- Faculté des lettres et sciences humaines
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Séminaire BA : Formal Ontology (2PH1345)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Bachelor en science des données	**Séminaire: 2 ph**	**Voir ci-dessous**	3
Pilier B A - Humanités numériques	**Séminaire: 2 ph**	**Voir ci-dessous**	3
Pilier B A - philosophie	**Séminaire: 2 ph**	**Voir ci-dessous**	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante

Kathrin Koslicki, Olivier Massin

Contenu

If one typed "ontology" into a search engine 20 years ago, the results would have shown only works in philosophy. If the same is done today, most of the results will concern computer science and the data sciences, as well as their relations to multiple fields such as the biomedical sciences, industry, geology, law, etc. Ontology, once considered a dusty philosophical discipline, has become a key element in today's ongoing digital transformations.

The main reason for this renewed interest in ontology is the multiplication of fields of research and the data they produce. While the increase in the amount of information is good news, it generates a central problem: to exploit this information, it is necessary that different scientific communities and the different databases they produce speak a common language. In other words, scientific communities are well-advised to adopt common definitions, represent, classify, and link their data in the same way. This is precisely what ontologies seek to do, by means of developing taxonomies of the kinds of entities studied in different fields and by explaining the relationships between these entities.

The aim of this seminar is to train participants in the assessment and construction of ontologies. This requires developing and combining three types of skills: (i) philosophical skills, in order to understand the fundamental categories used in formal and applied ontologies, and to know how to formulate good definitions and taxonomies; (ii) skills in logic and computer science, in order to develop consistent ontologies and to master the tools that are required to implement these ontologies in machines (OWL, Protégé); (iii) knowledge of certain specialized fields for which we want to develop an ontology. Based on students' areas of expertise and interests, this seminar will introduce the philosophical, logical, and basic computing tools necessary for the assessment and construction of ontologies.

Forme de l'évaluation

The final grade is determined by the weighted average of the following four elements:
- a problem set due every other week: 30%
- a project to be developed during the semester either individually or collectively (in groups consisting of no more than three students): 30%. The final version of the project is due on the last day of the seminar.
- a presentation on the project during the seminar: 20%
- attendance and participation in in-class discussions and on the seminar's online discussion forum: 20%

Modalités de rattrapage

Students who have completed all the assignments required for the seminar and have received a grade that is not satisfactory (below 4), will have the opportunity to hand in revised versions of their written assignments as a second attempt by June 30, 2024.

Documentation

All the readings and other documents are available on the seminar's Moodle page.

Pré-requis

The seminar is open to all the students, philosophers and non-philosophers alike, and has no pre-requisites.

Forme de l'enseignement

The seminar meets once a week, Mondays, 14:00-16:00. The language of instruction is English.

URLs	1) https://moodle.unine.ch/course/view.php?id=10550

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Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Define the central concepts of a domain
- Generate computable ontologies
- Represent the ontology of domain in a formal way

Compétences transférables

- Categorise key concepts of a field
- Relate entities of a domain
- Classify entities in a scientific area

URLs	1) https://moodle.unine.ch/course/view.php?id=10550