

# MC921 - Compilers Construction and Design

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Since 2016

Prerequisite: MC504

Syllabus:

Syntactic analysis methods. Execution systems. Object code generation and optimization. Error recovery. Implementation of a compiler.

Programme:

- Techniques, methods and algorithms used in the construction of modern compilers:
- Lexical, syntactic and semantic analysis;
- Type verification;
- Activation Records;
- Translation to intermediate code;
- Code generation;
- Data flow analysis;
- Optimization techniques;
- Garbage collection;
- Compilers for object oriented programming languages;
- Implementation of a compiler.

Bibliografia:

- A. Appel, Modern Compiler Implementation in Java, 2ª. edição, Cambridge University Press, 2002
- A. Aho, R. Sethi, J. Ullman, 2ª. edição, Compilers: Principles Techniques and Tools, 2006
- Keith Cooper, Linda Torczon. Engineering a Compiler, Second Edition, Morgan Kaufmann, 2011