

Course Template for M.Tech./BT-MT (dual degree)

Courses	Semester →	1	2	Summer Term	3	4
			SEE-601* [9]	SEE-604* [9]	0-2 Research Credits (SEE699)/Courses	SEE699 [36]
		SEE-602* [9]	SEE-605** [9]			
		SEE-603* [9]	SEE-612* [9]			
		SEE-609*[^] [9]	SEE690/691** [0]		SEE690/691** [0]	
		1-3 DE [9-27]	1-3 DE [9-27]			
		0-2 OE ^{\$} [0-18]	0-2 OE ^{\$} [0-18]			
	Credits →	36	36	[0-18] [#]	36	36
					Min. Total Credits (PG)	144

1. Total number of courses: 8
2. *Student must take a total of (2) two core basket courses combined from Semester I and II.
3. **Compulsory course.
4. A student should take at the least 3DE's.
5. ^{\$,^}Refer to the open elective course basket for more details.
6. [#]Optional summer research credits

Note: SEE 616 [9] was designated as a core course ONLY for students' of 2022 batch. However, those who have already taken SEE 603 are exempted from SEE 616 as core/compulsory. This course is now designated as an elective for students' of 2023 batch and onwards.

Department Electives (DE)	
SEE-606: Electrochemical Energy Systems	SEE-617: Introduction to sustainable energy policy
SEE-607: Hydrogen Energy: Production, Storage and Utilization	SEE-618: Energy Efficient Building Design
SEE-608: Introduction to Bioenergy and Biofuels	SEE-619A: Finite Volume Methods for Engineers
SEE-610: Introduction to Materials Modelling and Simulations ^{\$}	SEE-620A: Heat Driven Cooling Systems
SEE-611: Energy Systems: Modelling and Analysis	SEE-621A: Biomass Conversion and Biorefineries
SEE-612: Manufacturing of energy systems	SEE-622: Sustainable Energy- Enabling Net Zero Emissions
SEE 613: Solar Photovoltaics	SEE-623: Fuel Cell Electrical Energy Systems
SEE-614: Wind Energy	SEE-624: Design Strategies for Net-Zero Energy Buildings
SEE-615: Solar Thermal Engineering	Any other SEE [3-0-0-9] courses that will be added later.
SEE-616: Essential Electrical Engineering for Renewables Integration[#]	
Open Electives (OE)	
EE698D: Smart Grid Technology	CHE642A: Numerical Methods [^]
EE630A: Simulations of Power Systems	ME685A: Applied Numerical Methods [^]
EE660A: Basics of Power Electronic Converters	AE603: Introduction to Scientific Computing [^]
EE631A: Advanced Power System Stability	CHE622A: Molecular Simulations [^]
MSE673: Fundamentals and Applications of Electrochemistry	ChE626A: Practical Introduction to Quantum Mechanical Methods for Scientists and Engineers [^]
ME743: Fuel Cells	Any other 600 level or higher-level course in the institute of minimum 9 credits

[^]Students can take one of these courses if they have not credited SEE 609 [9].

(i.e. Students can take ONLY one of the following set: CHE642A, ME685A, AE603, SEE-609 and ONLY one of the following two: CHE622A, ChE626A.

[#] Designated as an elective only for the students admitted in May-July 2023.

Minimum credit requirements for M. Tech.

Coursework	72
Thesis	72
Total	144