COMSATS Institute of Information Technology
Registrar Office, Principal Seat, Islamabad

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No: CIIT-Reg/Notif-648/18/788 February 22, 2018

NOTIFICATION

Academic Council in its 29th meeting held on January 08, 2018 approved the Scheme of Studies of Master of Science in Energy and Environmental Engineering, effective, from Spring 2018;

Nomenclature: Master of Science in Energy and Environmental Engineering MS(ENE)

1. **Minimum Duration:**
   a) No. of years: 02
   b) No. of semesters: 04

		Min No. of Courses	Min No. of Credit Hours
2. **Course Work**			
i) Core courses	(List attached)	04	12
ii) Elective courses	(List attached)	04	12
3. **Total credit hours of coursework**			24
4. **MS Thesis**			06
5. **Total credit hours of the program**			30

Note:
The Regulations relating to MS Degree programs approved by the Competent Authority and amended from time to time shall also be applicable to this program.

Muhammad Hanif
Deputy Registrar

Encl (Pages 15 including this page)

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List of Core Courses

List of Core Courses

S. No.	Course Code	Course Title	Credits Hours
1.	ENE511	Nanotechnology and Energy	3(3, 0)
2.	ENE521	Air Pollution Control	3(3, 0)
3.	ENE522	Water and Wastewater Treatment	3(3, 0)
4.	ENE513	Renewable Energy Technologies	3(3, 0)

Elective Courses

S. No.	Course Code	Course Title	Credits Hours
1.	ENE512	Clean Coal Technologies	3(3, 0)
2.	ENE523	Solid Waste Management	3(3, 0)
3.	CHE649	Engineering Research Methods	3(3, 0)
4.	ENE531	Energy and Environmental Policies	3(3, 0)
5.	ENE514	Advanced Energy Engineering	3(3, 0)
6.	ENE515	Waste to Energy	3(3, 0)
7.	ENE524	Environmental Pollution Control	3(3, 0)
8.	CHE532	Special Topics in Energy and Environment	
9.	CHE521	Combustion Engineering	3(3, 0)
10.	CHE530	Life Cycle Analysis	3(3, 0)
11.	CHE551	Industrial Environmental Biotechnology	3(3, 0)
12.	CHE552	Biochemical Engineering	3(3, 0)
13.	CHE553	Bio-Chemical and Food Technology	3(3, 0)
14.	CHE554	Biotechnology and Environmental Processes	3(3, 0)
15.	CHE522	Advanced Treatment of Simultaneous Heat and Mass Transfer	3(3, 0)
16.	CHE531	Instrumental Analytical Techniques	3(3, 0)

17.	CHE523	Oil and Gas Economics	3(3, 0)
18.	CHE525	Petroleum Transmission	3(3, 0)
19.	CHE526	Natural Gas Transmission	3(3, 0)
20.	CHE527	Chemicals Emission and Control	3(3, 0)
21.	CHE532	Fate and Transport of Chemical in Environment	3(3, 0)
22.	CHE534	Industrial Environmental Chemistry	3(3, 0)
23.	CHE555	Bio-reaction Engineering	3(3, 0)
24.	CHE556	Bio-process Design	3(3, 0)
25.	CHE650	Production of Biofuels	3(3, 0)
26.	CHE620	Advanced Catalytic Processes	3(3, 0)
27.	CHE621	Fluidization Engineering	3(3, 0)
28.	CHE622	Advanced Process Control	3(3, 0)
29.	CHE535	Hazardous and Toxic Chemical Waste Treatment	3(3, 0)
30.	CHE536	Bioremediation of Toxic Chemicals	3(3, 0)
31.	CHE537	Solid Waste Engineering	3(3, 0)
32.	CHE653	Separation Processes for Bio-Chemical Products	3(3, 0)
33.	CHE657	Novel Separations	3(3, 0)
34.	ENV502	Environmental Technologies	3(3, 0)
35.	ENV504	Energy and the Environment	3(3, 0)
36.	ENV505	Environmental Impact Assessment	3(3, 0)
37.	ENV506	Environmental Policies, Planning and Law	3(3, 0)
38.	ENV622	Waste Water Treatment	3(3, 0)
39.	CHE681	Advanced Process Systems Engineering	3(3, 0)
40.	CHE682	Advanced Process Control	3(3, 0)
41.	CHE683	Process Design and Optimization	3(3, 0)
42.	CHE684	Process Modeling and Simulation	3(3, 0)
43.	CHE685	Process Integration	3(3, 0)
44.	CHE671	PINCH Technology	3(3, 0)
45.	CHE687	Advanced Process Economics	3(3, 0)

46.	CHE670	Sustainable Energy Systems	3(3, 0)
47.	CHE673	Plasma Chemical Engineering	3(3, 0)
48.	CHE674	Energy Management	3(3, 0)

Thesis

S. No.	Codes	Title	Credit Hours
1.	ENE800	MS Thesis	6(0, 6)

The student will register for the research project based thesis involving but not limited to design / process development / analytical work of 6 credit hours with a supervisor within the department or someone outside the department approved by the Departmental Advisory Committee.

Note: The detailed rules and regulations specified in the latest CIIT Graduate Handbook regarding examinations and thesis defense will be followed and considered final.