Basic computer Science for medical students

AA 18/19

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- My research is on software engineering

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

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"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 exa[mples] [...]g systems. how computing networks are used and all the [...].

- how to use the basic functions of the operating system . th[...]e able to efficiently organize files and folders so that they are [...] software to compress and extract large files, and how to us[...]er from viruses .

- how to use simple editing tools and print management [...] how to insert tables, images and import objects into docu[ments].

- 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 …

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Why physicians might want to learn computer programming

Pieter L. Kubben*

Redeem your self

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
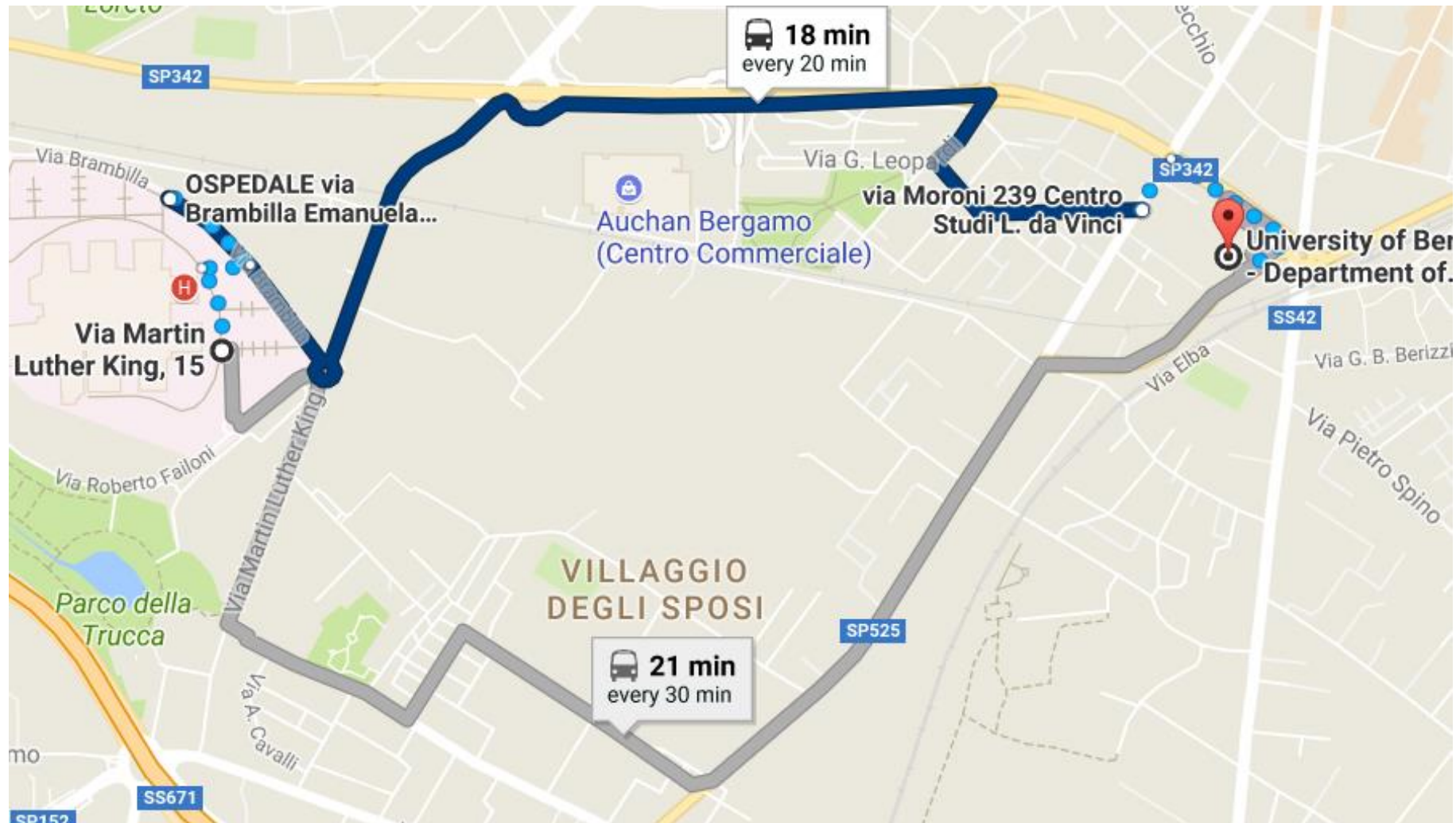
Calendar

- Online (my personal calendar)

