### Bachelor in Communication sciences and culture

<table>
<thead>
<tr>
<th>Course title:</th>
<th>Introduction to Computer Science for Communication Science</th>
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<tbody>
<tr>
<td>Course year:</td>
<td>2016-2017</td>
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<tr>
<td>Semester:</td>
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<td>Course code:</td>
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<td>Scientific sector:</td>
<td>INF 01</td>
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<tr>
<td>Lecturer:</td>
<td>Gabriella Dodero</td>
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<tr>
<td>Module:</td>
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<td>Lecturer other module:</td>
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<tr>
<td>Credits:</td>
<td></td>
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<tr>
<td>Total lecturing hours:</td>
<td>45 (30 lecture + 15 laboratory)</td>
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<tr>
<td>Total Hours of availability for students and tutoring:</td>
<td>15</td>
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<tr>
<td>Office hours:</td>
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<tr>
<td>Attendance:</td>
<td>according to the regulation</td>
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<tr>
<td>Teaching language:</td>
<td>English</td>
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<td>Propaedeutic course:</td>
<td>none</td>
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<td>Course description:</td>
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<td>Specific educational objectives:</td>
<td>The course has the objective of introducing participants to computer science and to the specific aspects of this discipline that are fundamental today for any communication task, in a global and multi-disciplinary perspective. The course follows a precise direction, stated in terms of basic concepts of computer skills by the European Computer Driving License (ECDL), specifically “Basic” and “Standard” modules. The main objectives are therefore the acquisition of basic computer skills that today are indispensable for any knowledge worker. A specific focus, both in frontal and laboratory lectures will be given to those skills that are useful for communications sciences.</td>
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| List of topics covered: | The course takes the list of topics from the European Computer Driving License (ECDL – [http://www.ecdl.org](http://www.ecdl.org)), in particular from basic and standard modules. In details, here follows the list of topics extracted from the mentioned programs:  
  - Base Modules  
    - Computer Essentials  
      - Understand key concepts relating to ICT, computers, devices and software.  
      - Start up and shut down a computer  
      - Work effectively on the computer desktop using icons, windows  
      - Adjust the main operating system settings and use built-in help features  
      - Create a simple document and print an output |
- Know about the main concepts of file management and be able to efficiently organise files and folders
- Understand key storage concepts and use utility software to compress and extract large files
- Understand network concepts and connection options and be able to connect to a network
- Understand the importance of protecting data and devices from malware, and the importance of backing up data
- Recognise considerations relating to green IT, accessibility, and user health

  o Online Essentials
    - Understand web browsing and online security concepts
    - Use the web browser and manage browser settings, bookmarks, and web outputs
    - Search effectively for online information and critically evaluate web content
    - Understand key copyright and data protection issues
    - Understand concepts of online communities, communications and e-mail
    - Send, receive e-mails and manage e-mail settings
    - Organise and search e-mails and use calendars

  o Word Processing
    - Understand web browsing and online security concepts
    - Use the web browser and manage browser settings, bookmarks, and web outputs
    - Search effectively for online information and critically evaluate web content
    - Understand key copyright and data protection issues
    - Understand concepts of online communities, communications and e-mail
    - Send, receive e-mails and manage e-mail settings
    - Organise and search e-mails and use calendars

  o Spreadsheets
    - Work with spreadsheets and save them in different file formats
    - Choose built-in options, such as the Help function, within the application to enhance productivity
    - Enter data into cells; use good practice in creating lists
    - Select, sort and copy, move and delete data
    - Edit rows and columns in a worksheet
    - Copy, move, delete, and appropriately rename worksheets
    - Create mathematical and logical formulas using standard spreadsheet functions; use good practice in formula creation; recognise error values in formulas
    - Format numbers and text content in a spreadsheet
    - Choose, create, and format charts to communicate information meaningfully
    - Adjust spreadsheet page settings
    - Check and correct spreadsheet content before finally printing spreadsheets

