

Chemistry Graduate Programs in the 2025-2028 Period: Strategic Planning, Inclusion, and Social Impact

Planning, Inclusion, and Social Impact: these three concepts succinctly encapsulate the central challenges of the 2025-2028 quadrennium in the evaluation of Graduate Programs in Chemistry (GPC) conducted by CAPES. Over the past decades, the academic community has persistently advocated for an evaluative framework more attuned to the local and specific realities of each program—one less dependent on quantitative metrics and productivist paradigms. The implementation of such changes proved complex, in part due to the absence of indicators and methodologies capable of enabling meaningful comparisons both within the field of chemistry and across distinct disciplinary domains.¹ Nevertheless, these instruments have been gradually introduced.

Within the quadrennium starting in 2025, the evaluative procedures scheduled for 2029 will be markedly oriented toward the distinctive characteristics of each program, privileging qualitative dimensions as articulated and annually monitored in their respective strategic plans. The impacts of the GPC are expected to be rigorously delineated, systematically pursued, empirically verifiable, and, above all, directed toward the student body, alumni, external collaborators, and broader societal demands.

Planning constitutes a pivotal element in the process of restructuring. It must be initially grounded in the trajectories of graduates, regional vocations, and faculty expertise, so that the mission of the Graduate Program in Chemistry is clearly defined. From this mission, the program's dimensions of activity and its scope—whether regional, national, or international—are delineated, thereby restructuring the few yet robust research areas, which must remain aligned with important national themes.

To enable the admission of professionals trained in diverse fields into graduate studies in Chemistry, broad-based leveling courses should be offered. Furthermore, graduate students must have access to specific courses that are modern, focused, modular and with a convergence of knowledge, designed to support their projects and aligned with the established research areas.

Based on this organized structure, GPC's must define short-term goals (within the quadrennium), medium-term

goals (for the subsequent quadrennium), and long-term goals (the program's vision), ensuring that their actions are quantifiable, auditable by society at large, and prominently disseminated through the program's official website.

Beyond the modernization of the GPC promoted through this restructuring, it is imperative for the advancement of the field of chemistry that the reduction of inequities, the strengthening of solidarity, and the systematic implementation of student and faculty inclusion initiatives permeate every action, ensuring that inclusion is embedded in every perspective. Graduate Programs must establish faculty inclusion policies—particularly with regard to female participation—within the criteria for accreditation and re-accreditation. Effective measures for student recruitment, inclusion, and retention must be informed by a broader understanding of the realities of this generation, including their engagement with social networks, access to information, and affinity with communication technologies.

Significant inequalities in access to graduate education persist across the country, with many regions facing knowledge gaps where even a master's program in chemistry is unavailable within a radius of more than 100 km, including in certain states of the southeastern region. Chemistry, however, maintains a proportion of GPC with 6 and 7 grades above the national average. These programs must serve as exemplars, acting more proactively in the implementation of associative initiatives and in solidarity actions with programs still in the process of consolidation.

Finally, in the evaluation of the 2025-2028 quadrennium, the social impact of Graduate Programs will be further emphasized. The world has undergone drastic transformations, and major challenges confront contemporary society, as highlighted in the 169 targets established under the 17 Sustainable Development Goals (SDGs) of the United Nations.² The field of Chemistry plays a central role in the search for solutions to problems that directly affect Brazilian society. It is essential that the knowledge generated within universities—knowledge that has secured strong positions in scientific production

rankings-also be mobilized to positively impact society and improve the quality of life of the population.

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References

1. CAPES, Chemistry Area. [Link] accessed in January 2026
2. United Nations, 17 Goals to Transform Our World. [Link] accessed in January 2026