— Plano de Ensino —
— Atividades Remotas Emergenciais 2021.1 —

Código	DCC024
Disciplina	Linguagens de Programação
Tuma	TW
Professor	Haniel Barbosa
Horário	2a/4a 19:00-20:40

Ementa. The purpose of this course is to study fundamentals concepts in programming languages and major tools and techniques to implement them. This includes a number of programming paradigms, namely: functional, imperative, and logic, as well as general aspects such as syntax specification and informal semantic models; binding and scoping; types and type systems; control structures; data abstraction; procedural abstraction and parameter passing; higher-order functions; and memory management. The course has a strong implementation component, with three languages being covered: SML, Python, and Prolog. No prior familiarity with these languages is assumed in this course. Learning them will have the secondary effect of exposing students to the different programming paradigms.

Programa.

Class	Date	Content	Category
1	19/05 (Wed)	Introduction	Sync
2	19/05 (Wed)	SML introduction	Async
3	24/05 (Mon)	Pattern matching in SML	Async
4	26/05 (Wed)	ADTs in SML	Async
–	26/05 (Wed)	Q&A, practical session	Sync
5	31/05 (Mon)	Polymorphism	Async
6	02/06 (Wed)	Higher-order functions. Combinators.	Async
–	02/06 (Wed)	Q&A, practical session	Sync
7	07/06 (Mon)	Syntax and semantics (Part 1)	Async
8	09/06 (Wed)	Syntax and semantics (Part 2)	Async
–	09/06 (Wed)	Q&A, practical session	Sync
9	14/06 (Mon)	Formal semantics (Part 1)	Async
10	16/06 (Wed)	Formal semantics (Part 2)	Async
–	16/06 (Wed)	Q&A, practical session	Sync
11	21/06 (Mon)	Binding and scopes	Async
12	23/06 (Wed)	Closures	Async
–	23/06 (Wed)	Q&A, practical session	Sync
13	28/06 (Mon)	Revision	Sync
14	30/06 (Wed)	**Exam 1**	Async
15	05/07 (Mon)	Python introduction	Async
16	07/07 (Wed)	Memory management (Part 1)	Async
17	12/07 (Mon)	Memory management (Part 2)	Async
18	14/07 (Wed)	Abstraction and abstract data types	Async
–	14/07 (Wed)	Q&A, practical session	Sync
19	19/07 (Mon)	Object orientation	Async
20	21/07 (Wed)	Error handling	Async
–	21/07 (Wed)	Q&A, practical session	Sync
21	26/07 (Mon)	Parameter passing (Part 1)	Async
22	28/07 (Wed)	Parameter passing (Part 2)	Async
–	28/07 (Wed)	Q&A, practical session	Sync
23	02/08 (Mon)	Prolog introduction	Async

24	04/08 (Wed)	Unification and resolution	Async
–	04/08 (Wed)	Q&A, practical session	Sync
25	09/08 (Mon)	Numeric predicates in Prolog	Async
26	11/08 (Wed)	Problem solving with Prolog	Async
–	11/08 (Wed)	Q&A, practical session	Sync
27	16/08 (Mon)	Programming SMT solvers (Part 1)	Async
28	18/08 (Wed)	Programming SMT solvers (Part 2)	Async
–	18/08 (Wed)	Q&A, practical session	Sync
29	23/08 (Mon)	Revision	Sync
30	25/08 (Wed)	**Exam 2**	Async
–	30/08 (Mon)	**Make-up exam**	Async

Bibliografia. Modern Programming Languages: A Practical Introduction, by Adam Webber.

Material de apoio. `https://homepages.dcc.ufmg.br/~hbarbosa/teaching/ufmg/2021-1/lp/`

Avaliações.

1	Prova 1	25	30/06
2	Prova 2	25	25/08
3	Projeto	35	22/08
4	Listas de exercício	15	