

INGEGNERIA INFORMATICA (LM75)

(Lecce - Università degli Studi)

Insegnamento PROGRAMMAZIONE DI SISTEMA E DI RETE

GenCod A006813

Docente titolare Francesco TOMMASI

Insegnamento PROGRAMMAZIONE DI SISTEMA E DI RETE

Insegnamento in inglese SYSTEM AND NETWORK 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 2022/2023

Erogato nel 2022/2023

Anno di corso 1

Lingua ITALIANO

Percorso PERCORSO COMUNE

Sede Lecce

Periodo Primo Semestre

Tipo esame Orale

Valutazione Voto Finale

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.
----------------------------	--

METODI DIDATTICI	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 explained by the teacher-
-------------------------	--

MODALITA' D'ESAME	Writing a C program aimed at solving a given problem within a given time. Students are free to consult (paper and digital) texts and to use Internet search engines.
--------------------------	--

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>
-------------------------	--

TESTI DI RIFERIMENTO	<p>F. Tommasi "Alla Scoperta di UNIX - Esplorare GNU/Linux e macOS con la linea di comando", Marzo 2021, ISBN: 9791220082204</p> <p>Stevens, Rago, Advanced Programming in the UNIX Environment, 3rd Edition, Addison-Wesley, 2013 ISBN 978-0321637734</p> <p>Stevens, Fenner, Rudoff, Unix Network Programming, Volume 1: The Sockets Networking API (3rd Edition), Addison-Wesley, 2003 ISBN 978-0131411555</p> <p>Kerrisk, The Linux Programming Interface, NO STARCH PRESS, 2010 ISBN 978-1593272203</p> <p>Handouts delivered by the teacher through http://moodliis.unisalento.it/</p>
-----------------------------	---