

University of San Diego Shiley-Marcos School of Engineering
Int Engr - BioMed Concentration Degree Checklist (2021/22 catalog)

Complete	Core Curriculum	Course that Satisfies Requirement	Units
	First Year Writing (CFYW)	FYW 150	3
	Mathematical Reasoning (CMRP)	MATH 150	
	Second Language Competency		3 to 9
	Lower-Division Theological and Religious Inquiry (FTRI)		3
	Upper-Division Theological and Religious Inquiry (FTRI)		3
	Philosophical Inquiry (FPHI)		3
	Ethical Inquiry (FETI)	PHIL 342	3
	Scientific and Technological Inquiry (ESTI)	ENGR 101	
	Historical Inquiry (EHSI)		3
	Social and Behavioral Inquiry (ESBI)		3
	Literary Inquiry (ELTI)		3
	Artistic Inquiry (EARI)		3
	Diversity, Inclusion, Social Justice (FDD1)	ENGR 103	
	Diversity, Inclusion, Social Justice (FDD2 or FDG2)	GENG 350	
	Advanced Writing (CADW)	GENG 350	
	Oral Communication (CORL)	COMM 203	3
	Quantitative Reasoning (CQUR)	ISYE 330	
	First Year Integration (CINL)	LLC course	
	Advanced Integration (CINT)	GENG 492	
Complete	Math/Science Courses	Prerequisites/(Corequisites)	
	CHEM 151/151L - General Chemistry		4
	Additional Math or Science (based on concentration)		3
	MATH 150 - Calculus I		4
	MATH 151 - Calculus II	MATH 150 (C- or better)	4
	MATH 310 - Applied Math for Science and Engineering I	MATH 151 (C- or better)	3
	MATH 250 - Calculus III	MATH 151 (C- or better)	3
	ISYE 330 - Engineering Probability & Statistics	MATH 151	3
	PHYS 270/270L – Mechanics +lab	MATH 150	4
	PHYS 271/271L – Electricity & Magnetism +lab	PHYS 270 (C- or better), MATH 151	4
Complete	Engineering Core Courses	Prerequisites/(Corequisites)	32
	ENGR 101 - Introduction to Engineering	MATH 115 or (MATH 150)	3
	ENGR 102 – Electromechanical System Design	ENGR 101, ENGR 121, MATH 150	3
	ENGR 103 – User-Centered Design	ENGR 101, MATH 150	3
	COMP 110– Computational Problem Solving	(MATH 150)	3.5
Complete	GENG Required Courses	Prerequisites/(Corequisites)	12.5
	GENG 250: Integrated Approach to Energy	PHYS 271, PHYS 271L, ENGR 102, ENGR 103, (MATH 310)	3
	GENG 311 - Engineering Materials Science	CHEM 151&L, MATH 151, PHYS 271&L (all with C- or better)	3
	GENG 288: Integrated Approach to Electrical Engineering	PHYS 271, MATH 310	4
	GENG 380 - Sustainability and Engineering		3
	MENG 210 - Statics	PHYS 270, MATH 150	3
	Engineering Elective (lower or upper division)		3
	Engineering Elective (upper division)		3
	GENG 350 - Engineering and Social Justice	ENGR 103, (GENG 250 or GENG 288 or MENG 311 C- or better)	3
	GENG 360 - Experimental Engineering	ENGR 102, GENG 288 or ELEC 201, MENG 210, GENG 250 or MENG 260, GE	3
	GENG 491 - Engineering Senior Design I	GENG 350&360	4
	GENG 492 - Engineering Senior Design II	GENG 491	3
Complete	Biomedical Engineering Concentration		35
	GENG 330 - Biomaterials Design	ENGR 311 or MENG 311 or GENG 311	3
	GENG 331: Quantitative Human Physiology	COMP 110/NGR 121/COMP 150, MATH 310	3
	GENG 430: Bioinformatics	COMP 110/COMP 121/ENGR 121, ISYE 330, GENG 331	3
	GENG 431: Biomechanics	MENG 210 , (MENG 370 or GENG 331)	3
	GENG 432: Medical Devices	ENGR 103, (GENG 332 or MENG 370)	3
	Approved BME electives		9
			24
		Total GENG units	147

Approved BME electives: