



PLANO DE ENSINO

1. IDENTIFICAÇÃO DA DISCIPLINA: **Semestre:** 2001/2
Código: INE5612 **Nome:** Desenvolvimento de Sistemas Orientados a Objetos II
Horas/Aula: 72 **Teóricas:** 36 **Práticas:** 36
Código(s) do(s) pré-requisito(s): INE5609

2. OBJETIVOS:

2.1 - Gerais

Estudar conceitos e técnicas de engenharia de software pertinentes ao desenvolvimento de componentes de software.

2.2 - Específicos

Estudar técnicas específicas de desenvolvimento de componentes de software;

Exercitar o desenvolvimento de componentes de software.

3. PROCEDIMENTOS DIDÁTICOS:

(AEX=Aula expositiva; LAB=Aula de laboratório; APR=Aula prática; OTR=Outros)

TÓPICOS

	Proc. Didático	Horas
1. Componentes de software	AEX	2
2. Metodologias de desenvolvimento	AEX	4
3. Estratégias de implementação	AEX	4
4. Estudos de casos (seminários)	AEX	20
5. Experimentos	APR	36
6. Discussões	AEX	6

4. AVALIAÇÃO DA APRENDIZAGEM:

Um seminário e um trabalho prático;

Recuperação através de uma única prova escrita sobre todo o conteúdo da disciplina.

5. BIBLIOGRAFIA:

Don Batory and Sean O'Malley, *The Design and Implementation of Hierarchical Software Systems with Reusable Components*. ACM Transactions on Software Engineering and Methodology, 1(4):355-398, 1992.

Ted J. Biggerstaff, *A Perspective of Generative Reuse*. Annals of Software Engineering, 5:169-226, 1998.

Special Section on Component-Based Enterprise Frameworks. Communications of the ACM, 43(10):24-66, 2000.

James O. Coplien, *Multi-Paradigm Design for C++*, Addison-Wesley, 1998.

Krzysztof Czarnecki and Ulrich Eisenecker, *Generative Programming: Methods, Tools, and Applications*, Addison-Wesley, 2000.

- Antônio A. Fröhlich**, *Application-Oriented Operating Systems*, Sankt Augustin: GMD - Forschungszentrum Informationstechnik, 200 p., 2001.
- William H. Harrison and Harold Ossher**, [*Subject-oriented Programming \(a Critique of Pure Objects\)*](#). in In Proceedings of the 8th Conference on Object-oriented Programming Systems, Languages and Applications, pages 411-428. Washington, U.S.A., 1993.
- Ian M. Holland**, [*Specifying Reusable Components Using Contracts*](#). in Proceedings of the European Conference on Object-oriented Programming, pages 287-308. Springer, Utrecht, The Netherlands, 1992.
- Ivar Jacobson, Grady Booch and James Rumbaugh**, *The Unified Software Development Process*. Addison-Wesley, 1999.
- Mehdi Jazayeri et al.**, [*Generic Programming*](#). in Report of the Dagstuhl Seminar on Generic Programming, Schloß Dagstuhl, Germany, 1998.
- Ralph E. Johnson**, *Frameworks = (Components + Patterns)*. Communications of the ACM, 40(10):39-42, 1997.
- Gregor Kiczales et al.**, *Aspect-Oriented Programming*. in Proceedings of the European Conference on Object-oriented Programming'97, pages 220-242, 1997.
- Barbara Liskov and Stephen Zilles**, *Programming with Abstract Data Types*. ACM SIGPLAN Notices, 9(4):50-59, 1974.
- Mira Mezini and Karl Lieberherr**, [*Adaptive Plug-and-play Components for Evolutionary Software Developmen*](#). In Proceedings of the Conference on Object Oriented Programming Systems Languages and Applications, pages 97-116, 1998.
- David Lorge Parnas**, *On the Design and Development of Program Families*. IEEE Transactions on Software Engineering, SE-2(1):1-9, 1976.
- P. J. Plauger**, *The Standard Template Library*. C/C++ Users Journal, 13(12):20-24, 1995.
- Johannes Sametinger**, *Software Engineering with Reusable Components*. Springer, 1997.
- Yannis Smaragdakis and Don Batory**, *Implementing Reusable Object-Oriented Components*. in Proceedings of the Fifth International Conference on Software Reuse, 1998.
- Bjarne Stroustrup**, *C++ Programming Language*. IEEE Software (special issue on Multiparadigm Languages and Environments), 3(1):71-72, 1986.
- Bjarne Stroustrup**, *The Design and Evolution of C++*. Addison-Wesley, 1994.
- Bjarne Stroustrup**, *The C++ Programming Language*. Addison-Wesley, 1997.
- Clemens Szyperski and Rudi Vernik Establishing**, *System-Wide Properties of Component-Based Systems: A Case for Tiered Component Frameworks*. in Proceedings of the Workshop on Compositional Software Architectures, 1998.
- Michael VanHilst and David Notkin**, *Using C++ Templates to Implement Role-Based Designs*. in Proceedings of the Second International Symposium on Object Technologies for Advanced Software, pages 22-37, 1996.
- Michael VanHilst and David Notkin**, *Decoupling Change from Design*. ACM SIGSOFT Software Engineering Notes, 21(6):58-69, 1996.
- Todd L. Veldhuizen**, [*Using C++ Template Metaprograms*](#). C++ Report, 7(4):36-43, 1995.
- Peter Wegner**, *Classification in Object-oriented Systems*. ACM SIGPLAN Notices, 21(10):173-182, 1986.
- David M. Weiss**, *Software Synthesis: The FAST Process*. in Proceedings of the International Conference on Computing in High Energy Physics, 1995.
- David M. Weiss and Chi Tau Robert Lai**, *Software Product-line Engineering: A Family-Based Software Development Process*. Addison-Wesley, 1999.
- Niklaus Wirth**, *Program Development with Stepwise Refinement*. Communications of the ACM, 14(4):221-227, 1971.