Code: **QG332**

Name: **Estudo de problemas de ensino de Ciências**

Name in English: **Studies on Problems in Science Teaching**

Name in Spanish: **Estudios de Problemas de Enseñanza de Ciencia**

Subject type: **Weekly**

Approval Type: **Grade and Frequency**

Characteristic: **Regular**

Frequency: **75%**

Period Type / Offering period: **Semestral / 1st period – odd periods**

Requires Final Exam: **Yes**

Vectors

T	L	P	O	PE	OE	SL	WEEKS	CREDITS
2	**-**	**-**	**-**	**-**	**-**	**2**	**15**	**2**

Occurrence on curriculum:

Pre requirement:

Summary: Meaningful learning. Alternative conceptions and conceptual change in science teaching, case study and analysis study. The role of language and forms of representation in science teaching. Strategies for inclusive education. Conceptual, procedural, and attitudinal knowledge. Didactic transposition. Contextualization in science teaching, STSE approach, possibilities, and limitations. The role of evaluation as a tool for recognition, structuring professional practice, and knowledge construction.

Program:

The course will address topics related to some of the main issues in science teaching as reported in the Research in Science Teaching. Thus, the following topics will be covered:

- Meaningful learning, alternative conceptions, conceptual change, and didactic transposition in science teaching through research case studies and experience reports.
- Scientific language and representations in science focusing on aspects related to cognitive levels of knowledge.
- Proposals for contextualization and the development of conceptual, procedural, and attitudinal knowledge.
- Contextualization in science teaching, STSE approach, and its possibilities and limitations.
- The learning evaluation process. Conceptions and methods for its implementation.
- Inclusive teaching in Science.

Basic Bibliography

1) CHASSOT, A. **Alfabetização Científica – Questões e Desafios para a Educação,** Ijuí, Editora da Unijuí, 2016, 7 ed.

2) MORTIMER, E. F. **Linguagem e formação de conceitos no ensino de ciências,** Ed. UFMG, Belo Horizonte, 2000.

3) ZANON, L. B.; MALDANER, O. A. **Fundamentos e Propostas de Ensino de Química para a Educação Básica no Brasil**. Ijuí: Unijuí, 2007.

Supplementary Bibliography

1) GONÇALVES, F. P.; REGIANI, A. M.; AURAS, S. R.; SILVEIRA, T. S.; COELHO, J. C.; HOBMEIR, A. K. T. **A educação inclusiva na formação de professores e no ensino de Química: a deficiência visual em debate.** Química Nova na Escola, 35, 264, 2013.

2) DA SILVA, M. N.; DE LIMA, A. G. A.; TENÓRIO, T. S.; LARANJEIRA, J. M. G. **Concepções alternativas**: **compreendendo sua importância para o ensino de química.** Scientia Naturalis, Rio Branco, v. 3, n. 3, p. 1211-1221, 2021.
3) HADJI, C. A **avaliação regras do jogo- das intenções aos instrumentos**. Porto: Porto Editora, 1994.
4) NARDI, R; ALMEIDA, M. J. P. M. **Analogias, leituras e modelos no ensino de ciência: a sala de aula em estudo.** 1ª Edição. São Paulo: Escrituras editora, 2006.
5) BRASIL. Base Nacional Comum Curricular, Ministério da Educação, Secretaria de Educação Básica, Brasília, 2015. Disponível em: http://basenacionalcomum.mec.gov.br/#/site/conheca