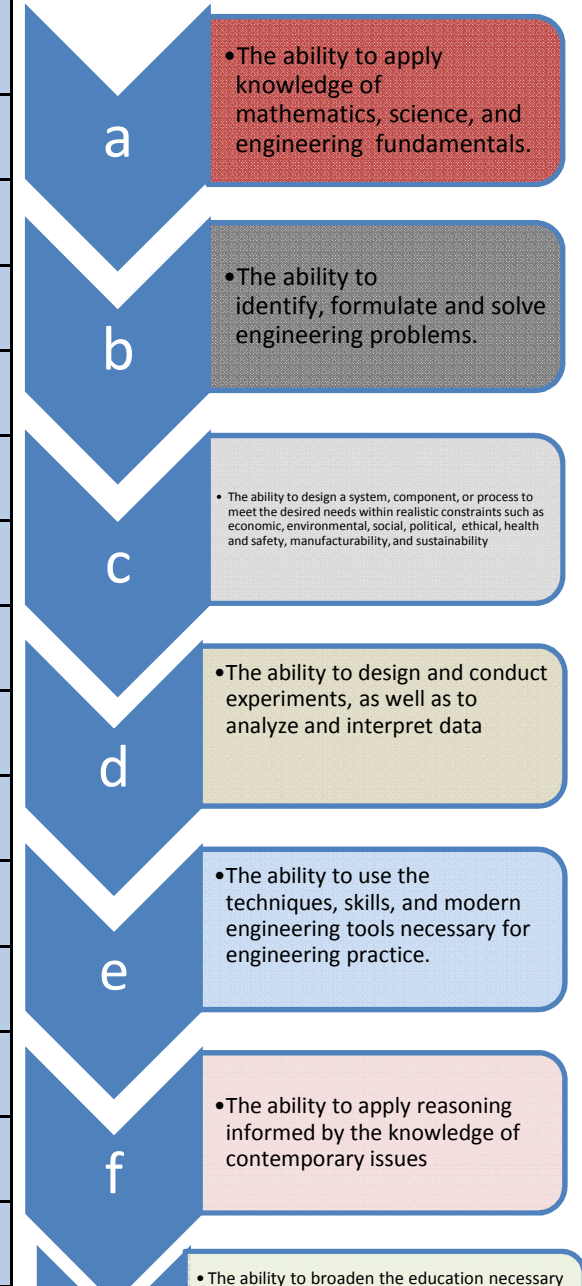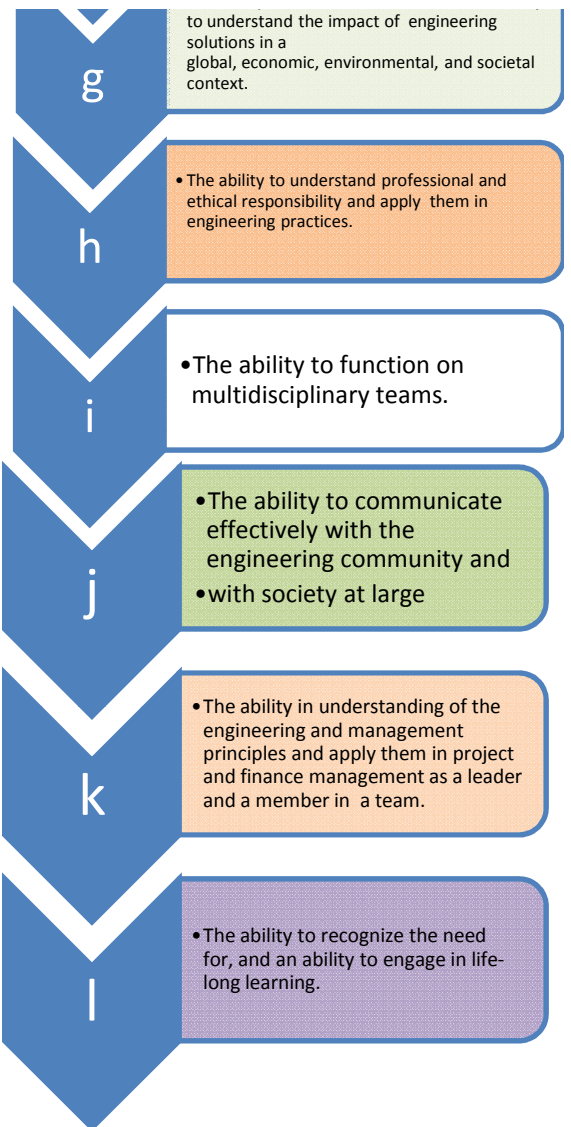# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
B.Tech MECHANICAL ENGINEERING
CURRICULUM VS PO MAPPING

