TRAINING NEEDS OF THE MIGUEL HERNÁNDEZ UNIVERSITY RESEARCH STAFF BY BRANCHES OF KNOWLEDGE

A survey was produced and submitted from 14 to 30 May 2021 using a Google Docs form in order to make a training proposal to the research staff. The response rate was 26.1%. A total 181 researchers took part (56.4% men and 43.1% women, with 0.5% not stating a gender). Regarding the number of researchers who answered the survey by categories: 29 R1, 37 R2, 54 R3 and 60 R4. Each researcher could choose a maximum three priority training proposals (1, 2 and 3) that they consider important for developing their research career.

The collected training proposals by branches of knowledge are the following.

ARTS AND HUMANITIES

PROPOSAL 1

- Data protection: use of images showing people.
- Resources for research in Art. Strategies to optimise efforts in artistic research.
- Research quality assessment.

PROPOSAL 2

- Copyright on the use of visual references (images with third party authors) in publications.
- Training for the appropriate accreditation of research merits in Cinematic Arts.
- Training for an efficient dissemination of research activities.

PROPOSAL 3

- Leadership in the dissemination of science.

SCIENCES

PROPOSAL 1

- Applying different statistical analyses using SPSS.
- How to avoid bureaucracy hindering or preventing you from conducting research.
- Course on equipment and basic instruments.
- Course on science philosophy.
- Course on writing ERC Advanced proposals.
- Graphic design for scientific publications.
- Statistics applied to field studies and data processing.
- Basic statistics for the processing of research data
- Statistics and Artificial Intelligence.
- Statistics for results of scientific experiments.
- Statistics and the creation of advanced graphs for scientific publications.
- Strategies to take part in the calls for proposals of national and/or European research projects.
- Oral presentations.
- Training on laboratory safety standards.
- Training on possible situations for boosting research activity.
- Training on scientific presentations on panels of experts.
- Training on internationalisation topics.

- Training on SDGs and Equality.
- Identifying possible priority sub-fields of the national plan to increase the possibility of securing funding.
- Statistical methods and techniques.
- Requests for European projects in collaboration with other universities.
- Programming.
- The social responsibility of science.
- Career opportunities and grants.
- Statistical treatment of experimental data.
- Use of new technologies to disseminate knowledge obtained in research.

PROPOSAL 2

- How to get your university to truly value excellence.
- Statistics courses for health science trials.
- Course on research ethics: designing experiments, analysing data with statistics programs, writing articles.
- Course on statistics.
- Course on writing proposals for European projects.
- Artificial intelligence.
- Basic programming for process automation.
- Science philosophy.
- Scientific English: spoken and written.
- Course on open databases (linked to scientific publications).
- Increase the amount of doctoral candidate training contracts.
- Training on producing European research projects.
- Training on group leadership.
- English classes.
- Industrial and intellectual property.
- Applications for ERC projects (individual).
- Notification of results.
- Transfer of science.
- How to produce a research project: what to take into account, how to produce a quote.

PROPOSAL 3

- Visual and image course to promote research.
- Course on computer programming.
- How to apply for grants/projects.
- Acquisition and advanced analysis of bibliographic resources: meta-analysis.
- Economic management of research projects.
- Postdoctoral contracts.
- Update in research methodology.
- Scientific communication.

HEALTH SCIENCES

PROPOSAL 1

- Data analysis and visualisation.
- Databases.

- Grants and funding for R1/R2 researchers.
- Good clinical practice.
- How to learn the publishing trends of a subject area from databases.
- How to find synergies with other research groups.
- How to create structural equation models.
- The visual communication of scientific results.
- Course on biostatistics.
- Course on good scientific practice.
- Course on statistics.
- Course on statistics applied to the analysis of experimental data.
- Rights and obligations of pre-doctoral fellows and supervisors.
- Health science study design.
- Statistics with R, SPSS and other statistical packages.
- Statistics: regression models.
- Training on novel laboratory trials.
- Research team management.
- Personal time management.
- Sustainable research based on the SDGs.
- Programming (Python, R, Matlab...).
- Tips to successfully publish a systematic review.
- The transfer of research results.
- Use of R (basic and advanced) for research staff.
- Link research to sustainable development goals and Agenda 2030.

