## **B.Tech in Biomedical Engineering**

## **Proposed draft Curriculum**

	Course code	Course name	Category	Credits	Prereq		Course code	Course name	Category	Credits	Prere
	CY1018 EP1108	Environmental Chemistry  Modern Physics	BS BS	2	None None		BM1030	Physio-anatomy-I Bioengineering <sup>es</sup>	BS Core	2	Non Non
	ID1063 ID <em></em>	Introduction to Programming Engineering Mechanics	BE BE	3	None None		BO1010 EP1208	Life Science Electricity & magnetism	BS BS	2	Non Non
Sem-1	LAxxxx	English Communication Personality Development	SS SS	2	None None	Sem-2	ID1054 IDxxxx	Digital fabrication Entrepreneurship	BE SS	2	Non Non
	MA1110 MA1220	Calculus - I Calculus - II	BS BS	1 1	None None		IDxxxx ID <ee></ee>	Artificial intelligence Basic Electrical Engineering	BE BE	3	Non Non
								Elementary Linear algebra Differential equations	BS BS	1	Non Non
								Electives	Sem	1	
			Sem Total	15					Total	17	
	Course	Course name	Category	Credits	Prereq		Course	Course name	Category	Credits	Prere
	BM1010	Physio-anatomy-II	Core	2	BM1000		BM2000	Control systems	Core	1	Non
	BM2013 BM2043	Analog and integrated circuits  Algorithms and data structures lab	Core	2	ID <ee></ee>			Introduction to embedded systems  Basic Bioinformatics	Core Core	2	BM201 BM1000 BM101
Sem-3	BM2053	Mathematical models & systems biologyes	Core		BM1000; BM1010	Sem-4		Medical nanotech-I	Core	2	BM1000 BM101
	ID2230 MA2110	Data structures and applications Introduction to Probability	BE BS	3	None None		BM3090	Biomedical imaging Introduction to Statistics	Core BS	3	Non
	WAZIIO	Electives	83	3	None		WIAZI40	Electives		3	Non
									Sem		
			Sem Total	16					Total	15	
	Course						Course				
Sem-5	code	Course name	Category	Credits	Prereq BM2033;		code	Course name	Category	Credits	Prere
	BM3000	Natural intelligence, Foundations of	Core	3	BM1000; BM1010			Internship / Electives		6	require CGF
	BM3023	Cell Technology	Core	3	BM1000; BM1010			Electives		9	
	BM3040	Introduction to Biomechanics Sensors & transducers in	Core	2	BM1000; BM1010 BM2013;	Sem-6					
	BM5013	healthcare	Core	2	BM2003 BM1000;						
	BM5090	Biomaterials-1 Linear Systems and Signal	Core	2	BM1010						
	ID <sp></sp>	Processing Electives	BE	3 2	None						
			Sem Total	17					Sem Total	15	
	Course	Course name	Category	Credits	Prereq		Course	Course name	Category	Credits	Prere
	BM5023	Biomedical devices	Core	2	BM5013		BM4000	Regulatory processes and bioethics	Core	2	BM502
iem-7		Electives		15		Sem-8	BM4015	Capstone Project	Core	3	Electiv bask
							BM6246	Clinical immersion & Biodesign	Core	2	BM103 BM502
								Electives	Sem	9	
			Sem Total	17					Total	16	
	Summary	of Credits						Total (All Sems)		128	
		Core credits BE credits	43 18					LA / CA electives Free Electives	8 10		
		BS credits SS credits	15 4					Dept. Electives  Total	30 128		
	<course< td=""><td>Name&gt;es</td><td>Offered to I</td><td>Engineerir</td><td>ng Science</td><td></td><td></td><td></td><td></td><td></td><td></td></course<>	Name>es	Offered to I	Engineerir	ng Science						
		ctive baskets					* C				
	of which o	30* departmental electives must be at least 22 credits must come from a ining credits may be chosen from ot	single baske	?t.			to choose	ts opting for internship during 6th Se e 24 electives of which 22 credits mu ngle basket			
maging	& sensing					Biomaterials a					
88	Course code	Course name	Category	Credits	Prereq		Course code	Course name	Category	Credits	Prere
	AI4000	Robotics	IM	3			BM3011	Medical biochemistry lab	MAT-NM	2	BM1000 BM101
	BM2033	Probability and Random Processes  Medical image processing &	IM	2	MA2110	-		Biomaterials Lab	MAT-NM	2	BM509
	BM4080 BM4020	analysis Biophotonics	IM IM	3	ID <sp> BM3090</sp>		BM4011	Medical nanotech-II Biomicrofab lab	MAT-NM MAT-NM	2	BM303 BM419
	BM4021 BM5170	Medical image processing lab Ultrasound in medicine	IM IM	3	BM4080 BM3090			Biofabrication Biomaterials-2	MAT-NM MAT-NM	2	BM509
	BM4091	Diagnostic Imaging Lab	IM	3	ID <sp>ID<em>;</em></sp>	-		Tissue engg & Regenerative med	MAT-NM	3	BM50
	BM6070 CS3390	Biomicrofluidics  Machine learning, Foundations of	IM IM	3	BM3040			Molecular Basis of Diseases  Mechanical behavior of materials	MAT-NM MAT-NM	3	
							MSxxxx	Soft Materials Proc, Struct, Char & Props	MAT-NM	3	
		Elective bucket total		24				Elective bucket total		24	
echanic	cs				ı	Natural Intelli	gence - Ar	tificial Intelligence			
	Course code	Course name	Category	Credits	Prereq		Course code	Course name	Category	Credits	Prer
	BM3001	Biomechanics Lab Mechano-biology	MEC MEC	2	BM3040		Al2010	Reinformcement learning	NI	2	BM203 CS33
	BM4051	Computational Biomechanics Lab	MEC	2	BM3040					2	
	BM4060 BM5141	Movement science Biomaterials-2	MEC MEC	2	BM3000		BIVIZU33	Probability and Random Processes	NI NI	3 2	MA21
	BM5160	Diomateriais-2	IVILC			_	BM4025	Natural intelligence, Implementations of	NI NI	2	BM30
