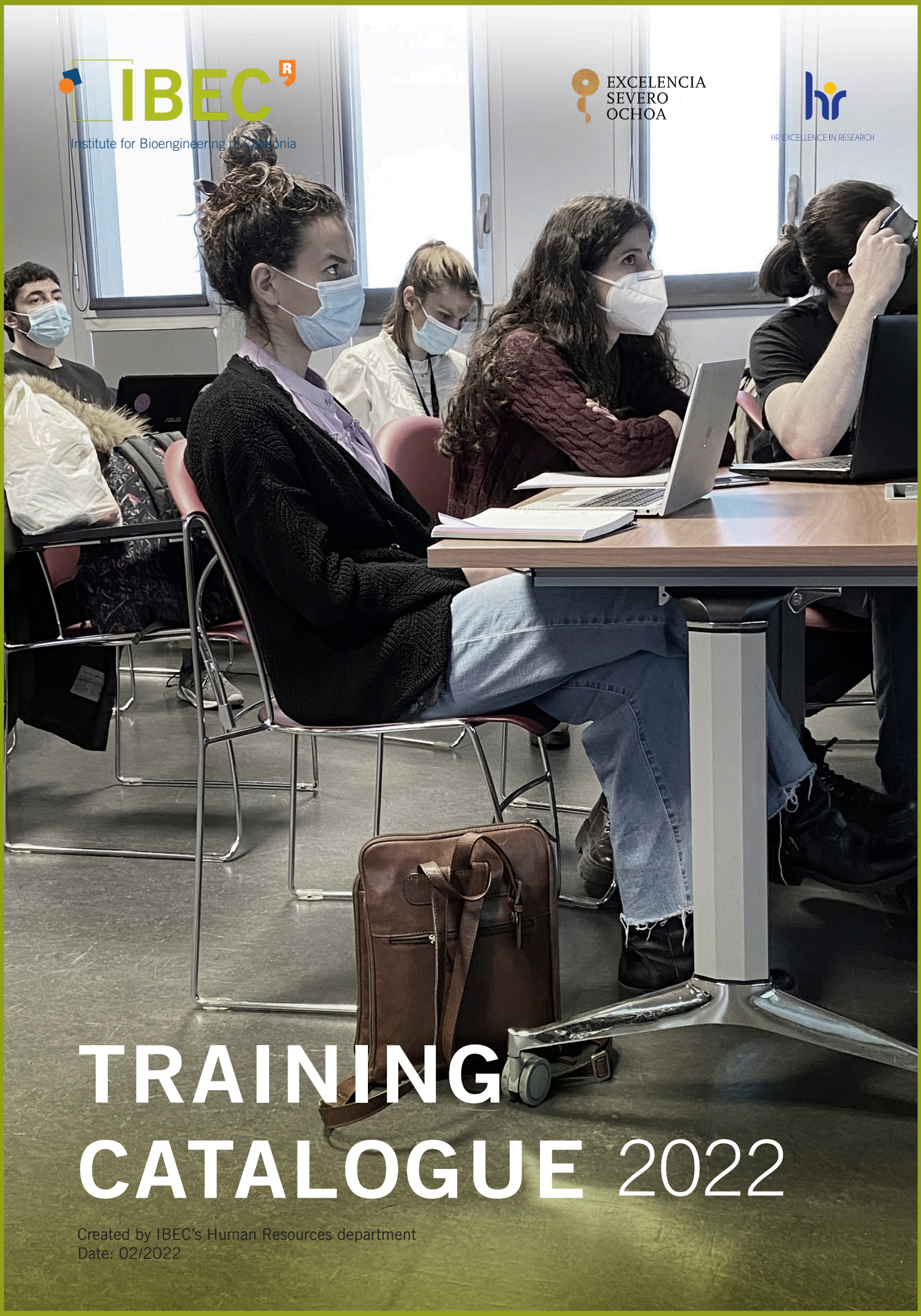
IBEC

Institute for Bioengineering of Catalonia

EXCELENCIA SEVERO OCHOA

HR EXCELLENCE IN RESEARCH



TRAINING CATALOGUE 2022

Created by IBEC's Human Resources department
Date: 02/2022

CONTENT

INTRODUCTION: TRAINING FOR CHANGE

IBEC's mission is achieved by carrying out different objectives, one of which is to train the next generation of experts in healthcare technologies. IBEC aims at preparing researchers to deliver brilliant research while giving them the opportunity to make the next steps onwards in their professional careers.

The worldwide pandemic has been extraordinary challenging for the whole Institute. We are proud to state, that since the beginning of the pandemic, we have been able to maintain our training offer at the same level as in previous years. We want to thank all our internal and external trainers and all participants for their ongoing patience and enthusiasm, together we kept the motivation and learning high through this challenging times.

In 2021 we learned that our researchers are passionate about IBEC´s ecosystem: the new training offer on TechTransfer attracted participants of all stages of the research career. We will continue to offer a broad range of training in this field for 2022. Another challenge for IBEC will be to open a conversation and implement policies on Open Science with all its implications. In 2022 we will include training on topics such as data management, scientific evaluation as well as citizens science.

The Training Catalogue for 2022 is fully aligned with the current IBEC Strategic Plan and the European Charter for researchers. Some of the training actions have been planned in the Action Plan of the Human Resources Strategy for Researchers (HRS4R). Moreover, our commitment to offer excellent training is even stronger for IBEC as a Severo Ochoa Centre of Excellence.

This Training Catalogue is a summary of the transversal skills, scientific tools, gender & diversity and health and safety courses offered to the IBEC community. It represents a work in progress as we adapt the existing courses and develop new ones, to stay up to date with the evolving needs of our researchers and the IBEC community. We want to highlight the high quality of trainers, a good mix of internal and external trainers, with academic and non-academic background.

As in last years, we also have included the courses organized by BIST. We would like to thank BIST to support the training activities of the seven research centers (CRG, IRB, ICFO, ICIQ, ICN2, IFAE, and IBEC) thus improving the skills and abilities of our researchers and supporting their professional development.

We would like to thank the PhD Committee and Postdoctoral Committee, deputy Talent and Training Dr. Elena Martinez as well as the Group Leaders who have collaborated in collecting the training needs of IBEC's researchers, as well as their contributions in defining some of the courses in this Training Catalogue. We also want to thank the work council at IBEC for their collaboration and for making this Training Catalog possible. Some of the training activities are funded by the Spanish Ministry of Science and Innovation under the grant Centros de Excelencia Severo Ochoa y Unidades de Excelencia María de Maeztu (CEX2018-000789-S).

As a novelty, we have included participants testimonials for some of our courses. They share why the course was relevant to them and offer their advice if you need help with choosing the workshops that best fits your need at any given time of your career.

Carolina Marí, Head of Human Resources

CATEGORIES OF TRAINING ACTIVITIES

Transferable skills

- Communication: Writing and Oral skills
- Leadership and management skills
- Entrepreneurial skills and Technology Transfer

Scientific tools and techniques

- Visualizing Data; Image J and Video processing; Statistical Analysis; Matlab; Tips and tricks to achieve good results at the bench; Image creation and photographic edition; Excel, etc.

Gender & Diversity

- Integration of Gender dimension into research

Health & Safety

- Courses focused on job requirements in the laboratory and offices, safety course, well-being and health promotion courses, such as yoga classes.

Languages

REGISTRATION INSTRUCTIONS

As of February 2022, the registration system will be available at our IBECNET.

With this Intranet functionality, we will avoid time-consuming and repetitive tasks, such as sending and receiving emails.

Instructions for the process of inscription:

Important: To assure your participation, a **TWO-STEP** process is necessary. Without the second step, your inscription will not be registered.

- Click on the button "Training" at the IBECNET.
- Click on the course you are interested to attend. Your data will be uploaded automatically from our database. **Register** for the course **(Step 1)**
- Step 1 will be followed by an eligibility check by the HR Unit based on: predefined eligibility criteria; representativity of different areas, research groups and Units and chronological order of inscriptions.
- You will receive an email from HR where you will be asked to **confirm (Step 2)** your attendance at the IBECNET. Your confirmation closes the process.
- Once you have confirmed your supervisor will be informed by email.

AT THE IBECNET, 2 PERIODS FOR INSCRIPTIONS ARE AVAILABLE:

- From February to mid-July, for the courses within this period.
- From mid-July to December for the courses within this period.

Cancelation:

Once you have confirmed your attendance you must give at least 3 days (72 hours) notice if you wish to cancel, so that we have the possibility of finding another person to take your place. **If you fail to do this, you may not be permitted to participate in a future course.**

In case of unavoidable, last-minute cancellations such as illness, please send an urgent email to hr@ibecbarcelona.eu or call extension 24487 / 31144 so that we can try to fill your place.