PROPOSAL 2

- The approach to research and design queries.
- Essentials for conducting scientific publications.
- Supplementary training: Courses, Conferences, Seminars, Workshops, etc.
- How to search for new contacts-networks on apps and social networks.
- How to design and implement multi-centre projects.
- Advanced SPSS analyses.
- Project management skills, with particular emphasis on European and coordinated projects.
- Training on bioinformatics.
- Course on the transfer of research.
- Course on scientific dissemination and communication.
- Course on the availability and use of molecular analysis equipment at the UMH.
- Accreditation processes.
- The potential of Artificial Intelligence in Health Data Analysis (neural networks, Bayesian networks, etc.).
- How to shape your future as a researcher.
- How to design research projects.
- Training on the use of new machines.
- Improve productivity.
- Decision making: Use of reason and biases.
- How to lead a research team.

- Courses on soft skills for doctoral candidates (making public presentations, relationship with the supervisor, conflict resolution...).
- Advice not to fail in your accreditation process. What should we focus our energy on?
- Statistics.
- Writing documents for grants and calls for funding.
- Implementing the university research responsibility index of the UMH (IRIU) and/or recognising socially responsible research practice.

PROPOSAL 3

- Communication, written and spoken.
- Early guidance for a future research career.
- Learn how to achieve "basic" funding for translations or the analysis of data from articles/publications or expenses from publishing in journals.
- Improvements for public speaking, tools for presentations and the management of graphic material.
- Course on how to work with cell cultures.
- Course on programming with Python or similar software.
- Doctoral degree at the UMH: regulation and execution.
- How to write a scientific article.
- How to collaborate with public hospitals affiliated to the UMH.
- Time management.
- Resources for research: Funding sources and their calls for proposals.
- Animal testing.
- How to start a long-term research project from scratch.
- Bioinformatics and data analysis.

SOCIAL AND LEGAL SCIENCES

PROPOSAL 1

- Methodological and statistical aspects.
- Literature searches and the management of bibliographies for scientific publications.
- How to direct doctoral theses.
- How to perform literature reviews.
- Course on innovation of Social and Human Science research methodologies.
- Course on calls for proposals of national projects.
- Research stays abroad.
- Training on the use of programs to assess data in the branch of Social Sciences.
- Training to request funding from European projects.
- How to use the WoS.
- Scientific methodology.
- Intellectual property.
- Statistical resources.

PROPOSAL 2

- Searching for sources of funding for research.
- Data analysis with R.
- Doctoral degree modalities and how to approach them.
- Course on software for managing research on Social Sciences.
- Course on calls for proposals of regional projects.
- Dissemination of science and knowledge.
- Research methodologies in the branches of Social Sciences (focus group, etc.).
- Statistics.
- How to publish in high-impact journals.
- Packages and databases.

PROPOSAL 3

- How to disseminate science.
- How to write in article format (indexed journals).
- Course on software for managing data for research on Social Sciences.
- Course on calls for proposals of European and international projects.
- Literature search and management.
- How journal impact factors are measured.

ENGINEERING

PROPOSAL 1

- Annually: Presentation of EC funding options.

- Training on searching for aids or grants (national, regional, European, etc.), and on filling out and/or improving research project proposals.
- Specific courses on statistics programs.
- Personal development.
- Practical statistics.
- Ethics in research.
- E-mail management.
- Project management.
- New data analysis tools.
- Advanced English for scientific presentations.
- Artificial intelligence.
- Exchanging knowledge with other institutions.
- Writing research project reports and requests.
- Result transfer.

PROPOSAL 2

- Employability (companies, options, job pools, Spanish National Research Council [CSIC], etc.).
- Course on producing quotes.
- Statistical data analysis.
- Writing national and European projects.
- Gender equality in research.
- Team management.
- Course to help write reports to request projects.
- Keys to be successful in calls for proposals of research projects.
- Writing and managing research projects in and outside the EU.
- Advanced programming.
- Data protection.

PROPOSAL 3

- Sources of funding.
- How to create a “Data management plan” or course on data management.
- Meeting management.
- Course to disseminate research results in media outlets that reach the general public.
- Administrative processes to manage projects.
- Applied psychology in research.