		Mechanics of bio-fluids	MEC	2	BM5090 BM3040		BM4025 BM4060	Natural intelligence,	NI	2	BM30 BM30 BM40
	BM6070	Mechanics of bio-fluids Biomicrofluidics	MEC MEC		BM5090 BM3040 ID <em>; BM3040</em>		BM4025 BM4060 BM4061	Natural intelligence, Implementations of Movement science	NI NI NI	2 2 2	BM300 BM300 BM400
	BM6070 BM6080 ME3100			2	BM5090 BM3040 ID <em>;</em>		BM4025 BM4060 BM4061 BM4070 BM4071	Natural intelligence, Implementations of Movement science Movement sciences lab	NI NI NI NI	2 2 2	BM300 BM400 ID <sp BM300 BM400</sp 
	BM6080 ME3100	Biomicrofluidics  Advanced Biomechanics	MEC MEC	3 2	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081	Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology & BCI theory Neurotechnology & BCI lab	NI NI NI NI	2 2 2 2 2	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
	BM6080 ME3100	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081	Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology & BCI theory Neurotechnology & BCI lab Computational neuroscience lab Theoretical & computational	NI	2 2 2 2 2 2 2	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
	BM6080 ME3100	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of	NI	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
	BM6080 ME3100	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
ther de	BM6080 ME3100	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of	NI	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
ther de	BM6080 ME3100 MS2050	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
	BM6080 ME3100 MS2050	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total	MEC MEC MEC  MEC  Credits	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	LA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 CS3390  Course Number	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
	BM6080 ME3100 MS2050  epartment Course Number	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  courses  Course Name	MEC MEC MEC	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	LA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 CS3390  Course Number LAxxxx LAxxxx	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development	NI NI NI NI NI NI NI Credits 2 1	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM614</sp 
вт	BM6080 ME3100 MS2050 MS2050  epartment Course Number BO1010 BO6070	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming	MEC MEC MEC  MEC  Credits  1  3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	LA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081  BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I	NI NI NI NI NI NI NI  NI  TI  TI  TI  TI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM614</sp 
т	BM6080 ME3100 MS2050 MS2050  Epartment Course Number BO1010 BO6070 ID1063 ID2230 Al2010	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning	MEC MEC MEC  MEC  Credits  1 3 3 3 2	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081  BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra	NI NI NI NI NI NI NI  NI 1 1 1	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM614</sp 
вт	BM6080 ME3100 MS2050 MS2050  Epartment Course Number BO1010 BO6070  ID1063 ID2230	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications	MEC MEC MEC  MEC  Credits  1 3 3 3 3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2110	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
ST CS	BM6080 ME3100 MS2050 MS2050  Epartment Course Number BO1010 BO6070 ID1063 ID2230 Al2010	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning	MEC MEC MEC  MEC  Credits  1 3 3 3 2	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2110	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
ES EY	BM6080 ME3100 MS2050  MS2050  Epartment  Course Number BO1010 BO6070  ID1063 ID2230 AI2010 CS3390	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total   Courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of	MEC MEC MEC  MEC  Credits  1 3 3 3 3 2 3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>		BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2140 MA2140	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
ES EY	BM6080 ME3100 MS2050  MS2050  Epartment  Course Number B01010 B06070  ID1063 ID2230 AI2010 CS3390  CY1018	Biomicrofluidics  Advanced Biomechanics Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming Data structures and applications Reinformcement learning Machine learning, Foundations of  Environmental Chemistry	MEC MEC MEC MEC  Credits  1 3 3 3 2 3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2110 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total   Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability  Introduction to Statistics  Engineering Mechanics  Digital fabrication	NI	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