Any IBEC member may participate in training activities free of charge; however, in some courses there is an eligibility criterion depending on career experience or other considerations. These are specified in the description of each course. In most of the courses free spots are offered to IBEC Alumni members.

When the training activity extends beyond lunchtime, a lunch meal or sandwiches will be covered by IBEC.

IBEC training courses will be held virtually or in-classroom, depending on the course content as well as restrictions related to the pandemic.

Parc Científic de Barcelona (PCB):

Tower I, floor 11
Parc Científic de Barcelona
Baldiri Reixac 4-8

Campus Diagonal – Besòs UPC:

Edifici C (floors 5, 6 and part of basements C and I)
Av. d'Eduard Maristany 16
08019 Barcelona

TRAINING CATALOGUE 2022

TITLE	DATES	AIMED AT	BY
TRANSFERABLE SKILLS: COMMUNICATION: WRITING AND ORAL SKILLS			
Powerful Presentations for Scientists	2nd semester	PhD students and Postdocs	IBEC
Becoming a Scientific Writer Putting 'why' before 'how'	2nd semester	PhD students and Postdocs	IBEC
Learning to write clearly The 'how' of good scientific writing	2nd semester	PhD students and Postdocs	IBEC
Conflict resolution through communication	June 2nd	All IBEC	IBEC
Bringing science to primary schools	April 2022	PhDs	IBEC
TRANSFERABLE SKILLS: LEADERSHIP AND MANAGEMENT SKILLS			
Group coaching: Communication and collaboration in research groups	All year	All IBEC research group	IBEC
Coaching for Group Leaders	All year	Group Leaders	IBEC
How to succeed in your PhD I	14th and 22nd of March	1st year PhD students	BIST
How to succeed in your PhD II	May and April 2022	1st year PhD students	BIST
How to succeed in your PhD III: Writing your thesis	March – May 2022	PhDs in their last year	BIST
Project Management for Researchers	April and May 2022	PhDs in their last year /postdocs	BIST
Mentoring Skills	2nd semester	Mentors and mentees	IBEC/ BIST
Leadership in action	To be defined	Postdoctoral researchers	BIST

Supervising PhD Students - Skills for effective supervision	November 2022	Postdoctoral researchers	BIST
Supervising Masters Students - Skills for effective supervision	November 2022	Postdoctoral researchers	BIST
Research Integrity for researchers at early career stages	To be defined	PhD Students	BIST
Research Integrity for supervisors & GL´s:	To be defined	Supervisors & GL´s	BIST
How to interview effectively and get the best candidate	Junes & September	All IBEC members	IBEC
TRANSFERABLE SKILLS: ENTREPRENEURIAL SKILLS AND TECHNOLOGY TRANSFER			
How to reach the industry	March 15th	All IBEC	IBEC
The process to establish a spin-off / start up. From the moment you get the OK from IBEC	March 29th	All IBEC	IBEC
Basic notions to understand and deal with Venture Capital companies	April, 5th	All IBEC	IBEC
Researchers - Industry: modes of partnership	May 10th	All IBEC	IBEC
Researchers - IBEC's TTO: a winner partnership	May 31th	All IBEC	IBEC
The development process of a drug for humans	2nd semester	All IBEC	IBEC
The development process of a medical device	2nd semester	All IBEC	IBEC
The role of the Spanish drug agency	2nd semester	All IBEC	IBEC
ERC Grants	To be defined	postdocs, junior GL	BIST
Grants overview	2nd semester	All IBEC	IBEC

SCIENTIFIC TOOLS & TECHNIQUES			
Open Science I: Open Publishing	17th of March	All IBEC	IBEC
Open Science II: Data Management	21st of April	All IBEC	IBEC
Open Science III: Citizen Science	2nd semester	All IBEC	IBEC
Open Science VI: Scientific Evaluation	2nd semester	All BEC	IBEC
Matlab: basic level	27th of September	Master students, PhD students	IBEC
Matlab: intermediate level	25th of October	Master students, PhD students	IBEC
Statistical analysis applied to research data	10th, 17th and 24th of february	PhD students	IBEC
Tips and tricks to achieve good results at the bench	June 7th	Master Students and 1st year PhDs	IBEC
Image J Basic	29th of March	Master students, PhD students and Postdocs	IBEC
Image J Advanced	10th of November	Master students, PhD students and Postdocs	IBEC

GENDER & DIVERSITY			
Integration of Gender dimension into research	2nd semester	All IBEC	IBEC
HEALTH & SAFETY			
Cybersecurity (Spanish)	7th of march	All IBEC	IBEC
Cybersecurity (English)	10th of march	All IBEC	IBEC
First aid in the workplace	24th of May	All IBEC	IBEC
Yoga & relaxation for your eyes	23rd of march	All IBEC	IBEC
How to work safely with biological agents and biological samples	25th of march and 25th of November	All IBEC members	IBEC
LANGUAGES			
Spanish beginners	First semester	All IBEC members with an IBEC-labour contract	IBEC
Catalan	All year	All IBEC members	Consorci per a la Normalització Lingüística

POWERFUL PRESENTATIONS FOR SCIENTISTS

The course's aim is to improve scientists' effectiveness and confidence when presenting their research to peers and public and multi-disciplinary scientific audiences.

Dates: 2nd semester 2022

Target group:

PhD students and post-docs (maximum 10 participants).
Participants should be advanced English speakers who are able to converse easily about their research in English.

Training content:

Participants will spend approximately half the time in plenaries (all the group together) and the other half of the time working, in discussion and sharing ideas in workshops. At the end of the week each participant makes a 4-minute presentation on which they receive feedback.

1. When to make a presentation.
2. Structuring your presentation
3. Making the abstract concrete
4. Creating effective slides
5. Body Language
6. Voice
7. Personal Delivery
8. Final PresentationStrengthen critical awareness of successful presentations to enhance their on-going learning.

Trainer:

Cormac Walsh is an Executive Consultant specializing in Communication Skills, Leadership and Sales training. He has worked as a Team Coach, Sales Trainer, Management Consultant and Business School Professor. He is focused on Storytelling in Business, CEO Coaching, Corporate Communication Consulting, and Investment Pitch Coaching. He has a wealth of experience in Leadership & Management.

BECOMING A SCIENTIFIC WRITER: PUTTING 'WHY' BEFORE THE 'HOW'

Becoming a Scientific Writer - putting 'Why' before 'How' is a workshop that provides a holistic overview of the most important skills you will need to become an efficient and effective scientific writer. The aim of this workshop will be to help publishing scientists develop a more impartial, analytical view of their own writing behavior and of their readers' perception of the finished product.

Dates: 2nd semester 2022

Target group:

PhD students (as of 2nd year) and post-docs

Training content:

Participants will develop a deeper understanding of the structure of scientific papers, with a renewed focus on the purpose of each section and the connections between them. They will gain a global framework for conceptualizing the entire publishing process, how to create an expectation in the reader and then deliver on that expectation, and how to make the qualitative jump from a passive scientific account to an active scientific argument. We will then apply this knowledge to the practical task of constructing a scientific manuscript from scratch.

This training workshop is highly interactive with extensive elements of partner work, exercises and group discussion, and a special emphasis on sharing and learning from participants' own expertise and experience. To increase applicability, we work with real-life cases from the participants.

We highly recommend you attend both workshops Scientific Writing workshops, as they are correlated, although the registration will be done separately.

Trainer:

Dr. Gavin Lucas, director of The Paper Mill, is a scientist with 14 years of experience as a biomedical researcher, and 11 years of experience as an academic author's editor, consultant and trainer. In addition to his own solid track-record as a publishing scientist on national, European and international research projects, as an academic author's editor and consultant, he has helped plan, critique, and polish over 250 original scientific articles for dozens of institutes in diverse fields, as well as numerous FP7 and H2020 proposals. He also has extensive experience as a trainer in scientific writing and other topics and provides consultancy on scientific productivity at academic institutes and agencies.

BECOMING A SCIENTIFIC WRITER: LEARNING TO WRITE CLEARLY - THE HOW OF GOOD SCIENTIFIC WRITING

Learning to write clearly, the 'how' of good scientific writing is a workshop that aims to help participants improve their writing skills through awareness of the elements of clear writing. Participants will learn linguistic tools to transmit scientific messages.

Dates: 2nd semester 2022

Target group: PhD students and post-docs

Training content:

In this workshop, the focus is on language. We will work on some of the most common problems of language construction that make scientists' writing unclear.

Starting with words, and moving on to sentences and paragraphs, we will consider why we are prone to these problems and will practice some intuitive editing tools to address them. The key message is that, to become a good scientific writer, you don't need to be a great writer, just a good scientist.

This training workshop is highly interactive with extensive elements of partner work, exercises and group discussion, and a special emphasis on sharing and learning from participants' own expertise and experience. To increase impact and applicability, we work with real-life cases from the participants whenever possible.