- Standard Modules
  - Presentation
    - Work with spreadsheets and save them in different file formats
    - Choose built-in options, such as the Help function, within the application to enhance productivity
- Enter data into cells; use good practice in creating lists
- Select, sort and copy, move and delete data
- Edit rows and columns in a worksheet
- Copy, move, delete, and appropriately rename worksheets
- Create mathematical and logical formulas using standard spreadsheet functions; use good practice in formula creation; recognise error values in formulas
- Format numbers and text content in a spreadsheet
- Choose, create, and format charts to communicate information meaningfully
- Adjust spreadsheet page settings
- Check and correct spreadsheet content before finally printing spreadsheets

Using Databases (partially)
- Understand what a database is.
- Understand the difference between data and information.
- Understand how a database is organized in terms of tables, records and fields.
- Know some of the common uses of large-scale databases like: airline booking systems, government records, bank account records, hospital patient details.

IT Security
- Understand the importance of keeping information and data secure, and identify common data/privacy protection, retention and control principles.
- Recognise threats to personal security from identity theft and potential threats to data from using cloud computing.
- Be able to use passwords and encryption to secure files and data.
- Understand the threat of malware and be able to protect a computer, device or network from malware and address malware attacks.
- Recognise common network and wireless security types and be able to use personal firewalls and personal hotspots.
- Protect a computer or device from unauthorised access and be able to safely manage and update passwords.
- Use appropriate web browser settings and understand how to authenticate websites and browse the web securely.
- Understand communication security issues that can arise from using e-mail, social networks, voice over Internet protocol, instant messaging and mobile devices.
- Back up and restore data to local and cloud storage locations and delete and dispose of data and devices securely.

Online Collaboration
- Understand the key concepts relating to online collaboration and cloud computing
- Set up accounts to prepare for online collaboration
- Use online storage and web-based productivity applications to collaborate
- Use online and mobile calendars to manage and plan activities
- Collaborate and interact using social networks, blogs, and wikis
- Schedule and host online meetings and use online learning environments
- Understand key mobile technology concepts and use features such as e-mail, applications, and synchronisation

For the modules highlighted with (partially), topics of the respective program will be reduced to those relevant for communication science

| Teaching format: | Frontal lectures and laboratory exercises. Due to the importance of practical experience with technology, students are requested to always bring a laptop, which may be borrowed by the ICT services before the lecture, if they have no personal laptop. Tablets or smartphones cannot substitute the laptop. |
| Learning outcomes: | Knowledge and understanding:  
  - understanding of the main concepts related to ICT that form the set of skills and knowledge that are crucial today for everybody, and that could be useful in any communication task, both from a theoretical and practical point of view  
  - knowledge about main tools and techniques available from computer science to improve communication skills  
  - understanding what kind of tools could be useful in which situation, and how to use them fruitfully  

Applying knowledge and understanding:  
- Acquire a practical experience on using ICT in any context where they can be applied for improving communication  
- Acquire a practical experience on using ECDL tools for computer-mediated communication  

Making judgments  
- Critical thinking and making judgment about present, current and future use of ICT within communication tasks  

Learning capabilities  
Students will developed their skills in a variety of areas during the course and will have engaged with the following:  
- Independent learning and working  
- Working with others  
- Communication  
- Personal reflection  
- Elements in problem analysis regarding web design and visual communication  

Communication capabilities:  
- Capabilities of using computers and networks to communicate with different communication media, synchronous and asynchronous  
- Capability of using new media and some visual tools in various area of modern communication, specifically those involving ICT  

| Assessment: | 30% - written exam on theoretical parts  
70% - lab parts  
Optionally, students can submit project work during the semester, which (if sufficient) shall reduce to about a half the part of the syllabus to be assessed at the exam.  
Such project work can be submitted via the ole.unibz.it platform, both by attending students and by non-attending students. |
| **Evaluation criteria and criteria for awarding marks:** | • in relation to the written test, correctness of answers and relevance of argument with respect to the contents will be evaluated, together with the ability to synthesis;  
• in relation to laboratory test, the proper and efficient use of computer tools addressed during the lab hours will be evaluated |
| **Required readings:** | • any text referring to the ECDL as presented in [http://www.ecdl.org](http://www.ecdl.org), limited to the modules of the ECDL training program indicated in “List of topics covered” section  
• study material and bibliography provided by the teacher, by means of the ole.unibz.it portal. |
| **Supplementary readings:** | |