CC70R Advanced object-oriented concepts
(O5 UD)

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Requisitos: CC51H/Autor

Metaprogramming

Generic programming, generative programming
Templates in C++, function / class templates, member templates, adapters, traits
Specialization of templates
Metaprogramming, two-level compilation of C++, compile-time programming
Software components
Domain analysis, domain design, domain implementation
Description in DSL (Domain Specific Language)
Description in ICCL (Implementation Component Configuration Language)
Configuration generator

Adaptive programming

Modularity, problem of functionality of collaborative classes
Encapsulation of data
Encapsulation of class hierarchy
Law of Demeter, structure-shy programming
Adaptiveness
Visitor style of programming
Propagation patterns
Traversal strategies
Example – Project ADONIS
Evaluation of adaptive programming

Aspect-oriented programming

Separation of concerns, problem of separation in OO-programming
Aspect-oriented programming, weaver, preprocessing
Tracing as an aspect
Testing of a client/server application as aspect
Synchronization as aspect
Programming language Aspect J
Example – Project ASPIC
Evaluation of aspect-oriented programming