speaking (3)	COMMUN 1200
COM 150 Intro Mass Comm (3)	COMMUN 2100
ENG 180 Intro to Literature (3)	ENGLSH LIT
ENG 195 Sel Tops in Lit (1)	ENGLSH LIT
ENG 220 Amer Lit: Beg-1870 (3)	ENGLSH 2300
ENG 225 Amer Lit: 1870-Pres (3)	ENGLSH 2300
ENG 240 British Lit: Beg-1790 (3)	ENGLSH 2200
ENG 245 British Lit: 1790-Pres (3)	ENGLSH 2200
ENG 250 Children's Lit (3)	ENGLSH LIT
ENG 260 Surv World Lit I (3)	ENGLSH 2155
ENG 265 Surv World Lit II (3)	ENGLSH 2155
HUM 101 Intro Humanities (3)	MISC HUM
HUM 102 World Humanities (3)	MISC HUM
MUS 101 Music of the World (3)	MUSIC_N1313
MUS 105 Western Music (3)	MUSIC_N1310
MUS 110 Music Fund (3)	MUSIC_N1211
MUS 120 Music Theory I (2)	MUS_THR1220
MUS 121 Music Theory II (2)	MUS_THR1221
MUS 201 Latin Amer Music (3)	MUSIC_NHUM
PHL 101 Intro to Philosophy (3)	PHIL 1000
PHL 105 Intro Ethics (3)	PHIL 1100
PHL 110 Rel of the World (3)	REL_ST 2110
PHL 120 Intro New Testament (3)	REL_ST 2510
THR 101 Intro Theater (3)	THEATR 1100
THR 110 Acting Fund (3)	THEATR 1400
THR 115 Intro Script Analy (3)	THEATR 2800
Social Sciences (◆=State Requirement)	
ECO 270 Princ of Macroeconomics (3)	ECONOM 1015
ECO 275 Princ of Microeconmics (3)	ECONOM 1014
GRY 101 World Geog (3)	GEOG SSC
GRY 230 World Econ Geog (3)	GEOG 2710
HST 105 World in Hist I (3)	HIST SSC
HST 106 World Hist II (3)	HIST SSC
◆HST 120 US History I: to 1865 (3)	HIST 1100
◆HST 130 US History II: 1865 to the Present (3)	HIST 1200
◆HST 230 20th Cent Amer (3)	HIST 2210
◆PLS 101 Amer Gov & Politics (3)	POL_SC 1100
PLS 102 MO Gov/Const (1)	POL_SC SSC
PLS 103 Intro Amer Pub Policy (3)	POL_SC SSC
PLS 201 Internat Relations (3)	POL_SC 1400
PLS 250 Pol of the Environ (3)	POL_SC SSC
PLS 255 Environ Laws & Reg (3)	POL_SC SSC
SOC 210 Urban Sociology (3)	SOCIOL 3000

Ozarks Technical College Course	MU Equivalent
Foreign Language	
FRN 101 Beginning French I (3)	FRENCH 1100A
FRN 102 Beginning French II (3)	FRENCH 1100B
GRM 101 Beg German I (3)	GERMAN 1100A
GRM 102 Beg German II (3)	GERMAN 1100B
SPN 101 Beg Spanish I (3)	SPAN 1100A
SPN 102 Beg Spanish II (3)	SPAN 1100B
SPN 201 Interm Span I (3)	SPAN 1200
SPN 202 Interm Span II (3)	SPAN 2100

SCIENCES

Ozarks Technical College Course	MU Equivalent
Biological Sciences (▲=Lab Course)	
AGR 160 Animal Science (4)	AN_SCI 1011
▲BCS 120 Human Anat & Physio (6)	BIO_SC BIOL
BCS 132 Allied Health Nutrition (3)	NUTR S 1034
▲BCS 145 Anat & Physio I (4)	BIO_SC BIOL
▲BCS 146 Anat & Physio II (4)	BIO_SC BIOL
▲BCS 165 Human Anatomy (4)	BIO_SC BIOL
▲BCS 200 Microbiology (4)	BIO_SC BIOL
▲BIO 100 Life Science (4)	BIO_SC 1030
▲BIO 105 Environ Science (4)	BIO_SC 1060
BIO 142 Essential Biol (3)	BIO_SC 1010
▲BIO 160 Gen Biology I (4)	BIO_SC 1500A
▲BIO 170 Gen Biology II (4)	BIO_SC 1500B
▲BCS 205 Human Physiology (4)	BIO_SC BIOL
BIO 250 Genetics (4)	BIO_SC 2200
▲BIO 292 Gen Microbiology (5)	BIO_SC BIOL
TLM 114 Envirn Stewardship (2)	NAT_R 1070
TLM 235 Soils (3)	PLNT_S 2100
Physical Sciences (▲=Lab Course, ✚=Math Reasoning Proficiency)	
▲CHM 101 Intro Chemistry (4)	CHEM 1100
▲CHM 111 Gen Chemistry I (5)	CHEM 1320
▲CHM 112 Gen Chemistry II (5)	CHEM 1330
▲CHM 200 Surv of Organic Chem (5)	CHEM 2030 & 2130
▲CHM 225 Environ Chem (3)	CHEM PSCL
▲PHY 100 Intro to Astronomy (4)	ASTRON 1010
▲PHY 101 survey of the Physical Sciences (4)	MISC PSCL
PHY 105 Intro to Physics (4)	PHYSCS 1150
▲PHY 110 Intro Geology (4)	GEOL 1100
✚▲PHY 120 Gen Physics I (MRP) (4)	PHYSCS 1210
✚▲PHY 130 Gen Physics II (MRP) (4)	PHYSCS 1220
▲PHY 140 Tech Physics (4)	MISC PSCL
▲PHY 220 Physics for Engr & Sci I (5)	PHYSCS 2750
▲PHY 222 Physics for Engr & Sci II (5)	PHYSCS 2760