We highly recommend you attend both Scientific Writing workshops, as they are correlated, although the registration will be done separately.

Trainer:

Dr. Gavin Lucas, director of The Paper Mill, is a scientist with 14 years of experience as a biomedical researcher, and 11 years of experience as an academic author's editor, consultant and trainer. In addition to his own solid track-record as a publishing scientist on national, European and international research projects, as an academic author's editor and consultant, he has helped plan, critique, and polish over 250 original scientific articles for dozens of institutes in diverse fields, as well as numerous FP7 and H2020 proposals. He also has extensive experience as a trainer in scientific writing and other topics and provides consultancy on scientific productivity at academic institutes and agencies.

TESTIMONIALS WORKSHOPS "BECOMING A SCIENTIFIC WRITER: LEARNING TO WRITE CLEARLY"

"I would it recommend to everyone interested in improving their writing skills in general, since this workshop gives so much a different and practical view.

> *The focus of these two workshops was to learn basic tools to improve your scientific writing on a paper basis. One workshop was more structure focused and the other more on a pleasant/Clear writing per se.*

Celia Ximenes, PhD student
Biomaterials for Regenerative Therapies group

"I would it recommend to PhD students as well as other early-stage researchers that they aren't familiar with writing scientific papers.

> *The goal of this workshop was to develop an analytical process-oriented view of scientific writing, introducing tools that will increase writing productivity and efficiency, also considering why? as well as How? of a scientific writing. In this workshop go through different stages of scientific writing, different parts of a paper and learn specific tasks for each part to improve writing ability.*

Melika Parchehbaf Kashani, PhD student
Biomimetic Systems for Cell Engineering group

"The workshop was about how to start writing your paper after the data you have received answered your research question. Workshop help you to develop a clear strategy and a plan for paper writing.

> *It is a second part of "Creative writing" workshop, and I recommend following both of them. It´s focus is on how to actually to build the sentences and paragraphs of your paper in a way that at the end you have a clear and coherent story.*

Galyna Malieieva, postdoctoral researcher
Nanoprobes and Nanoswitches group

You may contact the researchers that shared testimonials if you need more details.

CONFLICT RESOLUTION THROUGH COMMUNICATION SKILLS

Through this interactive workshop participants will acquire knowledge on the relationship between communication and conflict management. Participants will improve skills on how to identify and understand the barriers to effective communication. They will practice recognizing the role of emotions in conflict management, it´s difficulties and challenges.

Dates: June 2nd, 10:00 – 18:00 (in classroom training)

Target group: All IBEC

Training content:

COMMUNICATION AND CONFLICT

- Communication styles in the face of a conflict
- Types of communication
- Barriers to effective communication

MESSAGE MANAGEMENT

- Management and communication of emotion
- Active listening

SKILLS

- Assertiveness and the "I" message
- Principles of nonviolent communication

Trainer:

Emma López Sóle is an independent consultant in organisational development with a strong focus in conflict management. She provides mentoring and training to improve the conflict resolution, self-confidence, leadership and communication skills of individuals who want to establish more successful interactions in the workplace. She also helps devise organisational policies and practices to prevent and manage conflicts, improving working conditions and productivity. Passionate about people, Emma has twenty years' experience in public and private organizations in the legal & conflict resolution field in the UK and Spain. With extensive experience as a trainer, she has created and provided the postgraduate Mediation Program at the Rovira i Virgili University. She is also the author of several articles and books on conflict resolution, mediation and Restorative Justice practices.

SCIENCE EDUCATION: BRINGING SCIENCE TO THE PRIMARY SCHOOLS

The aim of this course is to involve the PhD students in an outreach activity and helping them to transmit science to non-experts. The workshop includes delivering a science presentation at a primary school as well as a feedback session afterwards.

Dates: 28th of April, 10:00 -13:00 (virtual)

Target group: PhDs

Training content:

- Presentation of the course and introduction to outreach activities (all PhD students).
- Personalized mentoring from education experts to guide the participants in the educational material preparation.
- Using the learning materials developed at IBEC you will learn how to prepare educational materials to bring science closer to society.
- You will learn how to adapt these materials to your language/educational portfolio and will experience in their primary school how to put them in practise with young students.
- You will have at all the process the support of IBEC's expert on outreach and education.
- Practical experience: you will prepare and deliver a presentation at a primary school of your choice.
- Post-activity session and experience sharing.

Trainers:

Pilar Jiménez, Science Education Coordinator, IBEC Strategic Initiatives department. She has a degree in Business Administration, a Master's degree in Communication and a Postgraduate Degree in Scientific Communication. She has more than 15 years of experience in planning and coordinating scientific events and has been the coordinator of the IBEC science education program for 10 years. She is currently managing 9 projects reaching more than 1,600 students a year. She has extensive experience in corporate communication and has been collaborating in the IBEC's fundraising program. She is currently a lecturer in the Postgraduate Course in Scientific Communication at the University of Vic.

Cristina Arimany, IBEC Strategic Initiatives Project Manager. Cristina has a Bachelor in Pharmacy and Biochemistry, and a PhD on Biomedicine. After a postdoc and some time in the scientific publishing industry she joined IBEC's

strategic initiatives department in 2019. She manages among other the EIT Health educational projects and campus activities. In the framework of the Spanish Platform of Nanomedicine she has work on the development of educational materials for primary school students. She has also participated as a lecturer in some of the activities that IBEC organizes.

GROUP COACHING: COMMUNICATION AND COLLABORATION IN RESEARCH GROUPS

The aim of the course is to improve communicative and relational competencies in a research groups. We will understand what the identity of the research group is and the way of working and relating in the group, thus we aim to create strong relations, show awareness and consideration for others, promote supportive relationships based on trust and learn listening skills and how to give and receive feedback.

It is highly recommended that the group coaching sessions are combined with individual coaching sessions for Group Leaders.

Dates: 3 half day sessions (one session per month). Dates to be negotiated with the Group Leader.

In person class sessions (not available on- line) = 10 hours.

Target group:

All IBEC members from the same research group. In 2022 up to 3 research groups will be trained.

Training content:

Based on a first session between the consultants and the Group Leader a specific program will be created according to the needs of the research group. Contents common for all research groups, but not restricted to are the following:

- Communication: Know how to give and receive feedback, listen and ask. How to be more effective about exchanging information and ideas with others.
- Collaboration: Knowing how to establish agreements (ask and offer) and establish relationships of trust.
- Relationship: know how to recognize others, establish support alliances, share and support in situations of difficulty, understand how you complement with the others. How to balance between giving and receiving.
- Explore the reorganization of the group so that it gains autonomy.

Methodology:

Group coaching, systemic analysis to understand the group as a relational system and case studies.

Trainers:

Elena Palma: Founder of Tiempo de Aprender. Senior consultant Facilitator of Change in Organizations. Psychologist for the UB. Transformational Coach by Institut Gestalt & People Tech Solutions (Washington). Systemic coach. Certified in MBTI (Myers-Briggs Type Indicator). Systemic Projects and advice with Management Teams.

David Valls: Systemic consultant and facilitator of transformation in organizations. Senior coach with international certificate (ICFPCC). Trainer of trainers and Consultant in Neurolinguistic Programming by the NLP University (Santa Cruz, CA). Higher Engineer in Electronics and Technical Engineer in Telecommunications from Ramón Llull University.

COACHING FOR GROUP LEADERS

The coaching process consists of 7 individual sessions between Coach and Coachee, with a duration of around 1hour.They are performed with a maximum interval of 15 days between sessions.

The time between sessions pretends that the coachee can carry out actions and assimilate the changes.

Target group: Group Leaders, with priority for those involved in the group coaching (see above mentioned course).

Content:

First meeting: establish a goal of improvement jointly and consensually.

During the 7 individual sessions with confidential character, the agreed objective of improvement will be worked on together.

Last meeting: assess the results of the process and ensure that improvements in relation to the agreed objective have been achieved.

Trainer:

Elena Palma: Founder of Tiempo de Aprender. Senior consultant Facilitator of Change in Organizations. Psychologist for the UB. Transformational Coach by Institut Gestalt & People Tech Solutions (Washington). Systemic coach. Certified in MBTI (Myers-Briggs Type Indicator). Systemic Projects and advice with Management Teams.

HOW TO SUCCEED IN YOUR PHD I

BIST Barcelona Institute of Science and Technology

What can you do to make yourself a more effective doctoral researcher and get the most out of your PhD?

The course has been designed for first year doctoral researchers and will look at practical ways to increase their effectiveness and meet the challenges of your PhD

Dates: 14th and 15th of March (Group 1)
21st and 22nd of March (Group 2)

Target Group: 1st year PhD Students.

