Healthcare Engineering and Management (HEM) Course Map (2018/2019)

Freshman

GENN001	MTHN001	MDPN001	MTHN002	PHYN001	GENN003	MECN001
History of Science & Engineering	Linear Algebra & Analytic Geom	Engineering Graphics	Calculus I	Mech, Waves & Thermodyn	Basic Eng. Design	Mechanics-1 (Statics)
1 1	5 3	6 3	5 3	5 3	2 2	4 2
GENN005	**GENN004**	**MTHN003**	**MDPN002**	**CHEN001**	**PHYN002**	**MECN002**
Technical Writing	Computers for Engineers	Calculus II	Fund of Manuf Engineering	Chemistry	Electricity & Magnetism	Mechanics-2 (Dynamics)
2 2	3 2	5 3	5 3	5 3	5 3	4 2

Sophomore

GENN102	MTHN102	CMPN103	ELCN103	HEMN130	HEMN113	HEMN115
Fundamentals of Management	Multivar Calculus & Linear Algebra	Programming Techniques	Circuit Analysis	Basics of Computer Arch.	Anatomy & Physiology for Eng	Intro to BME
2 2	5 3	5 3	5 3	5 3	2 2	3 2
GENN201	**MTHN103**	**CMPN102**	**HEMN121**	**ELCN123**	**HEMN123**	**HEMN125**
Comm & Presentation Skills	Differential Equations	Data Structures & Algorithms	Biosignals & Systems	Basic Electronics	Medical Physics	Req Eng for Digital Health
2 2	5 3	5 3	4 3	5 3	4 3	3 2

Junior

GENN210	MTHN203	HEMN280	HEMN230	HEMN213	HEMN216	HEMN215
Risk Management & Environment	Probability & Statistics	Seminar I	Database Systems	Biomedical Transducers	Analytical & Lab Instruments	Entrepreneurship
2 2	5 3	1 1	5 3	5 3	5 3	4 2
GENN224	**HEMN281**	**CMPN203**	**HEMN223**	**HEMN226**	**HEMN224**	**HEMN227**
Fundamentals of Economics & Accounting	Industrial Training I	Software Engineering	Measurments	Monitors & Life Support	Graphics & Visualization	Clinical Eng.
2 2	0 1	5 3	5 3	5 3	5 3	2 2

Senior I

GENN303	BHEN311	HEMN314	HEMN316	HEMN312	HEMN315
Critical Thinking	Digital Medical Signal Processing	Distributed App Development	Medical Device technologies	Embedded Sys in Medical Equipment	Quantitative Managment
2 2	5 3	5 3	5 3	5 3	5 3
BHEN381	**HEMN328**	**HEMN323**	**HEMN324**	**HEMN325**	**HEMN3xx**
Industrial Training II	Medical Device Standards	HCIS	Image Processing & Computer Vision	Modelling & Simulation	Major Elective
6 2	4 3	5 3	5 3	5 3	5 3

Senior II

GENN326	BHEN480	BHEN416	BHEN417	HEMN419	BHEN4xx	HEMN4xx
Marketing	Graduation Project I	Medical Imaging Equipment	HC Facilities Plan & Design	Operations Research in HC	Major Elective	Major Elective
2 2	3 1	5 3	5 3	5 3	5 3	5 3
GENN3xx	**GENN3xx**	**BHEN481**	**HEMN428**	**HEMN429**	**HEMN4xx**	**HEMN4xx**
Univ Gen Elective	Univ Gen Elective	Graduation Project II	Medical QA & Accreditations	Biomedical Data Analytics	Major Elective	Major Elective
2 2	2 2	7 3	4 2	5 3	5 3	5 3

University Requirements

School Requirements

Code
Course Name
M N

Discipline Requirements

Major Requirements

M: Contact Hours N: Credit Hours