Dipartimento di Ingegneria Elettrica e dell'Informazione, Politecnico di Bari (http://dee.poliba.it)

**ALTRE INFORMAZIONI**

C/C+: Programmer’s Reference

**ULTERIORI TESTI SUGGERITI**

C++ Fondamenti di programmazione

**TESTI DI RIFERIMENTO PRINCIPALI**


**ULTERIORI TESTI SUGGERITI**

C/C+: Programmers Reference Herbert Schildt
<table>
<thead>
<tr>
<th>Master Degree class:</th>
<th>First level (three years) degree:</th>
<th>Academic year:</th>
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<tbody>
<tr>
<td>Informatics and Automation Engineering (L-8)</td>
<td>Informatics and Automation Engineering (L-8)</td>
<td>2014 - 2015</td>
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<thead>
<tr>
<th>Type of course</th>
<th>Disciplinary area</th>
<th>Scientific Discipline Sector</th>
<th>ECTS Credits</th>
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<td>Different abilities</td>
<td>Information Engineering</td>
<td>(ING-INF/05)</td>
<td>3</td>
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<tr>
<th>Title of the course</th>
<th>Code</th>
<th>Type of course</th>
<th>Year</th>
<th>Semester</th>
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<tr>
<td>Informatics Lab</td>
<td>2157</td>
<td>Due</td>
<td>1st</td>
<td>2nd</td>
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**LECTURER:**
Prof. Vitoantonio Bevilacqua (Tenured Assistant Professor)

**Hours of Instruction:**
3 ECTS: (24 hours of lab)

**PREREQUISITES:**
The aim of this course is to explain the use of C/C++ compiler.

**AIMS:**
- Use of Compilers and interpreters: lexical, syntax and semantic analysis, generation of the object code.
- Implementation of Algorithms and modeling of data structures
- Examples of implementations of C programs: use of declarative and executive section. Variables of a program. Data types: data type definition, predefined types (built-in) and user-defined types; simple types: int, float, char and double, if-else, while; other cyclic instruction: for, do-while, switch-case, array and structured variables characteristics; type constructor: array constructor, struct constructor, pointers constructor, function definition, declaration of a function: header, return instruction, parameters: passing parameters, call of a function, current and formal parameters, memory management, activation record. Viability rules of a variable. Read, write and default functions; libraries.
- Text and Binary files and Stack Memory Management.

**TEACHING METHODS:**
Pc LAB and use of C/C++ compilers to design, coding, running and testing algorithms.

**EXPECTED OUTCOME AND SKILLS:**
- Ability to design, implement and test algorithms in structured programming (C language)
- Ability to design, implement and test algorithms in object oriented programming (C++ language)

**TEACHING AIDS:**
Laptop with development environment for C/C++ languages and video projector. Lecture notes, teacher notes, exams calendar and news from http://www.vitobevilacqua.it/ and file sharing systems.

**EXAMINATION METHOD:**
Oral examination to verify C/C++ knowledge and discussion about a project implemented on a real scenario.

**BIBLIOGRAPHY:**
- Linguaggio C - Guida alla programmazione 4/ed Alessandro Bellini, Andrea Guidi
- C++ Fondamenti di programmazione - Harvey M. Deitel, Paul J. Deitel

**FURTHER BIBLIOGRAPHY:**
- C/C+: Programmer’s Reference Herbert Schildt

**FURTHER INFORMATIONS:**
Department of Electrical and Information Engineering, Politecnico di Bari (http://dee.poliba.it)
Lecturer room at 3rd floor, tel. 0805063326 (int 3326), e-mail: vitoantonio.bevilacqua@poliba.it.