Content:

Pre-course work:

- Auto-reflection (personal work before the course)
- Stress management (information to give before the course)
- Description research project
- Play with an online tool

Core content:

- Creativity applied to promote collaborative research
- Communication and feedback
- Project and Time management tools I
- Project and Time management tools II

Transversal content:

- Team work
- Auto-reflection

Trainer:

The course will have a team of 3 trainers and one coordinator, together they will provide a range of resources to help researchers to develop and articulate their skills and plan their continuing professional development.

HOW TO SUCCEED IN YOUR PHD II

BIST Barcelona Institute of Science and Technology

Workshop for PhD students on from the second year that want to focus on what they can you do to make themselves a more productive doctoral researcher and get the most out of your PhD?

Dates: May and April 2022

Target Group: PhD students on from their second year

Content:

- High Intensity Productivity: Maximising the impact of short time periods or opportunities for progress.
- Wellbeing and Resilience
- Different, not wrong. Communicating with impact
- Coach yourself through impostor syndrome
- Effective communication with my supervisor
- What's next? Your career post-PhD

Trainer:

The course will have a team of 3 trainers and one coordinator, together they will provide a range of resources to help researchers to develop and articulate their skills and plan their continuing professional development.

HOW TO SUCCEED IN YOUR PHD III: WRITING YOUR THESIS

BIST Barcelona Institute of Science and Technology

Thesis bootcamp for PhD students in their last year. Focused on to boosting the initial phases of planning and writing

Dates: May and April 2022

Target Group: PhD students in their last year

Content:

- Thesis writing
- Peer support group

Trainer:

Dr Geraint Wyn Story has been a Researcher Development Consultant in the University of Cambridge since 2008. He completed his undergraduate and masters degrees in Manchester before carry out his PhD in Plant Sciences at Cambridge. He then worked for a small biotech company for two years as the manager of a plant genomics group before taking up his current post back in the university. His role is the coordination, development and delivery of researcher development for about 3,000 PhD and postdoc researchers in the life sciences.

PROJECT MANAGEMENT FOR RESEARCHERS

BIST Barcelona Institute of Science and Technology

A Project Management course created and designed for researchers with the aim to apply the benefits of project management to scientific communities across all fields.

In this course we will introduce the basic concepts, techniques and procedures of Project Management. We will learn the vocabulary and general guidelines. We will also understand the process in its entirety. The course aims to offer a very broad and general vision of the Project Management framework.

Dates: 27th, 29th of April 6th, 27th and 15th of May

Target Group: PhDs in their last years or postdocs

Content:

Day 1: Project Management, smooth landing

- Project Management Fundamentals
- Pj Management hard and soft skills
- Pj Management Framework
- VUCA-H times, challenges and opportunities

Day 2 & 3: Project Management, getting familiar

- Pj Management Toolkit
- Theory and practice
- Tools, dynamics, examples, debates
- What is a project? Phases of a Project, Triple constraints, Project Planning, Team, RACI, Risk management, problem solving, lean-agile mindset
- Monitor and control, PDCA, continuous improvement, ecosystem, communication, urgent-important, reporting, closing, lessons learnt

Day 4 & 5: Project Management, becoming a practitioner

- Learning by doing: Each group or individual will choose one or multiple tools and apply them into their day-to-day work
- Projects will be selected considering criteria such as: inclusion, diversity, sustainability, scalability, creativity, disruption.
- Competition Day: each group or individual will defend their projects in a elevator pitch competition.

Trainer:

Iolanda Marchueta, Ph.D. in Organic Chemistry, Universidad de Barcelona, Program for Management Development Executive Education, PMD-ESADE Business School & Digital Business Executive Program, DIBEX – ISDI.

She has more than 20 years international experience in the Biopharma industry covering R&D, product launches and business models. More than 11 years leading cross-functional, cross-cultural, transversal, in person and remote teams

https://www.linkedin.com/in/iolanda-marchueta
www.iolandamarchueta.com

MENTORING SKILLS

The aim of the workshop is to prepare Postdocs and Senior Researchers for their roles as Mentors within the IBEC mentoring program. Participants will be introduced to the IBEC Mentoring Program and will be prepared for their role as Mentor, before they start the program.

Dates: 2nd semester 2022

Target group: PhDs, postdoc and Senior researchers (mentors) participating in the IBEC's Mentoring Program.

Training content:

- Objectives for and the overall program
- Individual Expectations.
- What is Mentoring?
- The features of the IBEC Mentoring Program.
- Preparation of Learning Action Plan
- Follow up of the scheme.
- Next steps

Trainer:

Louise Schubert works both as an Organization Consultant and Executive Coach and has more than 30 years' experience working as a specialist in Learning and Development. She is accredited by the European Mentoring and Coaching Council (EMCC) at Senior Practitioner level; she has an MSC in Organization Consulting and is also certified as a Coach Supervisor. Over the last 4 years she has been helping organizations to set up Mentoring programs and also works as a Mentor herself with Oxford Brookes University, in the UK. She is English and has lived in Spain for the last 25 years.

LEADERSHIP IN ACTION

BIST Barcelona Institute of Science and Technology

The workshop will introduce theories and strategies to support the development of leadership skills for post-Doctoral staff.

Participants will use these insights to develop their individual leadership approach that encourages team cohesion and internal collaboration towards a clear research objective & empowers team member to manage their own wellbeing to ensure continued productivity through uncertain and stressful times. Participants will learn how to create a culture of open, proactive communication and decision-making.

Dates: to be defined

Target Group: Postdoctoral researchers.

Training content:

Clarity of direction and decision making.

- Develop clear aims, objectives and work packages.
- Techniques to support strategic and tactical decision making.

Leadership presence

- How do develop individual and team commitment to your strategic research objectives
- Strength based leadership theory
- The trust equation

Communication and team management

- Tools to effectively communicate your strategic research objectives.
- The What, How and Why
- When to consult, when to inform
- Manage individuals to ensure effectiveness, independence and o Situational leadership.
- Progressive tasks, maintenance tasks and delegation techniques

Stress Management

- The impact of stress on productivity and decision making.
- Techniques to rebalance from states of stress.
- Wellbeing maintenance and how to incorporate it into workplace culture

Trainer:

Caroline Broad started her 'entrepreneurial adventure' in 2011 as Broad Associates Ltd delivering interactive workshops that develop communication and collaboration skills. Caroline also works with businesses providing process improvement and knowledge management consultancy.

Caroline has lived in Cambridge for twenty years and gained her twenty years' experience leading teams and delivering technical and transferable skills training whilst working in bioscience, educational charity and Hi-Tech sectors.

SUPERVISING PHD STUDENTS – SKILLS FOR EFFECTIVE SUPERVISION

BIST Barcelona Institute of Science and Technology

Participants will gain clarity on the role of a supervisors. They will learn how to ensure quality outputs whilst balancing career opportunities of their students and how to effectively manage the time spent on supervising alongside your other responsibilities. Also, the course includes an insight into Intellectual Property rights on produced work.

Dates: November 2022

Target Group: Postdoctoral researchers.

Training content:

The role of a supervisor

- Expectations of an academic supervisor
- The process of 'contracting in'
- Manage expectations of your PhD student

Supervisor Skills

- Manage the relationship and develop trust
- Support versus challenge style of supervision
- How to develop an independent researcher
- Manage your time whilst meeting the needs of your student
- Negotiate outputs
- Challenge Assumptions
- Feedback skills
- Recognise opportunities to exploit intellectual property

Trainer:

Caroline Broad started her 'entrepreneurial adventure' in 2011 as Broad Associates Ltd delivering interactive workshops that develop communication and collaboration skills. Caroline also works with businesses providing process improvement and knowledge management consultancy. Caroline has lived in Cambridge for twenty years and gained her twenty years' experience leading teams and delivering technical and transferable skills training whilst working in bioscience, educational charity and Hi-Tech sectors.

SUPERVISING MASTERS STUDENTS - SKILLS FOR EFFECTIVE SUPERVISION

BIST Barcelona Institute of Science and Technology

An interactive training workshop to develop your supervision skills. An opportunity to meet other Supervisors of master's Students. Participants will gain clarity on the role of a supervisor and practice the foundation skills of being a supervisor. They will learn to ensure they meet and manage the needs of your master's Students and effectively manage the time spent on supervising alongside your other responsibilities.

Dates: November 2022

Target Group: Postdoctoral researchers.

Training content:

The role of a supervisor

- Expectations of an academic supervisor
- What does your master's student need from you?
- The process of 'contracting in'
- Manage expectations

Supervisor Skills

- Communication skills
- Challenging Assumptions
- Feedback skills
- Managing the relationship
- Dealing with potential challenges
- Manage your time
- Negotiate outputs

Theories and models introduced.

- Kolb's learning cycle
- Intervention styles
- Situational leadership
- GROW model
- Triple Constraints

Trainer:

Caroline Broad started her 'entrepreneurial adventure' in 2011 as Broad Associates Ltd delivering interactive workshops that develop communication and collaboration skills. Caroline also works with businesses providing process improvement and knowledge management consultancy.

