Department of Energy Science and Engineering
BTech (Energy) – Curriculum, 2022 onwards

Semester 3				
Course code	**Course name**	**Category**	**Credits**	Semester Total
MM 225	AI and Data Science	Engineering Sciences and skills	6	
EC 101	Economics	HASMED Core	6	
EN 203	Thermodynamics and energy conversion	Department Core	6	
EN 213	Electrical networks and machines	Department Core	6	
EN 204	Material science for energy applications	Department Core	6	
ES 250 & HS 250		HS 200 and ES 200	6	
				36

Semester 4				
Course code	**Course name**	**Category**	**Credits**	Semester Total
DE 250	Design Thinking	HASMED Core	6	
EN 220	Reactions for energy	Department Core	6	
EN 313	Power electronics	Department Core	6	
EN 222	Fluid mechanics and heat transfer	Department Core	6	
EN 224	Electrical networks and machines lab	Department Lab and SLP/PT/Works Visit	3	
EN 226	Energy conversion lab	Department Lab and SLP/PT/Works Visit	3	
		Flexible Elective	6	
				36

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Semester 5				
Course code	**Course name**	**Category**	**Credits**	Semester Total
		HASMED Elective	6	
EN 323	Renewable energy generation and storage	Department Core	6	
EN 325	Dynamics and control	Department Core	6	
EN 401	Energy systems modelling and analysis	Department Core	6	
EN 327	Power electronics and instrumentation lab	Department Lab and SLP/PT/Works Visit	3	
EN 309	Thermal and fluid engineering lab	Department Lab and SLP/PT/Works Visit	3	
				30

Semester 6				
Course code	**Course name**	**Category**	**Credits**	Semester Total
		HASMED Elective	6	
		STEM Elective	6	
EN 410	Energy management	Department Core	6	
EN 304	Electrical energy systems	Department Core	6	
EN 316	Renewable energy lab	Department Lab and SLP/PT/Works Visit	3	
EN 318	Energy systems design lab	Department Lab and SLP/PT/Works Visit	3	
				30

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Semester 7				
Course code	**Course name**	**Category**	**Credits**	Semester Total
		Flexible Elective	6	
		Flexible Elective	6	
	Department elective - 1	Department Electives	6	
	Department elective - 2	Department Electives	6	
	BTP - 1 / Department elective - 3	BTP/Equivalent Elective courses	6	
				30

Semester 8				
Course code	**Course name**	**Category**	**Credits**	Semester Total
		Flexible Elective	6	
		STEM Elective	6	
		Flexible Elective	6	
	BTP - 2 / Department electives - 4 and 5	BTP/Equivalent Elective courses	12	
				30