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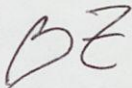
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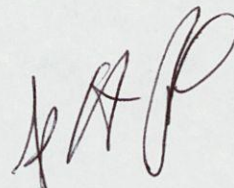
FACULTAD DE CIENCIAS EXACTAS Y NATURALES

1. DEPARTAMENTO: Computación
2. CUATRIMESTRE: Segundo de 2000
3. ASIGNATURA: Objet-oriented modeling and simulation in DEVS-Java
4. CARRERA: Licenciatura en Ciencias de la Computación
5. CARACTER DE LA MATERIA: optativa
6. NUMERO DE CODIGO DE CARRERA: 18
7. NUMERO DE CODIGO DE MATERIA: C
8. PUNTAJE: 1
9. PLAN DE ESTUDIOS AÑO: (1993) (1987)
10. DURACION DE LA MATERIA: una semana
11. HORAS DE CLASE SEMANAL:
  - a) TEORICA/PRACTICA: 15hs
  - b) LABORATORIO: ---
  - c) PRACTICAS: ----
  - d) SEMINARIOS: ---
12. CARGA HORARIA TOTAL: 15 hs semanales
13. ASIGNATURAS CORRELATIVAS: nociones básicas de programación orientada a objetos
14. FORMA DE EVALUACION: prácticos y final
15. PROGRAMA Y BIBLIOGRAFIA: adjuntos a esta hoja

Fecha: 29 de junio 2000



Prof. Responsable  
Dr. Bernard P. Zeigler



Directora Dra. Patricia Borensztejn

### M3 - " Object- Oriented Modeling and Simulation in DEVS-Java"

#### **Horario: 9 a 12 horas**

El Dr. Bernard P. Zeigler es profesor de la Universidad de Arizona, Tucson, en el departamento de Ingeniería Eléctrica y de Computación y es además director del grupo de investigación en Inteligencia Artificial y Simulación. Tras haber recibido premios por sus libros y artículos sobre las bases de la simulación el Dr. Zeigler ha sido nombrado Fellow de la IEEE. En 2000 ha recibido el más alto reconocimiento por sus contribuciones a la simulación de eventos discretos, el premio McLeod Founders de la Computer Simulation Society.

#### **Programa:**

The presentation is based on the Discrete-Event System Specification (DEVS) which is an increasingly accepted framework for understanding and supporting the activities of modeling and simulation. The US Department of Defense is promoting the High Level Architecture (HLA) standard for distributed simulation focusing on interoperability of existing geographically dispersed simulation assets. CORBA is a widely accepted middleware to support distributed software systems and offers complementary services to those of HLA.

The course consists of two parts. Part I is an introduction to basic DEVS concepts and how it supports systems modeling, design and engineering. Part II employs the perspective gained to discuss implementation of distributed simulation infrastructures based on DEVS in both the HLA and CORBA contexts. Examples of industrial-strength environments that have been implemented using the DEVS framework with either HLA or CORBA are also reviewed.

1. M&S in DoD and Business Contexts: Roles of HLA, CORBA and DEVS
2. Systems Concepts and Fundamentals of Modeling and Simulation
3. Basic DEVS Concepts. DEVS Formalism
4. Object Oriented DEVS Computational Environment
5. Creating DEVS C++/Java Models
6. HLA Basics. HLA Federation Development
7. DEVS/HLA Requirements, Design and Implementation
8. Creating Federations in DEVS/HLA
9. DEVS/CORBA Requirements, Design and Implementation
10. Creating Distributed Simulations in DEVS/CORBA
11. Efficient Large Scale Distributed Simulation
12. Collaborative/Distributed DEVS/HLA
13. DEVS/HLA Joint MEASURE: A Full-Capability System-of-Systems Environment
14. Zero Lookahead Simulation: Timing Issues in Distributed Simulation
15. DEVS/HLA Tools

The course is based on the above modules. A comprehensive slide presentation will be part of the course materials with additional material available through our web site ([www.acims.arizona.edu](http://www.acims.arizona.edu)). However, not all of the modules can be covered in the time available. The coverage will be determined, in part by, attendee preferences.

#### **Prerrequisitos**

Se requieren nociones básicas de programación orientada a objetos.

**ESTE CURSO SE DICTARA EN INGLES**

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