ES EY	BM6080 ME3100 MS2050 MS2050  Epartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390  CY1018 ID <ee></ee>	Biomicrofluidics  Advanced Biomechanics Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Courses  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming Data structures and applications Reinformcement learning Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering Linear Systems and Signal	MEC MEC MEC MEC  Credits  1 3 3 2 3 2 3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
ES E	BM6080 ME3100 MS2050  MS2050  Epartment  Course Number B01010 B06070  ID1063 ID2230 Al2010 CS3390  CY1018  ID <ee> ID<sp> ID<sp></sp></sp></ee>	Advanced Biomechanics Modelling and simulation Mechanical behavior of materials  Elective bucket total  Course Name Life Science Molecular Basis of Diseases  Introduction to Programming Data structures and applications Reinformcement learning Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering Linear Systems and Signal Processing	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  2	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2110 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of  Elective bucket total  Course Name  English Communication Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication  Robotics  Modelling and simulation	NI	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM610</sp 
SS CY	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char &	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  3  3  3  3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx IDxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability  Introduction to Statistics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
ES E	BM6080 ME3100 MS2050  MS2050  Epartment  Course Number B01010 B06070  ID1063 ID2230 Al2010 CS3390  CY1018  ID <ee> ID<sp> ID<sp></sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  2	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx IDxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of  Elective bucket total  Course Name  English Communication Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication  Robotics  Modelling and simulation	NI	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sp BM30 BM40 BM61</sp 
S Y	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char &	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  3  3  3  3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability  Introduction to Statistics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sr BM30 BM40 BM61</sr 
ES E	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char &	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  3  3  3  3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability  Introduction to Statistics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sr BM30 BM40 BM61</sr 
ES E	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char &	MEC  MEC  MEC  MEC  MEC  Credits  1  3  3  2  3  3  3  3  3  3	2 3 2 3	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA1150 MA2140 MA2140 ID<	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab  Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations  Introduction to Probability  Introduction to Statistics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sr BM30 BM40 BM61</sr 
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ES E	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char & Props  Course type  Course type  Core credits	MEC  MEC  MEC  MEC  MEC  Credits  1 3 3 3 2 3 3 2 3 3 7 Credits 43	2 3 3 24	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA  ME  PH  Course Dept.	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2110 MA2140 ID <bernation ep1208="" fp1208="" fp1208<="" id<bernation="" ma2110="" ma2140="" me3100="" td=""><td>Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology &amp; BCI theory  Neurotechnology &amp; BCI lab  Computational neuroscience lab Theoretical &amp; computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics  Electricity &amp; magnetism  Reference percentage  55-60%  11-12%  11-12%</td><td>NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1</td><td>2 2 2 2 2 2 2 2 3</td><td>BM30 BM40 ID<sr BM30 BM40 BM61</sr </td></bernation>	Natural intelligence, Implementations of Movement science Movement sciences lab  Neurotechnology & BCI theory  Neurotechnology & BCI lab  Computational neuroscience lab Theoretical & computational neuroscience  Machine learning, Foundations of  Elective bucket total  Course Name  English Communication  Personality Development  Entrepreneurship  Calculus - I  Calculus - II  Elementary Linear algebra  Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication  Robotics  Modelling and simulation  Modern Physics  Electricity & magnetism  Reference percentage  55-60%  11-12%  11-12%	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM30 BM40 ID <sr BM30 BM40 BM61</sr 
