30 March 2023

Course Template for M.S. (R)

	Semester →	1	2	Summer Term	3	4
Courses		**SEE-601* [9]**	**SEE-604* [9]**		SEE899 [36]	SEE899 [36]
		SEE-602* [9]	**SEE-605** [9]**	0-2 Research units (SEE899)[#]		
		SEE-603* [9]	**SEE-612* [9]**			
		SEE-609*,& [9]	**SEE690/691** [0]**		**SEE690/691**[0]**	
		0-2 DE [0-18]	0-2 DE [0-18]			
		0-1 OE[$] [0-9]	0-1 OE[$] [0-9]			
		0-2 Research units (SEE899)	0-2 Research units (SEE899)			
	Credits →	36	36	[0-18][#]	36	36
					Min. Total Credits (PG)	**144**

1. Total number of courses: 6 for students from 2023 batch and onwards.
2. *Student must take a total of (2) two core basket courses combined from Semester I and II.
3. **Compulsory course.
4. [$,&]Refer to the open elective course basket for more details.
5. [#]Summer research credits (recommended).
6. A student should take at the least 2 DE's.

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 department courses [3-0-0-9]

[&,$]Students can take one of these courses if they have not credited SEE 609 earlier [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 requirement for M.S.(R).

Coursework	54 (36 + 18[$])
Thesis	90 (108 - 18[$])
Total	144

[$]Applicable for the admitted students from 2023 and onwards.