

Code: QG771								
Name: Tecnologias de Informação e Comunicação Aplicadas ao Ensino de Química								
Name in English: Information and Communication Technologies Applied to Teaching Chemistry								
Name in Spanish: Tecnologías de Información y Comunicación Aplicadas a la Enseñanza de Química								
Subject type: Weekly								
Approval Type: Grade and Frequency								
Characteristic: Regular								
Frequency: 75%								
Period Type / Offering period: Semestral / 2nd Period – even periods								
Requires Final Exam: Yes								
Vectors								
T	L	P	O	PE	OE	SL	WEEKS	CREDITS
2	2	-	-	-	-	4	15	4
Occurrence on curriculum: 5								
Pre requirement: AA450								
<p>Summary: Historical, disciplinary and conceptual perspectives of Technologies and their relationships with teaching-learning practices in Sciences/Chemistry, possibilities and limitations. Information technologies and communication (ITC) and current society, web evolution and new technologies. Scholar and digital cultures. Educational legislation on the use and training with Technologies. Survey and problematization of the main technological supports: educational softwares, apps, simulations, videos, cooperative websites, remote and virtual labs. ITCs as assessment tools. Distance and blended learning and assistive technologies. Integration of contents and classroom practices.</p>								
<p>Program:</p> <ul style="list-style-type: none"> - Evolution of information and communication technologies. Web 1.0, 2.0 and 3.0. - Understanding the role of technologies on current society. - Scholar and digital cultures. Educational Legislation on the use and training with Technologies. - Education legislation, parameters and guidelines for teaching with technological resources. - Technological resources in Science/Chemistry teaching: Educational softwares, apps, simulations, videos, cooperative websites, remote and virtual labs as teaching tools. - Planning and assessment of teaching-learning activities with the use of technological resources. - Assistive technologies and the inclusive teaching. - Distance and blended teaching. Hybrid teaching, e-learning and m-learning. - Teaching proposals integrating ITCs and other teaching strategies. 								
<p>Basic Bibliography</p> <ol style="list-style-type: none"> 1) BARRETO, R. G. Tecnologias na sala de aula; in Leite, Márcia e Filé, Walter (Org.). Subjetividade, tecnologias e escolas. DP&A, Rio de Janeiro, 2002. 2) LEITE, B. S.; Tecnologias no Ensino de Química: Teoria e Prática na Formação Docente. Appris, 2015, 1^o edição 3) LÉVY, P. As tecnologias da Inteligência – o futuro do pensamento na era da informática. Rio de Janeiro, Editora 34, 2011. 								
<p>Supplementary Bibliography</p>								

- 1) GIORDAN, M. **O computador na Educação em Ciências: breve revisão crítica acerca de algumas formas de utilização.** Ciênc. educ. 2005, vol.11, n.2, pp.279-304.
- 2) CHASSOT, A. **Alfabetização científica: questões e desafio para a educação.** 4ª edição. Ijuí: Editora Unijuí, 2006.
- 3) LINS, H.A.M.; CABELLO, J. **Desenvolvimento de objetos de aprendizagem ligados à alfabetização e ao letramento: o caso do Grupo de Estudos Surdos e Novas Tecnologias,** Linha Mestra, v. 22, 85-96, 2013.
- 4) SANTOS, E.; WEBER, A. 2013. **Educação e cibercultura: aprendizagem ubíqua no currículo da disciplina didática.** Rev. Diálogo Educação, Curitiba, v.13, n. 38, 285–303.
- 5) VALENTE, J. A.; BARANAUSKAS, M. C. C.; MAZZONE, J. **Aprendizagem na era das tecnologias digitais.** Editora Cortez, 2007.