ES E	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char & Props  Course type  Course type  Course type  Core credits  BE credits  BS credits  SS credits  SS credits  total mandatory	MEC  MEC  MEC  MEC  MEC  Credits  1 3 3 3 2 3 3 2 3 3 4 8 15 4 80	2 3 3 2 3 24	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA  ME  ME  Course Dept. Bas Engg Bas Sci Soft Skill LA/CA	BM4025 BM4060 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2140 MA2140 ID <bma2140 bma2140="" i<="" id="" id<bma2140="" td=""><td>Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology &amp; BCI theory Neurotechnology &amp; BCI lab Computational neuroscience lab Theoretical &amp; computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity &amp; magnetism  Reference percentage 55-60% 11-12% 47-8%</td><td>NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1</td><td>2 2 2 2 2 2 2 2 3</td><td>BM300 BM400 ID<sp BM300 BM400 BM614</sp </td></bma2140>	Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology & BCI theory Neurotechnology & BCI lab Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity & magnetism  Reference percentage 55-60% 11-12% 47-8%	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM300 BM400 ID <sp BM300 BM400 BM614</sp 
CS CY	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char & Props  Mechanical behavior of materials  Soft Materials Proc, Struct, Char & Props  Course type  Core credits  BE credits  BS credits  SS credits  Free Electives  Free Electives	MEC  MEC  MEC  MEC  MEC  Credits  1 3 3 3 2 3 3 2 3 3 4 80 8 10	2 3 3 2 3 24	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA  ME  ME  Course Dept. Bas Engg Bas Sci Soft Skill	BM4025 BM4060 BM4061 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2110 MA2140 ID <back 11.72%="" 14.06%="" 3.13%<="" 57.03%="" age="" ai4000="" id1054="" idcompace="" me3100="" percent="" td=""><td>Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology &amp; BCI theory Neurotechnology &amp; BCI lab Computational neuroscience lab Theoretical &amp; computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity &amp; magnetism  Reference percentage 55-60% 11-12% 11-12% 47-8% 7-8%</td><td>NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1</td><td>2 2 2 2 2 2 2 2 3</td><td>BM300 BM400 BM400 BM400 BM400</td></back>	Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology & BCI theory Neurotechnology & BCI lab Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity & magnetism  Reference percentage 55-60% 11-12% 11-12% 47-8% 7-8%	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM300 BM400 BM400 BM400 BM400
Dther de	BM6080 ME3100 MS2050 MS2050  Pepartment Course Number BO1010 BO6070 ID1063 ID2230 AI2010 CS3390 CY1018 ID <ee> ID<sp> ID<sp> MS2050</sp></sp></ee>	Biomicrofluidics  Advanced Biomechanics  Modelling and simulation  Mechanical behavior of materials  Elective bucket total  Course Name  Life Science  Molecular Basis of Diseases  Introduction to Programming  Data structures and applications  Reinformcement learning  Machine learning, Foundations of  Environmental Chemistry  Basic Electrical Engineering  Linear Systems and Signal  Processing  Mechanical behavior of materials  Soft Materials Proc, Struct, Char & Props  Course type  Core credits  BE credits  BS credits  SS credits  total mandatory  LA / CA electives	MEC  MEC  MEC  MEC  MEC  MEC  Credits  1 3 3 3 2 3 3 2 3 3 3 4 8 10 30 48	2 3 3 3 24	BM5090 BM3040 ID <em>; BM3040 ID<em>;</em></em>	MA  MA  ME  ME  Course Dept. Bas Engg Bas Sci Soft Skill LA/CA Free El	BM4025 BM4060 BM4070 BM4071 BM4081 BM6140 CS3390  Course Number LAxxxx LAxxxx IDxxxx MA1110 MA1220 MA1140 MA2110 MA2140 ID <back 11.72%="" 3.13%="" 6.25%="" 7.81%<="" ai4000="" fp1208="" id1054="" idcompace="" me3100="" td=""><td>Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology &amp; BCI theory Neurotechnology &amp; BCI lab Computational neuroscience lab Theoretical &amp; computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity &amp; magnetism  Reference percentage 55-60% 11-12% 11-12% 47-8% 7-8%</td><td>NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1</td><td>2 2 2 2 2 2 2 2 3</td><td>BM3 BM4 ID&lt;9 BM3 BM4 BM6 BM3</td></back>	Natural intelligence, Implementations of Movement science Movement sciences lab Neurotechnology & BCI theory Neurotechnology & BCI lab Computational neuroscience lab Theoretical & computational neuroscience Machine learning, Foundations of Elective bucket total  Course Name English Communication Personality Development Entrepreneurship Calculus - I Calculus - II Elementary Linear algebra Differential equations Introduction to Probability Introduction to Statistics  Engineering Mechanics  Digital fabrication Robotics Modelling and simulation  Modern Physics Electricity & magnetism  Reference percentage 55-60% 11-12% 11-12% 47-8% 7-8%	NI NI NI NI NI NI NI NI NI 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 3	BM3 BM4 ID<9 BM3 BM4 BM6 BM3