

**ABET ACREDITATION - CHEMICAL ENGINEERING PROGRAM- UNIVERSIDAD NACIONAL DE COLOMBIA, BOGOTA CAMPUS**  
**RELATION BETWEEN THE STUDENT OUTCOMES AND THE COURSES OF THE DISCIPLINARY COMPONENT OF THE CURRICULUM**

Conventions: SO - Student Outcome; 3- Main component ≥25% of time; 2- Important component [10% - 25%] of time; 1- Minority component [5% - 10%] of time; I- Occasional component <5% of time

LINE	PROFESSIONAL CONTEXT	THERMODYNAMICS					UNIT OPERATIONS						CHEMICAL AND BIOCHEMICAL PROCESSES					RESEARCH AND INNOVATION				
		INTRODUCTION TO CHEMICAL ENGINEERING	THERMODYNAMICS	CHEMICAL THERMODYNAMICS	WORKSHOP 1	ENERGY BALANCE AND CHEMICAL EQUILIBRIUM	MASS BALANCE	FLUIDS	SOLIDS HANDLING	HEAT TRANSFER	MASS TRANSFER	WORKSHOP 2	SEPARATION OPERATIONS	CHEMICAL REACTION ENGINEERING	DESIGN OF CHEMICAL AND BIOCHEMICAL PROCESSES	PROCESS CONTROL	PROCESS ENGINEERING	DESIGN OF PLANTS AND EQUIPMENT	LABORATORY OF THERMODYNAMICS AND TRANSPORT PROPERTIES	LABORATORY OF FLUIDS, SOLIDS AND HEAT TRANSFER	LABORATORY OF SEPARATIONS, REACTION AND CONTROL OPERATIONS	INTERDISCIPLINARY PROJECTS WORKSHOP
CODE	2015718	2015741	2015740	2015735	2015707	2015708	2015714	2015713	2015743	2015744	2015736	2015731	2015716	2015713	2015710	2015715	2015712	2015721	2015719	2015720	2024045	2015218
SO1. Ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	1	3	3	1	3	3	3	3	3	2	2	3	3	2	3	3	1	1	2	3	3	3
SO2. Ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	0	1	1	1	1	2	2	2	2	2	3	2	3	3	2	2	3	1	2	1	3	1
SO3. Ability to communicate effectively with a range of audiences.	3	3	2	3	1	1	1	1	3	1	3	2	2	1	2	1	3	2	2	3	3	1
SO4. Ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and social contexts.	1	2	1	1	1	1	1	2	1	1	3	1	1	2	2	1	2	1	3	1	3	1
SO5. Ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	3	3	2	3	1	3	1	3	2	2	3	2	1	2	3	3	3	3	3	3	3	1
SO6. Ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	0	0	2	1	1	0	1	2	1	1	1	1	2	2	1	2	1	3	3	3	3	2
SO7. Ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	3	2	2	2	1	1	1	1	2	1	2	1	2	1	1	1	2	1	1	2	3	3
SO8. Ability to participate in research, innovation and entrepreneurship projects.	1	0	1	0	1	0	0	1	0	0	2	1	1	1	0	0	0	1	0	1	3	1

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