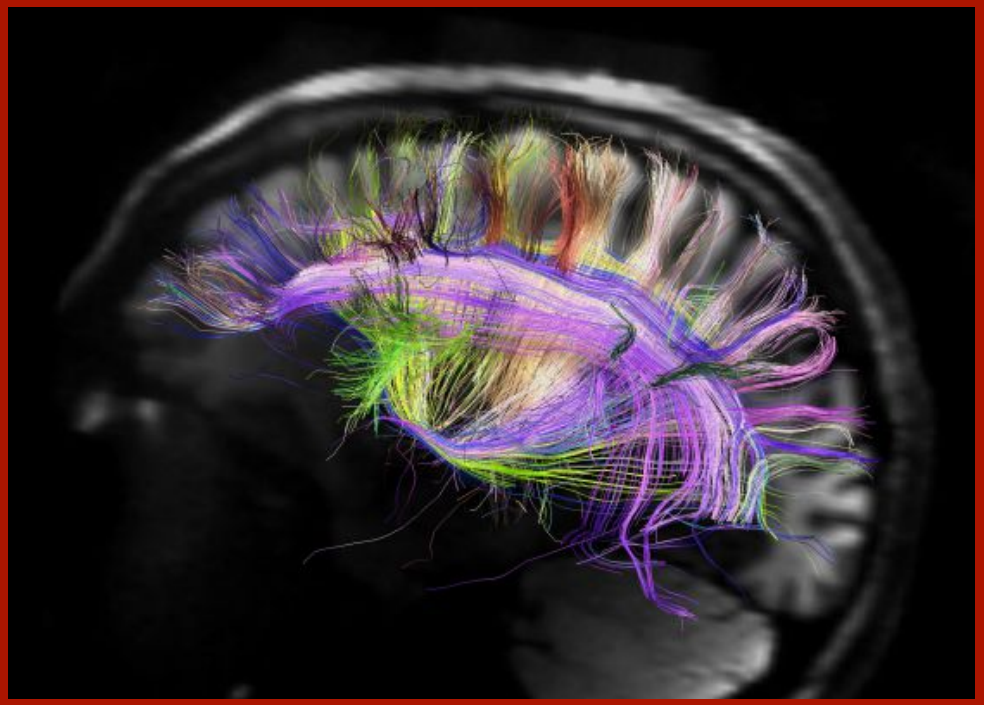

Introduction to Scientific Methodology

Carmel Ferragud, Rafaela Domínguez, Enric Novella
The History of Science

Documentation and Scientific Methodology
Pharmacy Degree

VNIVERSITAT DE VALÈNCIA

The Three Greats

- SCIENCE IN HISTORY
- SCIENCE IN ACTION
- SCIENCE IN SOCIETY

What can history offer us?

- An undeniable need for historical perspective
- A place in referential frameworks and the values of the profession
- A global vision (holistic) against growing specialisation in the health sciences
- An ethical and intellectual stimulus

Science in action

- A perspective that can question conventional and idealised images of science:
  - How do we obtain valid data, how do we construct explanations, theoretical models, etc?
  - How to use tools and what is the role of experimentation (including on animals)? How do we estimate error margins and control them, etc?
  - How can we study the efficiency of a drug? How do we write a scientific article?
  - How does scientific change happen? How do great scientific revolutions happen?

Science in society

- Pharmacy is not only developed in a laboratory: above all, it takes place in industry, shops, hospitals and homes
- Medical and pharmaceutical knowledge does not exist independently from social, political, cultural and economic contexts
- It is socially constructed knowledge and in constant interaction with other forms of knowledge

Unknown, *Pharmacy* (c. 1508)

Subject goals

1. Learn the **fundamentals of scientific methodology** and how to apply scientific method in **practice**
2. Critically examine the **social implications of technology and scientific change in health sciences**
3. Analyse the basic elements of how **health worker terminology** is formed
4. Become **reflectively aware** of what health, illness, and death have meant and mean to people
5. Be aware of the excessive **medicalisation** of our society and the **expropriation of health**

Contents

1. Syllabus

- Topics 9 to 24
- Topic 25: General review of the course

2. Presentations and notes

- Periodically posted on Virtual Classroom site

3. Complementary materials

- Available on Virtual Classroom site

Seminars

4. Human experimentation
5. The culture of drugs

Tutorials

2. Practical preparation of conceptual maps (syllabus)

Assessment

1. **Theoretical assessment:** There will be a final written exam, accounting for 50% of the grade. Students will need to obtain a minimum mark of 4 in this exam to pass the subject. The exam will consist of:
   a) Answering a question from topics 9 to 24. You must choose from one of three options
   b) Five short questions (answers on less than half a page) on specific parts of the syllabus, and where the ability to connect ideas and concepts will be valued

2. **Practical assessment:** You will be asked to present an activities notebook (40%) and a conceptual map (10%). The notebook will contain all the contents of the workshops and seminars related to the subject. This will be done individually, or in pairs, and will be presented via the Virtual Classroom site. If the workshops have been a result of pairwork, each member of the pair must present their notebook and clearly state the names of both students and how the group work was organised. If any part of the notebook has not been done, it must be left blank

Presenting the notebook and conceptual map

- Both must be sent before 23.55 hours on 7 January 2017 via the Tasks section on the Virtual Classroom site. This represents 50% of the total assessment grade and you will need a minimum mark of 4 (both for the activities notebook and the conceptual map) to pass the subject. If the activities notebook is the result of two students working together, the notebooks must be presented by both students on their corresponding sections on the Virtual Classroom site.
- All parts of the activities notebook and conceptual map must be the result of original work by the student, or pair of students. Any plagiarism from other works or documents will be sufficient motive for the student(s) to be failed.

Tutorials

- Wednesdays from 3pm to 6 pm in the office 0.36 (History of Science) of the Building Jeroni Muñoz
- Make an appointment beforehand by e-mail:

enric.novella@uv.es