

INGEGNERIA INFORMATICA (LM75)

(Lecce - Università degli Studi)

Insegnamento PROGRAMMAZIONE DI SISTEMA

GenCod A007901

Docente titolare Francesco TOMMASI

Docenti responsabili dell'erogazione
VALERIO DE LUCA, Francesco TOMMASI

Insegnamento PROGRAMMAZIONE DI SISTEMA

Insegnamento in inglese SYSTEM PROGRAMMING

Settore disciplinare ING-INF/05

Corso di studi di riferimento
INGEGNERIA INFORMATICA

Tipo corso di studi Laurea Magistrale

Crediti 9.0

Ripartizione oraria Ore Attività frontale: 81.0

Per immatricolati nel 2024/2025

Erogato nel 2024/2025

Anno di corso 1

Lingua ITALIANO

Percorso PERCORSO COMUNE

Sede Lecce

Periodo Primo Semestre

Tipo esame Orale

Valutazione Voto Finale

Orario dell'insegnamento

<https://easyroom.unisalento.it/Orario>

BREVE DESCRIZIONE DEL CORSO

UNIX System Overview
UNIX Standardization and Implementations
File I/O
Files and Directories
System Data Files and Information
Process Environment
Process Control
Process Relationships
Signals
Threads
Thread Control
Daemon Processes
Advanced I/O
Interprocess Communication
Network IPC: Sockets
Terminal I/O

PREREQUISITI

All the concepts presented in the "Sistemi Operativi" course in the first level degree "Ingegneria dell'Informazione". Namely, a good knowledge of: UNIX® basic concepts, the UNIX® bash shell, bash scripting, main UNIX® commands

OBIETTIVI FORMATIVI	<p>Overview</p> <p>The course aims at starting the students off on programming system applications (e.g. a server) on a UNIX® System.</p> <p>Learning Outcomes; after the course the student should</p> <ul style="list-style-type: none">* Know the most important functionalities and facilities offered by a UNIX® system, the System Calls (and, more generally, the APIs) offered to access them.* Be able to write efficient CLI (Command Line Interface) system and network applications in the C language.* Know how to write interoperable applications by complying with the UNIX® standards (SUSv3, SUSv4).* Know which are the main differences between the MacOS and the Linux varieties and how to cope with them.
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METODI DIDATTICI	<p>The course is strongly oriented towards an hands-on methodology. Students must follow lectures in front of a computer which must be used to reproduce and test what is expounded by the</p>
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MODALITA' D'ESAME	<p>Writing a C program aimed at solving a given problem within a given time. Students are free to consult (paper and digital) texts.</p>
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ALTRE INFORMAZIONI UTILI	<p>Computer Science is a very structured subject. Beware: missing a lecture could hinder understanding of all it follows.</p>
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PROGRAMMA ESTESO	<p>UNIX System Overview</p> <p>UNIX Standardization and Implementations</p> <p>File I/O</p> <p>Files and Directories</p> <p>System Data Files and Information</p> <p>Process Environment</p> <p>Process Control</p> <p>Process Relationships</p> <p>Signals</p> <p>Threads</p> <p>Thread Control</p> <p>Daemon Processes</p> <p>Advanced I/O</p> <p>Interprocess Communication</p> <p>Network IPC: Sockets</p> <p>Terminal I/O</p>
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TESTI DI RIFERIMENTO

F. Tommasi "Alla Scoperta di UNIX - Esplorare GNU/Linux e macOS con la linea di comando" 2a edizione, Aprile 2024, ISBN: 979-1221056372

Stevens, Rago, Advanced Programming in the UNIX Environment, 3rd Edition, Addison-Wesley, 2013 ISBN 978-0321637734

Stevens, Fenner, Rudoff, Unix Network Programming, Volume 1: The Sockets Networking API (3rd Edition), Addison-Wesley, 2003 ISBN 978-0131411555

Kerrisk, The Linux Programming Interface, NO STARCH PRESS, 2010 ISBN 978-1593272203

Handouts will be delivered by the teacher through <https://elearning.unisalento.it>