Caroline has lived in Cambridge for twenty years and gained her twenty years' experience leading teams and delivering technical and transferable skills training whilst working in bioscience, educational charity and Hi-Tech sectors.

RESEARCH INTEGRITY FOR RESEARCHERS AT EARLY CAREER STAGES

BIST Barcelona Institute of Science and Technology

The participants of the workshop will gain an improved understanding of personal responsibility for good research practice and research integrity. They will understand how research culture can influence individual decision making under pressure, and the costs and consequences of research misconduct. They will gain skills in working with supervisors to support clear and effective communication, project monitoring, and the agreed delegation of responsibilities. After the course, they will have improved knowledge of a fast-evolving research reporting infrastructure that supports reproducibility and good research practice as well as improved skills in ethical reasoning to navigate common grey areas in research practice and research reporting.

Dates: to be defined

Target group: Early career researchers (PhD Students, Master students) from BIST centers

Training content:

- What is good research practice?

Brief overview of European Code of Conduct for Research Integrity and the centres policies and codes on good research practice. An exploration of the values and behaviours that support (or work against) research integrity and good research practice.

- Who is responsible for good research practice?

Attendees breakout into discussion groups. Each group discusses what aspects of good research practice a particular stakeholder (early career researcher, group leader, senior institute leader, and funder) is responsible for. Each group presents their key points back to the workshop in an open, guided discussion.

- Research misconduct:

Presentation that explains what research misconduct is, its system-level and personal drivers, and its costs and consequences (financial, personal, societal, and reputational)

- Reporting concerns at BIST

Presentation of how to report suspected misconduct and how allegations of misconduct are investigated.

Research culture, research practice and research irreproducibility: Presentation that explains how research culture and research practice are interlinked and how they contribute to research irreproducibility. Includes overview of community responses to the issues raised. •

- Ethics case discussion:

This part of the workshop will feature an ethics case video sourced from the US Office of Research Integrity.

Trainer:

Dr Jane Alfred, the Director and Co-founder of Catalyst Editorial Ltd. Jane Alfred is a professional editor and trainer specialising in research integrity, responsible research practice, publication ethics and peer review.

RESEARCH INTEGRITY FOR SUPERVISORS: SUPPORTING GOOD RESEARCH PRACTICE THROUGH LEADERSHIP

BIST Barcelona Institute of Science and Technology

The participants of the workshop will gain an improved understanding how to create good research practise through leadership in their research group. They will understand how research culture in their group can influence individual decision making under pressure, and the costs and consequences of research misconduct.

Dates: to be defined

Target group: Supervisors: Senior researchers, Postdocs and GL from BIST centers

Training content:

- Supporting good research practice through leadership:

Presentation of current reports on leadership problems in the lab, which identify principles for good lab management. Explore these principles through guided discussion in breakout groups. The aim of this discussion is to explore where tension points and challenges lie, to share solutions that support good practice, to surface useful tools and approaches, and to identify where further support or training might be required.

- Outcome setting discussion:

Reflective, guided discussion to identify individual or institutional outcomes and actions to take forward and put into practice.

- Ethics case discussion:

Tailored according to the training needs of this more senior group.

Trainer:

Dr Jane Alfred, the Director and Co-founder of Catalyst Editorial Ltd. Jane Alfred is a professional editor and trainer specialising in research integrity, responsible research practice, publication ethics and peer review.

TESTIMONIALS WORKSHOPS “RESEARCH INTEGRITY”

“ The main focus of the workshop was to understand not only your duties but also your rights as a young researcher. It helps you finding the tools needed to overcome problematic situations in the lab, academia and in the industry.

> *I would recommend this for early career researchers especially for whom has not clear the professional path they want to follow.*

Marco Vigo, PhD student
Targeted Therapeutics and Nanodevices group

You may contact the researchers that shared testimonials if you need more details.

HOW TO INTERVIEW EFFECTIVELY AND GET THE BEST CANDIDATE

Are you an objective interview and always identify the candidate that best fits the requirements of the position?

Being objective in an interview is a huge challenge. But it is necessary, not only to find the best candidate but also to guarantee the same opportunities for diverse candidates.

Let´s talk about our implicit biases and what we can do to avoid biased evaluations of candidates.

Dates:

Group 1: 30th of June, 09:00 – 14:00 (in-classroom)
Group 2: 24th of November, 09:00 – 14:00 (in-classroom)

Target Group: Group Leaders, Heads of Unit, Senior Researcher and Postdocs.

Training content:

- What are competencies and why use competencies for recruitment and selection
- Interview techniques
- Competency Based Interviews: framework at IBEC
- Soft skills for the interview: questioning techniques, listening, observing, verbal and no verbal communication, feedbacks
- Recruiting diversity: how to avoid gender bias and awareness of own cultural filters
- How to evaluate your interview

Trainer:

Anke Kleff is psychologist and organizational development internal consultant. She has been working for more than 15 years as an HR professional in the field of development, recruitment and the implementation of strategic HR initiatives and has joined IBEC in 2019.

TESTIMONIALS WORKSHOPS “HOW TO INTERVIEW EFFECTIVELY AND GET THE BEST CANDIDATE”

“ The main focus of this workshop was how to obtain the right information from a candidate in an interview and how to evaluate it efficiently. Complete and useful.

I would recommend the workshop for Group leaders, senior post docs, heads and coordinators

Teresa Galán, Coordinator
MicrofabSpace and Microscopy Characterization facility

“ During the interview never ask a close question. An open ended question gives a better idea about the candidate.

It was a good experience. The best part of it was the practical demonstration as a mock interview. I think we can have that practical part a bit more.

Mohit Kumar, Senior researcher (post doc),
Molecular Bionics group

You may contact the researchers that shared testimonials if you need more details.

HOW TO REACH THE INDUSTRY

The objective of the course How to reach the industry is to understand the different pathways to transfer innovations to the companies and to the market.

Dates: 15th of March, 10:00 – 12:00 (virtual)

Target group: All IBEC members.

Training Content:

- Different pathways and strategies to transfer research results and innovations to the companies.
- Characteristics and constraints of the innovation process in the companies.
- Overview different strategies

Trainer:

Eduardo Salas, He holds a degree in medicine and surgery and a doctorate in medicine. His post-doctorate was developed at the University of Alberta in Canada in the Department of Pharmacology. He has obtained a Master in Business Administration. Previous positions: Physician at Endocrinology in Hospital Universitario Marqués de Valdecilla, Scientist at Wellcome Research Laboratories in UK, R&D director and head of IP office at Laboratorios Lacer, SA, and partner, scientific director and head of IP office at Gendiag. Eduardo has more than 20 years of experience leading science and business; leading drug developments (both pre-clinical and clinical), medical device developments (analytical and clinical), CE-label process, research collaborations, in and out technology transfer and IP portfolio . He has published 70 papers and 10 patents.

THE DEVELOPMENT PROCESS OF A DRUG FOR HUMANS

The objective of the course is to acquire the knowledge of the process from the medical need identification to the authorization of commercialization for a new drug for humans.

Dates: second semester

Target group: All IBEC members.

Training Content:

- the identification and selection of a medical need
- the selection of the target to which the new drug will be directed.
- the synthesis and analysis of different compounds to achieve the led identification.
- We will describe the different stages of the preclinical and clinical development of a new drug.

Trainer: to be defined

THE DEVELOPMENT PROCESS OF A MEDICAL DEVICE

The objective of the course is to acquire the knowledge of the process from the medical need identification to the authorization of commercialization for a new medical device.

Dates: second semester

Target group: All IBEC members.

Training Content:

In the course we will enter into the details on how to identify and select of a medical need, and how to design and establish the technical specifications of the product to be developed. We will learn how to identify the Gold Standard for the comparison of the new product. We will understand the analytical and clinical validation studies and the process to obtain the CE mark.

Trainer: to be defined

THE ROLE OF THE SPANISH DRUG AGENCY

We will analyze the role of Spanish Drug Agency, agency that protects public health through different activities.

Dates: second semester

Target group: All IBEC members.

Training Content:

The Spanish Drug Agency develops several activities very relevant for the public health. In the course, we will analyze those activities such as:

- The evaluation and authorization of medicines for human use and a veterinarian.
- Authorization of clinical trials with medicines or with medical devices.
- Continuous monitoring of drug safety once marketed.
- Authorization or registration as well as inspection of pharmaceutical laboratories and manufacturers of active ingredients.
- Monitoring supply and sourcing of medicines to society.
- Inspection functions and responsibilities in the control of narcotics and substances
- Certification, control and surveillance of medical devices.
- The fight against illegal medicines, medical devices and counterfeit cosmetics.
- Tracking the safety of cosmetics and products personal care.

