# **Effective Communication Skills for Scientists**

### **Course website:**

https://celama.uca.es/International/II\_International\_Summer\_School\_ceimar/course\_II\_ Effective Communication Skills for Scientists

### **Objetives**

Presentations, posters and articles are the opportunity to broadcast your work to the scientific community and the general public. Although these forms of communication are an integral part of scientific work, many scientists do not spend enough time refining their communication skills. Too often, unattractive and overloaded scientific presentations and publications will confuse the audience and pass by unnoticed. Provided you have solid data and a story worth telling, your communication should be able to capture the attention of its intended audience. To do this, both content and presentation of your science are important to transmit the story you want to tell.

In this intensive and highly interactive course, we will focus on basic and advanced skills in science communication. Students will be introduced to modern theories of communication and the latest trends in design and presentations. Overall, the course will provide a hands-on approach with plenty of exercises on: title and abstract writing, constructing a story, principles of design and layout, use of graphics and colours, graphs, slides, poster and infographics preparation, presentation techniques, delivery and effective use of voice and body and the use of new tools to prepare your communication.

By practicing and constantly refining their skills through continuous feedback from the professors and peers, the participants will learn how to capture the attention of their audience and effectively tell their scientific story.

## **Keywords:**

Scientific communication. Storytelling. Posters. Infographics. Presentations. Visuals. Design. Delivery.

# **Course dates:**

4-8/7/2016

### **Application deadline:**

3/6/2016

# **Preliminary Programme:**

# Monday (04/07/2016)

09:00 - 10:00

**Theory.** Welcome to the Students. Course presentation. Principles of communication and psychology. Sokratis Papaspyrou.

How the brain functions.
Famous cases of good and bad communicators.
Unatractive and boring presentations.
The most common mistakes.
Can we do something about it?
Try it out yourself.

10:00 - 11:00 **Theory.** In the beginning... Planning your communication. Sokratis Papaspyrou.

What do you want to say.

To whom is the communication aimed at.

What is the purpose of the communication.

What is the best way to communicate on each ocassion.

Make good use of their and your time.

### 11:00 - 11:30 Coffee break

11:30 - 12:30 Workshop. Crafting the story. Structure and Storyline. Francesc Montserrat and Diana Vasquez.

Plan ahead.

How much content should I use?

Transitions.

Start analog.

What do I want my audience to remember?

Find your key points.

Putting it together.

12:30 - 13:30 Workshop. Titles, headlines, abstract and summaries. Francesc Montserrat and Diana Vasquez.

Catch the attention of your audience.

Prepare an effective abstract.

#### Lunch

13:30 - 15:30

**Workshop.** Short presentation: how to "elevator" pitch your work.

15:30 - 17:30 Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat, Diana Vasquez.

Students present an abstract of research/experiment, and 3 slides, 5 minutes. How can we improve it?

17:30 - 18:30 Workshop. Recap. What did we learn today? What can we improve? Francesc Montserrat and Diana Vasquez.

Comments on exercises, presentations, or visuals prepared on the day.

# Tuesday (05/07/2016)

**Workshop.** Visuals and communication style. S. Papaspyrou and Francesc Montserrat.

What to look for when designing graphs and slides.

Delete the defaults.

Presentation styles (Assertive-evidence, TED, Lessig, Pecha Kucha).

What to choose.

### 11:00 - 11:30 Coffee break

11:30 - 13:30 **Workshop.** Principles of graphic design. Fonts, colours, layout. Vanessa Gonzalez and Diana Vasquez.

Why graphic design is important in science.

Convert info into images.

Font uses: serif vs sans

Colour psychology.

Mess is boring (and confusing).

### 13:30 - 15:30 Lunch

# 15:30 - 17:30 **Workshop.** Figures, Diagrams, and Graphs. Vanessa Gonzalez and Diana Vasquez.

We can love graphics.

Defeat graphical distorsion.

Label power.

Diagrams composition.

Photos vs figures.

What message do you want to convey?

How can I improve this graph?

# 17:30 - 18:30 Workshop. Recap. What did we learn today? What can we improve? Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat and Diana Vasquez.

Comments on exercises, presentations, or visuals prepared on the day.

# Wednesday (06/07/2016)

# **Workshop.** Put the WOW factor in your slides. Vanessa Gonzalez, Diana Vazquez and Francesc Montserrat.

Design fundamentals in slides (colors, fonts, and layout).

Simplicity to reinforce your message.

Supersize your message.

Your presentation is not a teleprompter.

Images use.

How to capture the attention of the audience.

How to present data.

Alternatives to Powerpoint.

Where to find resources.

### 11:00 - 11:30 Coffee break

# 11:30 - 13:30 **Workshop.** Create an effective poster. Vanessa Gonzalez, Diana Vasquez and Francesc Montserrat.

For whom is your poster?

The five questions before designing your poster.

Stay visual.

Scale, contrast, and harmony.

Color use.

Create your grid.

Prepare your images.

Why you should not use Powerpoint for your posters.

Professional alternatives to Powerpoint.

Prepress tips: understand your printer for best results.

13:30 - 15:30 Lunch

**Workshop.** The new age: Infographics. Vanessa Gonzalez and Diana Vasquez.

What is an infographic.

Short history and types.

Infographics in science.

Understand visual messages.

Infographic structure.

Order is basic: the grid.

Visual codes.

Page layout.

Infographics analysis.

17:30 - 18:30 Workshop. Recap. What did we learn today? What can we improve? Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat and Diana Vasquez.

Comments on exercises, presentations, or visuals prepared on the day.

## Thursday (07/07/2016)

09:00 - 11:00 Workshop. Delivery. Francesc Montserrat and Diana Vazquez

It's all about practice.

Types of delivery.

Impromptu speaking.

Memorising.

Reading.

The room, the audience, and you.

Keep track of the time.

11:00 - 11:30 Coffee break

11:30 - 13:30 **Workshop.** Use of Body and voice. Francesc Montserrat and Diana Vazquez

Relaxation techniques.

Breathing technique.

Control of posture.

Use of voice.

Performance techniques.

Voice projection.

Holding an audience's attention.

13:30 - 15:30 Lunch

15:30 - 17:30 **Workshop.** Practice your presentation. Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat and Diana Vasquez.

Students will practice in small groups with one of the professors.

17:30 - 18:30 Workshop. Recap. What did we learn today? What can we improve? Francesc Montserrat and Diana Vasquez.

Comments on exercises, presentations, or visuals prepared on the day.

### Friday (08/07/2016)

**Workshop.** Mini conference by the students. Open to the public. Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat and Diana Vasquez.

Our 10 min talk mini congress. How did we do? Discussion and evaluation by peers.

11:00 - 11:30 Coffee break// Poster session. Open to the public.

11:30 - 13:30 **Workshop.** Mini conference contd. Open to the public. Sokratis Papaspyrou, Vanessa Gonzalez, Francesc Montserrat and Diana Vasquez.

# **Professors:**

### Sokratis Papaspyrou, Non-Tenured Lecturer,

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### **Dr. Francesc Montserrat Trotsenburg**

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