

## Study subjects covered in the competitive examination for postgraduate applicants (Master's, PhD) for the academic year 2024-2025

- 1- Master's Degree (Chemical Process Engineering, Oil and Gas Refining Engineering, Industrial and Petroleum Pollution Engineering)

NO.	Subject name	Sources
1-	<b>Principles of Chemical Engineering</b>	<b>Basic Principles and Calculations in Chemical Engineering Eighth Edition, By David Mautner Himmelblau, James B. Riggs</b>
2-	<b>Mass Transfer</b>	<b>Coulson and Richardso, Chemical Engineerin, Volume 2, Fifth Edition Fluidization, Liquid filtration, Distillation, Absorption, Liquid-Liquid Extraction</b>
3-	<b>Heat Transfer</b>	<b>Heat Transfer by Holmann</b>
4-	<b>Fluid Flow</b>	<b>Fluid flow for chemical Engineering, by Holland Chemical Engineering Vol.1, by Coulson</b>
5-	<b>Reactor Design</b>	<b>Fogler, H.S., Elements of Chemical Reaction Engineering Smith J.M., "Chemical Engineering Kinetics</b>
6-	<b>Thermodynamics</b>	<b>J. M. Smith,H.C.Van Ness, Introduction to chemical engineering thermodynamics, 8th edition (International Edition), Mc-Graw Hall, 2008</b>

2- PhD (Chemical Engineering)

NO.		
1-	<b>Principles of Chemical Engineering</b>	<b>Basic Principles and Calculations in Chemical Engineering, Eighth Edition, By David Mautner Himmelblau, James B. Riggs</b>
2-	<b>Mass Transfer</b>	<b>Coulson and Richardso, Chemical Engineering, Volume 2, Fifth Edition Fluidization, Liquid filtration, Distillation, Absorption, Liquid-Liquid Extraction Transport Phenomena, R. Byron Bird, Mass transfer, Ch.16, Ch.17, Ch.18</b>
3-	<b>Heat Transfer</b>	<b>Heat transfer by Holman and chemical Eng. vol. 1</b>
4-	<b>Fluid Flow</b>	<b>Fluid flow for chemical Engineering, by Holland Chemical Engineering Vol.1, by Coulson Transport Phenomena, by Bird</b>
5-	<b>Reactor Design</b>	<b>Fogler, H.S., Elements of Chemical Reaction Engineering Levenspiel, Chemical Reaction Engineering</b>
6-	<b>Thermodynamics</b>	<b>J. M. Smith,H.C.Van Ness, Introduction to chemical engineering thermodynamics, 8th edition (International Edition), Mc-Graw Hall, 2008</b>