

Subject: Training Course Visit to Biotechnical faculty (University of Montenegro)

Place: Podgorica, Montenegro

Date: 20th January to 23rd January, 2015

Procurement plan: Training, line 5

Training course visit to Podgorica is planned to provide a three-day course on academic research skills to LOVCEN project researchers. The course will take place at Biotechnical faculty.

Training visit goals and activities WP 3 b

The title of the course is “Academic Research Skills”

The whole course, which targets young scientists developing a career in research, will give participants a wide range of skills needed to become good quality researchers, whatever their subject area. The course will also equip them with a broad range of generic (lifelong learning) skills, valuable for any career in academia and commerce. Through a combination of lectures, workshops and exercises the course provides the following learning outcomes:

- to know how to look for the truth and to recognise when it has been found,
- to acquire skills to develop arguments and ideas and present them in a logical manner,
- to recognise what makes a well-designed piece of research,
- to appreciate the importance of quality control at every step in the research cycle,
- to appreciate different methods for processing and analysing experimental results,
- to be able to construct a good quality scientific paper for publication in English,
- to be able to present results effectively in either tabular or figure formats,
- to acquire skills in presenting scientific research to others at meetings in poster and oral formats,
- to appreciate the criteria needed to write a successful research proposal,
- to acquire basic skills for self-management, decision-making and strategic planning,
- to be able to prepare an effective CV and motivation letter for career development,
- to appreciate the qualities needed for effective research student supervision and mentoring.

The course has six main sections, the first two of which will be given during this visit:

Good quality research: Looking for the truth, hypothesis testing, the research cycle, the research pyramid, a Gantt chart in practice, principles of experimental design, anticipating problems, the Null Hypothesis, sources of error, data quality control, errors in biochemical analyses, ignoring data but avoiding fraud.

Scientific writing skills: Marketing strategy to persuade a publisher to want your paper, recognising whether you have good quality science, different types of research papers, suitable journals, impact factors, journal instructions for authors, "once upon a time ... they all lived happily ever after", how to tell a convincing story, recommendations for the Abstract, Introduction, Materials and Methods, Results, Discussion, improving the style and the English, the refereeing process.

Modules to be given later in the project:

Presentational skills: Interacting with stakeholders at scientific meetings, points to consider for posters, identifying the pros and cons of different poster styles, how to put together a PowerPoint presentation, preparing what to show, preparing how to show it, preparing the environment, commenting on a short presentation.

Writing research proposals: Examples of different types of proposal and the criteria to be met, the philosophy needed for success, background/objectives, workplan/Gantt and PERT charts, milestones and deliverables, management, risk analysis, budget, Logical Framework Matrix, a “road map” on developing skills in proposal writing, essential points to remember, taking part in Horizon 2020.

Management skills: Self-management, decision-making, time management, setting priorities (importance and urgency), strategic planning, SWOT analysis, career development, CVs and motivation letters.

Student supervision: The purpose of post-graduate research, example of a formalised research training programme, planning a research project, from novice technician to independent researcher, getting students constantly questioning, research ethics, getting used to writing, help with the thesis and viva.

Main goal of this visit is to give participants an appreciation of good quality research and skills in scientific writing through lectures and activities for participants during the two days of the course.

Arrival date: 20th January, 2015

Departure date: 23rd January, 2015