Trainer: to be defined

THE PROCESS TO ESTABLISH A SPIN-OFF / START UP AT IBEC

The objective of the course is to transmit the steps to establish a spin-off/start up at IBEC

Dates: March 29th from 10:00 – 12:00 (virtual)

Target group: All IBEC members.

Training content:

1) The communication to IBEC of the willingness to establish a company

2) How to obtain the approval from the IBEC's stakeholders

3) The steps from the approval to the market

Trainer:

Eduardo Salas, He holds a degree in medicine and surgery and a doctorate in medicine. His post-doctorate was developed at the University of Alberta in Canada in the Department of Pharmacology. He has obtained a Master in Business Administration. Previous positions: Physician at Endocrinology in Hospital Universitario Marqués de Valdecilla, Scientist at Wellcome Research Laboratories in UK, R&D director and head of IP office at Laboratorios Lacer, SA, and partner, scientific director and head of IP office at Gendiag. Eduardo has more than 20 years of experience leading science and business; leading drug developments (both pre-clinical and clinical), medical device developments (analytical and clinical), CE-label process, research collaborations, in and out technology transfer and IP portfolio . He has published 70 papers and 10 patents.

BASIC NOTIONS TO UNDERSTAND AND DEAL WITH VENTURE CAPITAL COMPANIES

The objective of the course is to transmit basic notions to understand and deal with Venture Capital companies in order to prepare researcher for dealing with this kind of companies.

Dates: April 5th, from 10:00 – 12:00 (virtual)

Target group: All IBEC members. Maximum 25 participants.

Trainer: to be defined

RESEARCHERS – INDUSTRY: MODES OF PARTNERSHIP

The objective of the course is to transmit is to learn the different ways a researcher can establish a partnership with the industry

Dates: May 10th, 10:00 – 12:00 (virtual)

Target group: All IBEC members.

Training content:

1) Research and service contracts
2) Advisory contract
3) Grants supporting public-private collaborations
4) Joint Units
5) Open innovation Labs
6) Industrial doctorates
7) Spin-off
8) Patronage
9) Training

Trainer:

Eduardo Salas, He holds a degree in medicine and surgery and a doctorate in medicine. His post-doctorate was developed at the University of Alberta in Canada in the Department of Pharmacology. He has obtained a Master in Business Administration. Previous positions: Physician at Endocrinology in Hospital Universitario Marqués de Valdecilla, Scientist at Wellcome Research Laboratories in UK, R&D director and head of IP office at Laboratorios Lacer, SA, and partner, scientific director and head of IP office at Gendiag. Eduardo has more than 20 years of experience leading science and business; leading drug developments (both pre-clinical and clinical), medical device developments (analytical and clinical), CE-label process, research collaborations, in and out technology transfer and IP portfolio . He has published 70 papers and 10 patents.

RESEARCHERS - IBEC'S TTO: A WINNER PARTNERSHIP

The objective of the course is to transmit is to he way the TTO can be an useful partner for IBEC's researchers

Dates: May 31th, 10:00 – 12:00 (virtual)

Target group: All IBEC members.

Training content:

1) Research and service contracts with companies
2) Identification of transferable projects
3) Establishment of the valorization process
4) Patenting process
5) Licensing process
6) Spin-off / start up constitution

Trainer:

Eduardo Salas, He holds a degree in medicine and surgery and a doctorate in medicine. His post-doctorate was developed at the University of Alberta in Canada in the Department of Pharmacology. He has obtained a Master in Business Administration. Previous positions: Physician at Endocrinology in Hospital Universitario Marqués de Valdecilla, Scientist at Wellcome Research Laboratories in UK, R&D director and head of IP office at Laboratorios Lacer, SA, and partner, scientific director and head of IP office at Gendiag. Eduardo has more than 20 years of experience leading science and business; leading drug developments (both pre-clinical and clinical), medical device developments (analytical and clinical), CE-label process, research collaborations, in and out technology transfer and IP portfolio . He has published 70 papers and 10 patents.

HOW TO ELABORATE A BUSINESS CASE

Learn how to elaborate a business case

Dates: 2nd semester

Target group: All IBEC members.

Trainer: to be defined

HOW TO ELABORATE A PITCH

Learn how to elaborate a pitch

Dates: 2nd semester

Target group: All IBEC members.

Trainer: to be defined

GANTS OVERVIEW FOR SENIOR RESEARCHERS

This workshop, focused on Senior positions at Ibec, will provide participants with practical skills on effective grant writing as well as an annual overview on grants, including information on what, when and requirements for applications.

Dates: 2nd semester

Target group: Senior Positions (Group Leaders, Senior Researchers and Postdocs).

The final list of participants will be defined by the Group Leader of the potential participants and the Projects Office team.

Training content:

- Overview of current funding schemes.
- Insights on the next EU R&I framework program – Horizon Europe (2021-2027).
- Overview of the evaluation procedure of EU proposals.
- Improvement on the writing skills.

Trainers:

Project Managers at the IBEC's Projects Office.

ERC GRANTS

BIST Barcelona Institute of Science and Technology

This workshop, focused on Senior positions at BIST Research Centers, will provide participants

Dates: to be defined

Target group: postdocs, junior GL from BIST centers

Training content:

- overview of calls
- preparation of proposals
- inputs from evaluators from centres

Trainers: to be defined

INTEGRATION OF GENDER DIMENSION INTO RESEARCH

"Gender dimension" means integrating sex and gender analysis into research. With a focus on bio-medical and bio-engineering fields this workshop will show how Sex and Gender Analysis is to be integrated into all phases of basic and applied research—from setting priorities to funding decisions, to establishing project objectives and methodologies, to data gathering, analyzing results, and evaluation.

Dates: Second semester 2022

Target group: All IBEC members

Training content:

- Sex/gender as conditions of quality in science knowledge making
- Using research process as the frame, demonstrate sources and effects of gender bias in results and outcomes (e.g., hypothesis formation, literature search, data collection and analysis, theoretical considerations, reporting, application/innovation etc.)
- Demonstrate examples of research that has included methods of gender analysis (e.g., vaccines, biomarkers, cancer immunotherapy, etc.)
- Cell sex: why it matters
- Issues in commercial supply of cell lines, and biobanks
- Issues and opportunities for innovation: e.g. lab-on-a-chip, predictive biomarkers,
- Lessons from Horizon 2020 on integrating gender dimension in proposals and in evaluation

Trainer:

Dr. Elizabeth Pollitzer is founder and Director of Portia, an organization devoted to improving gender equality in STEM and promoting the inclusion of the gender dimension in STEM. She has 20 years' experience teaching and researching in the Departments of Computing and Management at Imperial College, University of London. Her original training was in Biophysics. She now applies this scientific background to her work as director of Portia. Portia was the coordinator of the genSET project, the Gender Summits were established as part of the genSET project.

WORKSHOP OPEN SCIENCE I "OPEN ACCESS"

As the author of a research article or book, you can ensure that your research can be accessed and used by the widest possible audience. The workshop introduces Open Access to IBEC researchers.

Dates: 17th of March 2022, 09:00 – 13:30 (in-classroom)

Target group: All IBEC

The development of research activity entails adherence to a series of rules that seek to ensure the fair exploitation of publicly funded results, so that they can reach peers and the public and/or be reused for the benefit of science and society at large and as quickly as possible. The recent Covid-19 crisis provides a clear example of the power of data reuse.

Open access (OA) refers to the free, immediate, online availability of research outputs such as journal articles or books, combined with the rights to use these outputs fully in the digital environment. OA content is open to all, with no access fees.

Open Access benefits:

- Increased citation and usage
- Greater public engagement
- Wider collaboration
- Faster impact
- Compliance with open access mandates

Training content:

1. The Open Science framework
2. Open Access policies, funders current requirements
3. IBEC Open Access policy, procedures and tools
4. The scientific publication process
5. Finding open access journals and publications
6. Routes to Open Access for authors
7. Licensing: copyright and Creative Commons

Trainer:

Fidel Bellmunt, IBEC's Knowledge Manager at Strategic Initiatives unit: He has a degree in Documentation. He has worked in knowledge management centers and projects in health sciences, both in the private and public spheres. At IBEC he is mainly in charge of managing scientific production, publications and research data, both for internal exploitation and to achieve the objectives of open science.

WORKSHOP OPEN SCIENCE II "DATA MANAGEMENT"

Gain awareness on data management issues and learn how to handle them. This workshop introduces research data management to achieve better scientific outputs.

Dates: 21st of April, 09:00 – 13:30 (in-classroom)

Target group: All IBEC

Research data management (RDM) refers to the organization, storage and preservation of data created during a research project. It covers initial planning, day-to-day processes and long-term archiving and sharing.

Research data have a long-term value for research and academia, with the potential for widespread use in society. To ensure this, research data should follow FAIR principles and be findable, accessible, interoperable and reusable.