Computer lab

lab 19 via dei Caniana – campus Economia - Bergamo
only 24 PCs
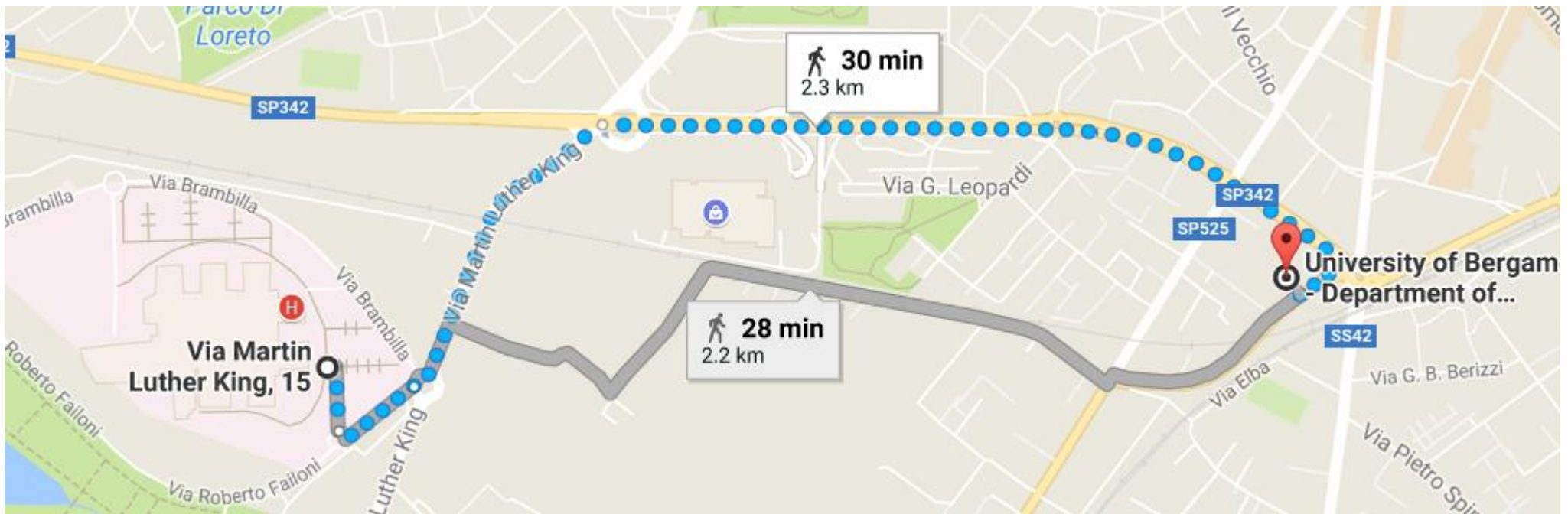
By public transporttion – bus n. 2 or 5

Date for labs

Giorno	Data	Ora inizio	Ora fine	Durata (in minuti)	Codice aula
lunedì	05/11/2018	09:00	13:00	240	CN-LB19
lunedì	05/11/2018	14:00	18:00	240	CN-LB19
lunedì	19/11/2018	09:00	13:00	240	CN-LB19
mercoledì	21/11/2018	14:00	18:00	240	CN-LB19
lunedì	03/12/2018	14:00	18:00	240	CN-LB19

Exam for this module

- Divided in two parts
    1. Some questions (manly closed) about the theory
        - Example: how many bits in byte…
    2. An exercise to do on computer where:
        - Word: write a paper in a given format with some extra (like pictures, styles, …)
        - Excel: analyze some data (use formulas…)
        - Presentation: write a presentation
        - Database: design and implement a database
    - For every exercise there is mark, the sum up to 32

- DATES: to be decided

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 >=17)
  - Also in different dates
  - The vote for one module will last till the end of the year (dec 2019)
  - 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 may have the ITALIAN version

Programs to be used for the exam

- you can use the programs installed on the laboratory machines (in italian)
- you can install your copy of libreoffice (in english) download
  - There is also a portable edition
- Use office 365 (no db is included) via web (in English)
  - For DB you can use BASE of libreoffice
- 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:

    📁 book set cheltenham
    📁 book set springer
    📁 bookset libreoffice
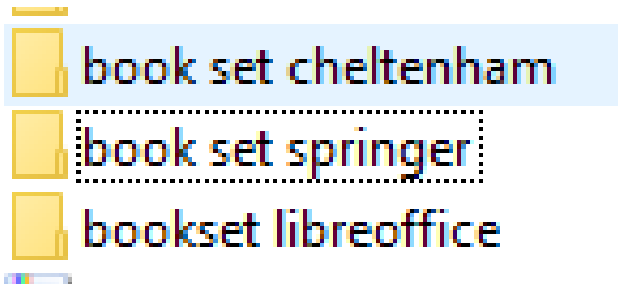
Module		Hours	on computer	totale	
1	Basic concepts of ICT (Information and Communication Technology)	2			
2	Computer use and files managing	2			di cui in caniana
3	Word processing	2	9		5
4	Spreadsheets	4	9		5
5	Database usage	4	7		5
6	Presentation	2	2		
7	Web Browsing and Communication	2	0		
	•?? Health care systems ??				
		18	27	45	15