Sl. No	Semester	Subject Code	Subject Name	a	b	c	d	e	f	g	h	i	j	k	l
1	I	BEN101	English-I	X		X	X	X				X	X		X
2		BMA101	Mathematics –I	X	X			X		X					
3		BPH 101	Engineering Physics – I	X		X							X		X
4		BCH101	Engineering Chemistry – I	X		X	X			X					
5		BCS101	Fundamentals of Computing and	X		X	X			X					
6		BSS101	Personality Development		X	X					X	X	X	X	
7		BBT 102	Biology for Engineers	X	X	X			X			X	X		
8		BCE101	Basic Civil Engineering	X	X			X	X	X			X		
9		BME101	Engineering Graphics-E	X	X						X	X	X		
10		BCM1L1	Basic Civil and Mechanical	X	X	X	X							X	
11		BPC1L1	Physics and Chemistry Laboratory		X								X	X	
12		BSSIL4	NCC							X					
13		BSSIL5	NSS							X					
14		BSSIL6	NSO							X					

a — The ability to apply knowledge of mathematics, science, and engineering fundamentals.

b — The ability to identify, formulate and solve engineering problems.

c — The ability to design a system, component, or process to meet the desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

d — The ability to design and conduct experiments, as well as to analyze and interpret data

e — The ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

f — The ability to apply reasoning informed by the knowledge of contemporary issues

The ability to broaden the education necessary

#	Sem	Code	Course	a	b	c	d	e	f	g	h	i	j	k	l
15	II	BEN 201	English-II			X					X		X		
16		BMA201	Mathematics- II	X	X				X						
17		BPH 201	Engineering Physics – II	X		X	X								
18		BCH201	Engineering Chemistry – II	X	X			X		X		X			
19		BFR201	French	X		X					X	X			
20		BGM201	German	X		X					X	X			
21		BJP201	Japanese	X		X					X	X			
22		BKR201	Korean	X		X					X	X			
23		BCN201	Chinese	X		X					X	X			
24		BTM201	Tamil	X		X					X	X			
25		BME202	Engineering Mechanics	X	X		X		X	X			X	X	
26		BEE201	Basic Electrical and Electronics Engineering		X							X			
27		BCS2L2	Computer Practices Lab	X	X		X		X	X			X	X	X
28		BEE2L1	Electronics Engineering Practices		X									X	
29		BPC2L1	Physics and Chemistry Laboratory		X								X	X	
30		BSS2L7	Yoga								X				
31	III	BMA301	Mathematics III	X	X				X						

g. to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

h. • The ability to understand professional and ethical responsibility and apply them in engineering practices.

i. • The ability to function on multidisciplinary teams.

j. • The ability to communicate effectively with the engineering community and
• with society at large

k. • The ability in understanding of the engineering and management principles and apply them in project and finance management as a leader and a member in a team.

l. • The ability to recognize the need for, and an ability to engage in life-long learning.

No	Sem	Code	Course												
32		BME301	Kinematics of Machines	X	X	X			X			X			
33		BME302	Thermodynamics	X	X	X			X			X			
34		BME303	Mechanics of Solids	X	X									X	X
35		BME304	Fluid Mechanics and Machinery	X	X									X	X
36		BME305	Manufacturing Technology –I	X		X									X
37		BME3L1	Machine Drawing	X		X									
38		BCE3L3	Fluid Mechanics, Machinery and	X		X									X
39	IV	BMA401	Numerical Methods	X		X									X
40		BME401	Dynamics of Machines	X		X									X
41		BME402	Thermal Engineering I	X		X									X
42		BME403	Industrial Metallurgy	X	X									X	X
43		BME404	Engineering Metrology and		X		X		X			X		X	
44		BCE406	Environmental Studies				X								
45		BME4L1	Metrology and Metallurgy Lab	X				X						X	
46		BME4L2	Manufacturing Technology Lab-I	X				X						X	
47		BME4L3	Technical Seminar-I	X				X			X	X			
48	V	BME501	Machine Design I												

