

DESE BTech Curriculum

Semester 1	B.Tech. Credits = 33	Dual Degree Credits = 0	Total Credits = 33
Course Code	Course Name	Category	Credits
CH 111	Chemistry	Basic Sciences and Mathematics	8
CH 117	Chemistry lab	Basic Sciences and Mathematics	3
EN 110	Energy Engineering Fundamentals	Department Core	6
GC 101	Gender sensitization course	Non - Credited compulsory Courses	0
MA 105	Calculus	Basic Sciences and Mathematics	8
MS 101	Makerspace	Engineering Sciences and skills	8
NOCS 01	NCC/NSS/NSO	Non - Credited compulsory Courses	0
Semester 2	B.Tech. Credits = 33	Dual Degree Credits = 0	Total Credits = 33
Course Code	Course Name	Category	Credits
CS 101	Computer programming	Engineering Sciences and skills	6
HSS/IDC/ENT	Introduction to HASMED	HASMED Core	8
MA 110	Linear Algebra and Differential Equations	Basic Sciences and Mathematics	8
NOCS 02	NCC/NSS/NSO	Non - Credited compulsory Courses	0
PH 110	Introduction to Classical and Quantum Physics	Basic Sciences and Mathematics	8
PH 117	Physics lab	Basic Sciences and Mathematics	3
Semester 3	B.Tech. Credits = 36	Dual Degree Credits = 0	Total Credits = 36
Course Code	Course Name	Category	Credits
EN 215	AI and Data Science for Energy	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	ES 250 & HS 250	HS 250 and ES 250	6
Semester 4	B.Tech. Credits = 30	Dual Degree Credits = 0	Total Credits = 30
Course Code	Course Name	Category	Credits
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
Semester 5	B.Tech. Credits = 30	Dual Degree Credits = 6	Total Credits = 36
Course Code	Course Name	Category	Credits
	HASMED elective 1	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
	Honors 1	Honors	6
Semester 6	B.Tech. Credits = 36	Dual Degree Credits = 6	Total Credits = 42
Course Code	Course Name	Category	Credits
	HASMED elective 2	HASMED Elective	6
	STEM Elective 1	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
	Department elective - 1	Department Electives	6
	Honors 2	Honors	6

Semester 7	B.Tech. Credits = 30	Dual Degree Credits = 6	Total Credits = 36
Course Code	Course Name	Category	Credits
	Flexible Elective 1	Flexible Elective	6
	Flexible Elective 2	Flexible Elective	6
	Department elective - 2	Department Electives	6
	Department elective - 3	Department Electives	6
	BTP - 1 / Department elective - 4	BTP/Equivalent Elective courses	6
	Honors 3	Honors	6
Semester 8	B.Tech. Credits = 30	Dual Degree Credits = 6	Total Credits = 36
Course Code	Course Name	Category	Credits
	Flexible Elective 3	Flexible Elective	6
	Flexible Elective 4	Flexible Elective	6
	STEM Elective 2	STEM Elective	6
	BTP - 2 / Department electives - 5 and 6	BTP/Equivalent Elective courses	12
	Honors 4	Honors	6
Semester 9	B.Tech. Credits = 0	Dual Degree Credits = 48	Total Credits = 48
Course Code	Course Name	Category	Credits
	DDP Stage I	Dual Degree Project	36
	PG Elective -1	PG Electives	6
	PG Elective -2	PG Electives	6
Semester 10	B.Tech. Credits = 0	Dual Degree Credits = 48	Total Credits = 48
Course Code	Course Name	Category	Credits
	DDP Stage II	Dual Degree Project	36
	PG Elective -3	PG Electives	6
	PG Elective -4	PG Electives	6