Code: **QL701**

Name: **Projetos Integrados**

Name in English: **Integrated Projects**

Name in Spanish: **Proyectos Integrados**

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	**-**	**-**	**4**	**-**	**-**	**2**	**15**	**6**

Occurrence on curriculum: **05, 56**

Pre requirement: **QG760**

Summary: Elaboration and application of Chemistry Teaching projects, with articulation of conceptual aspects developed with theoretical and / or experimental approach and / or with application of computer resources, for high school education. The rationale of the projects involves a critical and directed bibliographic survey, with subsequent elaboration of a descriptive text describing the application. The activities are guided by professionals from the Institute of Chemistry and the Faculty of Education of UNICAMP.

Program:

By the bibliographic survey in the field of Chemistry Teaching, students will have contact with research topics in this field and will be able to develop teaching projects based on the results of the research.

Development:

1. Literature survey in the main publications of the area, aiming to identify works that bring some contribution to the practice of high school chemistry teachers. From the survey they will choose a set of articles on a theme, elaborating related teaching proposals. The proposals will be consolidated with the presentation of classes in which they will incorporate the elements of the research.
2. Contact with interactive media for teaching chemistry, analysis and evaluation of their teaching potential.
3. Development of laboratory practices for Chemistry Teaching.

Basic Bibliography

1) REES, S. E. NEWTON, D. **“Creative chemists - Strategies for teaching and learning”**, 7ª edição, The Royal Society of Chemistry, CPI Group Ltd, Croydon, UK, 2020, 187p, ISBN: 978-1-78801-511-0.

2) WINDSCHITL, M.; THOMPSON, J.; BRAATEN, M. **"Ambitious science teaching"**, 1ª edição, Harvard Education Press, Cambridge, Massachusetts, EUA, 2018, 312p. ISBN: 978-1-682531-624.

3) RIBEIRO, L. R. C., **“Aprendizagem baseada em problemas (PBL) - Uma experiência no ensino superior”,** EdUFSCar, São Carlos, 2008, 166 páginas, ASIN: B00MMN57XS

Supplementary Bibliography

1) MESTRE, J. P.; DOCKTOR, J. L. **“The science of learning physics - Cognitive strategies for improving instruction”**, World Scientific Publishing Co, Danvers, MA, USA, 2021, 211p, ISBN: 978-9-81122-776-9.

2) DARLING—HAMMOND, L.; **"Preparando os professores para um mundo em transformação - O que devem aprender e estar aptos a fazer"**, 1ª edição, Editora Penso, São Paulo, 2019. ISBN: 978-85-8429-180-9.

3) WIGGINS, G.; MCTIGHE, J.; **" Planejamento para a compreensão - Alinhando currículo, avaliação e ensino por meio da prática do planejamento reverso"**, 2ª edição, Editora Penso, São Paulo, 2019. ASIN: B07S9ZYF3S.
4) COHEN, E. G.; LOTAN, R. A.; CARNEIRO, J. R. L. M. M.; **"Planejando o trabalho em grupo - Estratégias para salas de aula heterogêneas"**, 3ª edição, Editora Penso, São Paulo, 2017. ISBN: 978-8-584291-014.
5) BENDER, W. N. **"Aprendizagem baseada em projetos - Educação diferenciada para o século XXI"**, 1ª edição, Editora Penso, 2014. ISBN: 978-8-584290-017.