Data that are used as primary sources to support technical or scientific enquiry, research, scholarship, or artistic activity, and that are used as evidence in the research process and/or are commonly accepted in the research community as necessary to validate research findings and results. All other digital and non-digital content have the potential of becoming research data. Research data may be experimental data, observational data, operational data, third party data, public sector data, monitoring data, processed data, or repurposed data.

Training content:

1. Definitions and the Research Data Life Cycle
2. Research Data Management policies, funders current requirements
3. The Data Management Plan
4. The FAIR principles
5. IBEC's Research Data Management Policy, procedures and tools
6. Choosing a data repository
7. Licenses and copyright

Trainer:

Fidel Bellmunt, IBEC's Knowledge Manager at Strategic Initiatives unit: He has a degree in Documentation. He has worked in knowledge management centers and projects in health sciences, both in the private and public spheres. At IBEC he is mainly in charge of managing scientific production, publications and research data, both for internal exploitation and to achieve the objectives of open science.

WORKSHOP OPEN SCIENCE III: "CITIZEN SCIENCE"

Get involved on how to improve the social impact of your research effort, beyond the direct achievements of it. With this workshop, you may oversee other ways of giving value to science.

Dates: second semester 2022

Target group: All IBEC

Citizen's science is understood as scientific research with the active involvement of the non-specialist public. Any person has knowledge, tools and resources that can contribute to the advancement of science.

Citizen's science is the practice of public participation and collaboration in scientific research to increase scientific knowledge. Through citizen science, people share and contribute to data monitoring and collection programs.

Training content:

1. Definitions and Citizen Science in the Open Science framework
2. Citizen Science goals
3. Outreach actions required by the funders
4. Citizen Science initiatives at IBEC
5. Successful experiences with Citizen Science
6. How to participate in Citizen Science initiatives
7. Trends in our context

Trainer:

IBEC´s Strategic Initiatives Team + Specialist Guest

WORKSHOP OPEN SCIENCE III: "SCIENTIFIC EVALUATION"

Understand the new trends on scientific evaluation, how can impact in the assessment of your activity, and the implications of the whole science model.

Dates: second semester 2022

Target group: All IBEC

Research Assessment in the Transition to Open Science: Research assessment is a powerful tool for making the transition to Open Science a reality. Making evaluation practices more accurate, transparent and responsible will allow universities to establish best practice and work together for our academic community.

Open Science is a paradigm shift. Open publication, open access, open citations, open data, open-source software, citizen science - in the same cooperative spirit, all these innovations revolutionize research by rejecting competition, even though many researchers still consider this inevitable.

This new science approach seems likely to develop further and, in the long run, to become the norm. However, no matter how hard advocates strive, Open Science will never be achieved unless accompanied by a change in the way researchers are evaluated. Without this, no researcher, (and especially no early-stage researcher,) will take the proven risk of departing from the old principles that continue to paralyze scientific communications: publish as often as possible, in journals with the best possible reputation.

Training content:

1. Overview of the current scientific evaluation systems
2. The European proposal
3. The Spanish situation and trends
4. Implications of the different models on how science is done

Trainer:

IBEC´s Strategic Initiatives Team + Specialist Guest

MATLAB I (BASIC LEVEL)

The workshop aims to provide participants with an accessible and comprehensive introduction to Matlab.

Dates: 27/09 09:00 – 14:00 (in-classroom)

Target group: PhD students (maximum 20 participants).

Training content:

The course is interactive, and participants will have opportunities to carry out practical exercises. IBEC provides MATLAB license for the course.

- Introduction to the MATLAB environment.
- Data types.
- Matrices and Operators.
- Scripts and Functions.
- Flow control.
- Basic plotting.
- Practical exercises.

Trainer:

Lluís Fernández Romero is a Physicist and Electronic Engineer, both degrees obtained from the University of Barcelona. (UB). He also obtained a Master in Nanoscience and Nanotechnology, at the same University. He has a PhD in Engineering and Advanced Technologies (UB). The main goal of the thesis was to design and build a chemical sensing system inspired by the architecture of the olfactory system of mammals. After finishing his PhD he started a postdoc at the Institute for Bioengineering of Catalonia (IBEC), developing fully automated pipelines for metabolomic analysis for Nuclear Magnetic Resonance (NMR) and Liquid Chromatography - Mass Spectrometry (LCMS) data, developed in R language. Nowadays, he works as a Lecturer Professor at the Department of Electronics and Biomedical Engineering at the UB, but I still collaborate with the Signal and Information Processing for Sensing Systems group, at IBEC.”.

MATLAB II (MEDIUM LEVEL)

The workshop aims to provide participants with an accessible and comprehensive introduction to Matlab at a medium level.

Dates: 25/10 09:00 – 14:00 (in-classroom)

Target group: PhD students (maximum 20 participants).

Training content:

The course is interactive, and participants will have opportunities to carry out practical exercises. IBEC provides MATLAB license for the course.

- Importing/Exporting data.
- Introduction to Statistics: descriptive statistics, linear regression.
- Introduction to Signal processing: smooth a noisy signal and find peaks.
- Introduction to Image Processing: correct non-uniform background and detect foreground objects.
- Advanced plotting.
- Practical exercises.

Trainer:

Lluís Fernández Romero is a Physicist and Electronic Engineer, both degrees obtained from the University of Barcelona. (UB). He also obtained a Master in Nanoscience and Nanotechnology, at the same University. He has a PhD in Engineering and Advanced Technologies (UB). The main goal of the thesis was to design and build a chemical sensing system inspired by the architecture of the olfactory system of mammals. After finishing his PhD he started a postdoc at the Institute for Bioengineering of Catalonia (IBEC), developing fully automated pipelines for metabolomic analysis for Nuclear Magnetic Resonance (NMR) and Liquid Chromatography - Mass Spectrometry (LCMS) data, developed in R language. Nowadays, he works as a Lecturer Professor at the Department of Electronics and Biomedical Engineering at the UB, but I still collaborate with the Signal and Information Processing for Sensing Systems group, at IBEC.".

STATISTICAL ANALYSIS APPLIED TO RESEARCH DATA

The course will give an overview on important concepts and methods used to analyze biological data. The emphasis will be on the understanding of statistical concepts and their interpretation in a research framework. The final goal is to have a deep understanding of the meaning and interpretation of a test statistic and how to construct own statistic given data.

Dates: 10th, 17th and 24th of february (pending confirmation due to COVID situation)

Target group: PhD students and Postdoctoral researchers (maximum 20)

Training content:

- Introduction. Sampling distribution. Statistical inference. Student-t test
- Analysis of variance. One-way ANOVA. Two-way ANOVA. Multiple comparison procedures.
- Correlation and regression. Multiple regression analysis. Partial correlation.
- Categorical Data. Introduction to Experimental Design. Effect size and Power Analysis.

The course is interactive combining practical and theoretical lectures.

Trainer:

Hafid Laayouni is an associate researcher at Universitat Pompeu Fabra and the coordinator of the degree of Bioinformatics (Join degree between UPF, UPC and UB). He obtained a master degree in Genetics and a PhD in Biological Sciences from University Autònoma de Barcelona in 2000.He is author of more than 36 papers in indexed journals, two book chapters and mentor of 5 PhD theses. He is joined professor at the University Autònoma de Barcelona and visiting professor of the master's degree of Bioinformatics and Computational Biology of the Escuela Nacional de Sanidad (ISCIII, Madrid).

TIPS AND TRICKS TO ACHIEVE GOOD RESULTS AT THE BENCH

Are you sure that you know the basics for performing an experiment?

Join the dynamic and practical workshop "Tips and tricks to achieve good results at the bench" and find it while playing and having fun.

The objective of this workshop is to acquire the good practices necessary in a laboratory to ensure the highest quality of the results.

Dates: June 7th, 10:00 – 13:00 (in-classroom)

Target group:

Newcomers student researchers that work at IBEC wet labs: Master Students and first year PhDs.

For 1st year PhDs working in wet lab this course is mandatory.

PhDs in their 2nd year who could not attend previous editions are welcome to participate.

Training content:

This workshop is focused on fundamental basic aspects of working in a Chemistry/ Biology laboratory: process of performing an experiment, from previous planning until the moment of leaving the bench.

- Introduction and overview to the Good Laboratory Practices.
- Highly interactive and practical daily lab situations with real equipment.
- Understand the basics of good laboratory practices
- Plan an experiment considering all the steps necessary to perform it
- Use several basic equipment: scale, centrifuge, pHmeter, biosafety cabinet/ sterile technique, handling liquids
- Classify several types of hazardous waste

Trainer:

IBEC's Core Facilities members.

IMAGE J BASIC

The aim of the workshop is to achieve basic skills in the analysis and quantification of microscopy images using ImageJ. The course is interactive, and participants will have opportunities to carry out practical exercises.