#	Sem	Code	Course Name	1	2	3	4	5	6	7	8	9	10	11	12
49		BME502	Thermal Engineering II	X				X		X					
50		BME503	Fluid Power Systems	X	X									X	X
51		BME504	Automobile Engineering	X	X									X	X
52		BME505	Manufacturing Technology –II	X		X									X
53		BME5L1	Thermal Engineering Lab	X	X							X			
54		BME5L2	Manufacturing Technology Lab-II	X	X							X			
		BME5L3	Instrumentation and Dynamics lab	X	X							X			
55		BME5C	Comprehension I												
56	VI	BME601	Machine Design II	X	X									X	X
57		BME602	Finite element analysis	X											
58		BME603	Heat and Mass Transfer	X											
59		BME604	CAD/CAM	X	X	X	X		X						
60		BSS601	Value Education and Professional Ethics			X		X		X					
61		BME6L1	Heat Transfer Lab	X		X	X	X							
62		BME6L2	CAD/CAM Lab	X		X	X	X							
63		BME6L3	Technical Seminar -II	X		X	X	X		X					X
64	VII	BME701	Industrial Engineering			X	X			X		X			X

No	Category	Code	Course	1	2	3	4	5	6	7	8	9	10	11	12
65		BME702	Operations Research for Engineers	X	X					X	X				X
66		BMT7L1	Fluid Power Automation Lab &	X		X	X	X							
67		BME7L1	Computer Aided Analysis and	X		X	X	X							
	VIII	BME8C	Comprehension II	X		X	X	X		X					X
68		BME8P1	Project work	X		X	X	X		X		X			X
69	CORE ELECTIVE I	BME001	Advanced Internal Combustion Engines			X	X			X	X				X
70		BME002	Special Casting Process			X	X			X	X	X			X
71		BME003	Mechanical Vibrations	X		X	X			X	X	X			X
72		BME004	Plant layout and Material Handling	X		X									
73	CORE ELECTIVE II	BME005	Design of Heat Exchangers	X		X						X			
74		BME006	Combustion Engineering	X		X									
75		BME 007	Composite materials and Technology	X		X	X	X		X					X
76		BME008	Mechanics of Fracture	X		X	X								
77	CORE ELECTIVE III	BME009	Design for Manufacturing	X	X									X	X
78		BME010	Advanced Turbo Machines	X	X									X	X
79		BME 011	Process planning and cost Estimation	X			X			X		X		X	X
80		BME012	Jigs, Fixtures and Press tools	X		X						X			X

81	NON MAJOR ELECTIVE I	BGE001	Vibration Control and Condition Monitoring	X		X						X			X
82		BGE002	Wind and Solar Energy	X		X						X			
83		BGE003	New and Renewable Sources of Energy							X			X	X	X
84		BGE 004	Electronics for Mechanical systems	X	X	X					X				X
85	NON MAJOR ELECTIVE II	BGE005	Industrial Robotics			X		X							X
86		BGE006	Power Plant Engineering	X		X						X			
87		BGE007	Gas Dynamics and Space Propulsion	X		X			X			X			
88		BBA008	Total Quality Management					X			X				
89	NON MAJOR ELECTIVE III	BGE009	Nuclear Engineering			X		X							X
90		BGE010	Rapid prototyping	X		X						X			X
91		BGE011	Computational Fluid Dynamics			X		X							X
92		BGE012	MEMS & Nanotechnology			X		X							X
93	OPEN ELECTIVE I	BBA001	Principles of Management and			X	X			X		X			X
94		BBA002	Entrepreneurship Development							X			X		X
95		BBA003	Marketing Management							X			X		X
96	OPEN ELECTIVE II	BBA004	Engineering Economics and							X			X		X
97		BBA005	Energy Engineering and Management			X		X	X						

No	Code	Subject	1	2	3	4	5	6	7	8	9	10	11	12
98	BBA006	Indian Constitution and Society			x		x	x						
99	BBA007	Engineering Economics and Cost	x	x		x			x				x	
			71	33	56	26	23	13	22	21	34	16	21	39	375