

# Basic computer Science for medical students

AA 20/21

Angelo Gargantini

School of Medicine and Surgery

# Prof. Angelo Gargantini

- Associate professor of computer science (engineering)
- [angelo.gargantini@unibg.it](mailto:angelo.gargantini@unibg.it)
- [cs.unibg.it/gargantini](http://cs.unibg.it/gargantini)
  
- My research is on software engineering

# 2part of the course

- Another teacher:
- dott. Silvia Bonfanti
- Powerpoint and Database module

# Computer science for physicians? Really?



# What are the goals of this course?

- Basic knowledge of computers and information technology
- Efficient use of IT tools
  - To be more productive
  - To be safer (privacy and so on)
  - To be updated w.r.t. new technologies
- For personal use, as student, as professional
  - For gathering data in an effective way
  - For extracting new information

Copyright 2006 by Randy Glasbergen.  
www.glasbergen.com



**“More and more patients are going to the Internet for medical advice. To keep my practice going, I changed my name to Dr. Google.”**

# What we do then?

- 1. Basic concepts of ICT (Information and Communication Technology)
- 2. Computer use and files managing
- 3. Word processing (basic + advanced)
- 4. Spreadsheets (basic + advanced)
- 5. Database usage
- 6. Presentation
- 7. Web Browsing and Communication
- ?? Health care systems ??

# At the end

- what hardware and software are, and how to provide examples of systems. how computing networks are used and all the
- how to use the basic functions of the operating system . the able to efficiently organize files and folders so that they are software to compress and extract large files, and how to us from viruses .
- how to use simple editing tools and print management how to insert tables, images and import objects into documents
- how to work with spreadsheets and save them in various formats. how to choose, create and format charts to communicate information meaningfully.
- how to create a table, define and modify fields and their properties; enter and edit data in a table.
- how to work with presentations and save them in different file formats. • how to choose, create and format charts to communicate information meaningfully. • how to insert and edit pictures, images and drawings. . understand what Internet is and what are the key terms associated with it.
- Perform common tasks of web browsing, including changing the browser settings. • Understand what an e-mail is and know some advantages and disadvantages of its use. Be aware of other modes of communication.



# ... computer programming ...

[Journal List](#) > [Surg Neurol Int](#) > v.4; 2013 > [PMC3622380](#)



[Surg Neurol Int](#). 2013; 4: 30.

PMCID: PMC3622380

Published online 2013 Mar 22. doi: [10.4103/2152-7806.109461](https://doi.org/10.4103/2152-7806.109461)

## **Why physicians might want to learn computer programming**

[Pieter L. Kubben](#)\*



# Redeem your self

POPULAR

QUARTZ

OBS

## **Why I became a computer scientist instead of a doctor**



# Course material

- Main link:
- <http://cs.unibg.it/gargantini/didattica/basiccs4med/>
  - Material (books)
    - <http://cs.unibg.it/gargantini/didattica/basiccs4med/restricted/>
  - User: basiccs4med
  - Password: Bergam0
- Elearning site:
  - <https://elearning.unimib.it/course/view.php?id=20930>

# Calendar

- Follow the official calendar
  - I publish my calendar (with what has been done) on my google calendar
- On webex on our

# Clerkship 1

- BCS is also part of clerkship 1
- Laboratories will be considered for that

# Exam for this module

- Divided in two parts
  1. Some questions (manly closed) about the theory
    - Example: how many bits in byte... module 1, 2 and 7
  2. An exercise to do on computer where:
    - (3) Word: write a paper in a given format with some extra (like pictures, styles, ...)
    - (4) Excel: analyze some data (use formulas...)
    - (6) Presentation: write a presentation
    - (5) Database: design and implement a database
- For every exercise there is mark, the sum up to 32
- DATES:
  - 29/1/2021 9:00 13:00
  - 12/2/2021 9:00 13:00
  - 26/2/2021 9:00 13:00

# Exams for the entire course

- Each module will have a different exam
  - Normally modeling and imaging the same day, my module another day because we need the lab
- To pass the exam, all the modules must be passed (mine with  $\geq 17$ )
  - Also in different dates
  - The vote for one module will last till the end of the year (dec 2021)
  - The average will be the final vote.
    - `ROUND(AVERAGE(Q8:S8);0)`

# tools

- We normally use office 365 – with English interface
  - You can download it and install using your unimib account
- For database: we will use access (or BASE of libre office)
  - you can have a copy of MS access - See Microsoft Imagine Premium - from here:
    - <http://www.old.unimib.it/go/151599839649112306/Home/Italiano/Service-Desk/Software-download>
- In lab we have the ITALIAN and ENGLISH version
  - Change the language of the interface



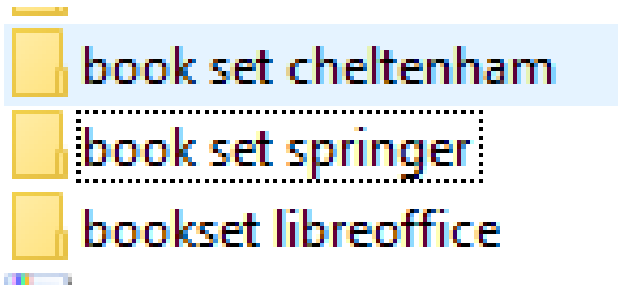
# Programs to be used for the exam

- you can use the programs installed on the laboratory machines (in italian)
- you can use your laptop - but with an empty user and no backup programs activated (like dropbox) and no wifi (no whatsapp, no skype, etc.)



# material

- Follow the syllabus
- on the restricted site:
  - slides
    - After the lessons (and not complete)
  - Several notes (as pdfs)
  - 3 book sets – chose one:



Module		Hours	on computer	totale
1	Basic concepts of ICT (Information and Communication Technology)	2		
2	Computer use and files managing	2		
3	Word processing	2	9	
4	Spreadsheets	4	9	
5	Database usage	4	7	
6	Presentation	2	2	
7	Web Browsing and Communication	2	0	
	•?? Health care systems ??			
		18	27	45

# Mandatory presence

- 70% of the hours.

# (virtual) laboratory

- VMware Horizon Client
- <https://vdi-libaas.si.unimib.it/>