Dates: 29th of March, 09:00 – 14:00 (in-classroom)

Target group: PhD students, Master students and post-docs.

Training content:

- Image and video modes and memory allocation
- Image tools:
- Understanding image properties
- Transformation (cropping, removing background, filters...)
- Quantification (intensity profiles, types of measurements)
- Video tools
- Opening image sequences
- Transformation (drift, slice selection, background, walking average...)
- Quantification (kymographs, tracking, montage...)
- Generating videos for publication.
- Plugins

Trainer:

Manuel Gómez González is a postdoc at the Integrative Cell Tissue and Dynamics group, under the supervision of Prof. Xavier Trepat, at IBEC. Manuel's knowledge of ImageJ comes from his use for microscopy analysis and data processing, starting with his pre-doctoral research at the lab of Prof. Juan Carlos del Álamo, University of California, San Diego, and continuing now at IBEC.

IMAGE J ADVANCED

The aim of the workshop is to achieve advanced skills in the analysis and quantification of microscopy images using ImageJ. The course is interactive, and participants will have opportunities to carry out practical exercises.

Dates: 10th of November, 09:00 – 14:00 (in-classroom)

Target group: PhD students, Master students and post-docs.

Training content:

- ImageJ Macro language
- ImageJ Macro creation and recording
- Application of ImageJ Macros to problems such as:
    - Object counting
    - Cell Tracking
    - Segmentation
    - Batch processing
    - Other quantifications

Trainer:

Manuel Gómez González is a postdoc at the Integrative Cell Tissue and Dynamics group, under the supervision of Prof. Xavier Trepat, at IBEC. Manuel's knowledge of ImageJ comes from his use for microscopy analysis and data processing, starting with his pre-doctoral research at the lab of Prof. Juan Carlos del Álamo, University of California, San Diego, and continuing now at IBEC.

TESTIMONIAL WORKSHOPS “IMAGE J BASIC & ADVANCED”

“ The workshop Image j basic was focused on learning basic Image J techniques. The take away was to know the possibilities it offers.

I would recommend the workshop to undergraduate students, Master students and PhD students who start to do research.

The workshop Image j advances was focused on automating ImageJ and write macros. The main take-away was that it is unavoidable to learn ImageJ macros, and it is better to do it before you actually need it.

Miquel Bosch, PhD Student
Integrative Cell and Tissue Dynamics group

You may contact the researchers that shared testimonials if you need more details.

CYBERSECURITY

Workshop aimed on empowering IBEC´s users to take personal responsibility for protecting the organization's information. Cybersecurity is an obligation to all IBEC users. This workshop aims on sharing knowledge on how to protect your data as well as the organizations data.

Dates:

7th of March, 15:00 – 18:00 (virtual): Spanish edition

10th of March, 15:00 – 18:00 (virtual): English edition

Participants: all IBEC

Content:

- Main cybersecurity threats to companies

Kidnapping, theft, manipulation, destruction of data.

Denial of service (directly or indirectly)

- Types of attacks

Malware (indiscriminate or APT)

PhishingCopy, fold and combine queries.

- Entry routes

Mail, the most important.

Navigation (be careful with the RRSS and download pages)

Removable storage devices

Wifi

- Resolution of participants doubts (30mint)

Trainer:

Experts on cybersecurity for organizations from the CIEF group. https://www.grupcief.com/

FIRST AID IN THE WORKPLACE

Practical and very dynamic workshop focused training practical skills in lifeguarding and first aid at the workplace

Dates: May 24th, 09:00 – 13:00

Participants: all IBEC

Content:

How to provide first aid at the workplace in case of emergency:

- First aid introduction
- Principles of lifesaving
- Suffocation
- Epilepsy
- Insect bites
- Hemorrhages
- Wounds
- Intoxication
- Burnings
- Cold injuries
- Fractures
- Bandages
- etc.

Trainer:

Experts on Health & Safety from the preving Group (**https://www.preving.com/)**

YOGA & RELAXATION FOR YOUR EYES

It is undeniable that spending so many hours in front of the computer and connecting with

the TV, the mobile, the tablet... is disastrous for our vision. The human eye It is designed to look far away and not spend so many hours looking staring up close.

If you suffer from eye fatigue, itchy eyes, dry eyes, back pain, headache and/or blurred vision, you most likely have a characteristic syndrome of the XXI century

Dates: 23/03 13:00-14:00 (virtual)

Target Group: All IBEC.

Content:

Integrate tools, resources, and guidelines for healthier vision

- Improve visual quality
- Learn to relax and moisten the eyes
- Optimal visual maintenance

The method of the EYE YOGA Workshop follows very simple techniques to exercise the eyes and understand eye problems.It is not necessary to have practiced yoga before. The practice is carried out seated, without the need to changing clothes.

Through breathing and relaxation, integrating exercises, very simple tools and resources to reconcile screens and eye health. Apply guidelines to improve vision and achieve a healthy visual quality.

1. Some notes about computer caused eye problems
2. Prepare for the session
3. Focus on the breath
4. Exercises and visualizations to relax and moisten the eyes
5. Strengthen the eye muscles
6. Exercise lateral vision
7. Exercise far-near
8. Guidelines

Trainer:

Elisabet Surís, OFFICE yoga teacher. After many years working in the publishing field and cultural management, in 2014 he founded YOGA EN LA OFFICE, a company specializing in yoga and occupational health.Develops a specialized technique in occupational health and stress management, to help improve the well-being and performance of staff in their job.

Kundalini Yoga teacher by the European Yoga Alliance, the International Standards of International Yoga Federation and PREM (Association Kundalini Yoga International). Member of Yoga4cancer

INTRODUCTORY COURSE: HOW TO WORK SAFELY WITH BIOLOGICAL AGENTS AND BIOLOGICAL SAMPLES

Recently, IBEC has started a project to declare to the authority the use of biological agents and genetically modified organisms in its installations. For that reason, biological risk assessments have been performed in all IBEC laboratories. After these evaluations, it is of interest to offer a training in Biosafety to strengthen the safe work with biological agents and biological samples.

Dates:

March 25th, 11:00 – 12:30 (virtual)

November 25th, 11:00 – 12:30 (virtual)

Target Group: All IBEC

Content:

- What is the biological risk?
- Biologic agent classification in risk groups and biosafety levels
- Good laboratory practices
- Transport of agents and samples, inside and outside the PCB
- Waste management

Trainer:

Miriam Funes, holds a Bachelor of Biology, a Master of Molecular Biotechnology in 2009 and Biosafety specialization in 2019. Since 2004 she has been holding the position of laboratory technician for IBEC´s Nano-bioengineering Group, overseeing laboratory management, training in biological techniques, the culture room and participation in research projects. She is responsible for Biosecurity at IBEC.

SPANISH CLASSES (BEGINNER)

Non-Spanish speakers at IBEC will have the possibility to attend Spanish classes during 1 trimester

Dates: One trimester, from March to May

In person class session: 18 Hours, 1,5 hour per week

Target group:

The course is aimed at Non-Spanish speakers with an beginner Spanish knowledge. For PhDs, postdocs, Senior researchers, Group Leaders, technicians and research assistants regardless of the contracting institution. (Maximum 14 participants).

Training content:

- In the first session, an analysis of needs will be carried out with all the participants in the group.
- At the end of the trimester there will be an evaluation test based on the content of the classes, as well as a performance review with each participant to check if he/she has achieved the objectives.
- By not following a book, the teachers can make the class subjects more flexible to adapt to the objectives and needs of the students in the class.
- The course will follow the integrated methodology of oral expression, written expression and grammar.

Trainer:

Experienced native speaker teachers from the language school Oxford House.

CATALAN

There are 3 official course formats available, depending on your learning preferences.

Classroom Training:

If you prefer classroom training, you should contact the **Consorci per a la Normalització Lingüística (CPNL)**. They offer courses for all levels of Catalan, both intensive and long-term. It is necessary to do an initial evaluation of your level. You can find training centers in all neighborhoods of Barcelona

https://www.cpnl.cat/cursos-catala/

Online Training:

If you prefer to study online, the best option is the official platform **PARLACAT.** They offer courses in learning groups and also free recourses, if you prefer to learn at your own rhythm.

https://www.parla.cat/pres_catalaenlinia/AppPHP/login/index.php?lang=en

Language mentors:

If you prefer to learn Catalan with a local, we recommend the organization **Voluntariat per la Llengua** (volunteers for Catalan). Local people meet with you for conversations. It´s an excellent way to improve your conversation skills. The organization offers many additional recourses, like cultural activities and an online platform.

https://www.vxl.cat/


IBEC
Institute for Bioengineering of Catalonia


EXCELENCIA
SEVERO
OCHOA


HR EXCELLENCE IN RESEARCH