

The background of the cover is a photograph of a group of people in a meeting. A woman in a black and white patterned dress is standing and holding a document, while others are seated around a table, looking at papers and engaged in discussion. The scene is brightly lit, suggesting an indoor office or conference room environment.

TRAINING

catalogue 2023

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.**

After the challenging times of the pandemic have learned how important is to promote wellbeing and healthy habits. We have also learned new ways of delivering training. On the one hand we experienced an increase of courses online, but on the other hand we identified the need to come back to in-person training, so that we have a more balanced catalogue of courses where we combine both types of education.

In 2022 we learned that our researchers are passionate about IBEC's ecosystem: the new training offer on TechTransfer, Open Science and Project Management attracted participants of all stages of the research career. We will continue to offer a broad range of training in these fields for 2023.

The Training Catalogue for 2023 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, open science, languages 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 past 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.

As this Catalogue of training courses represents a collaborative work, 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).

Carolina Marí, Head of Human Resources

Categories of training activities

Transferable skills

- **Communication**
- **Leadership & management skills**
- **Entrepreneurial skills and Tech Transfer**
- **Open Science**

Scientific tools and techniques

- ImageJ; Statistical Analysis; Matlab; Python; Tips and tricks to achieve good results at the bench; Graphic design and photographic edition, etc.

Gender & Diversity

- Inclusive Training
- Integration of Gender dimension into research

Health & Safety and Wellbeing

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

Languages

- Spanish
- Catalan

Registration instructions

As of February 2023, 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 March to mid-July, for the courses within this period.
- From mid-July to December for the courses within this period.

Cancellation: 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
Baldri Reixac 4-8

Campus Diagonal – Besòs UPC:

Edifici C
Av. d'Eduard Maristany 16
08019 Barcelona

Training Catalogue 2023

CATEGORY	TITLE	DATES	AIMED AT	BY
Communication	Powerful Presentations for Scientists	April 27 th and May 2 nd	PhD students and Postdocs	IBEC
	Non-violent communication to de-escalate conflicts at work	April and May	PhD students and Postdocs	IBEC
	Becoming a Scientific Writer: Focusing on “why” and on “how”	2 nd semester	All IBEC	IBEC
Leadership & management skills	Group coaching: Communication and collaboration in research groups	All year	All IBEC research group	All IBEC research group
	Coaching for Group Leaders and Heads	All year	Group Leaders and Heads	IBEC
	How to succeed in your PhD I	27 th and 28 th of Feb	1 st year PhD students	BIST
	Mentoring Skills	March - April	Mentors and mentees	IBEC / BIST
	Research management: an aligned shared vision about our function at IBEC	May 4 th and 18 th and June 1 ^s	All Support members	IBEC
	Career Development: Transition to Academia	May 11 th	Postdocs	IBEC
	Time Management & Personal Effectiveness	24 th and 25 th of May	Postdocs	IBEC
	Scientific Project Management for Researchers	May-June	PhDs in their last year/Postdocs	BIST
	Skills to hold difficult conversations and avoid conflict	June 8 th	Supervisors	IBEC
	How to succeed in your PhD II: Writing your thesis	June	PhDs in their last year	BIST
	Leadership in action	May	Postdoctoral researchers	BIST
	Research Integrity for researchers at early career stages	September	PhD Students	IBEC
	How to interview effectively and get the best candidate	November	Supervisors	IBEC
	Grants overview for senior researchers	2 nd semester	Senior Researchers	IBEC

Entrepreneurial skills and Tech Transfer	Introduction to patents and intellectual property	March 29 th	All IBEC	IBEC
	How to reach the industry	April 19 th	All IBEC	IBEC
	The valorisation plan	May 17 th	All IBEC	IBEC
	Experience of some researchers in IBEC as Entrepreneurship	June	All IBEC	IBEC
	The development process of a medical device	2 nd semester (September)	All IBEC	IBEC
	How to elaborate a business case	2 nd semester (October)	All IBEC	IBEC
	How to elaborate and present a pitch	2 nd semester (November)	All IBEC	IBEC
	Basic notions to understand and deal with Venture Capital companies	2 nd semester (December)	All IBEC	IBEC
Open Science	Open Science I: Open Publishing	30 th of March	All IBEC	IBEC
	Open Science II: Data Management	22 nd of June	All IBEC	IBEC
	Open Science III: Citizen Science	2 nd semester	All IBEC	IBEC
	Open Science VI: Scientific Evaluation	2 nd semester	All BEC	IBEC
Scientific tools & techniques	CRG: Quantitative Light Microscopy	20-24 February	PhD students and Postdocs	IBEC
	Statistical analysis applied to research data	1 st , 2 nd , 6 th , 8 th , 15 th , 16 th of March	Master's students, PhD students and Postdocs	IBEC
	MRI/MRS Training	4 th , 11 th , 28 th of March	PhD students and Postdocs	IBEC
	Graphic design for presentations and scientific communication	13 th of April	Master's students, PhD students and Postdocs	IBEC
	ImageJ Basic	23 rd of March	Master's students, PhD students and Postdocs	IBEC
	Python Basic	8 th , 13 th , 16 th of June	Master's students, PhD students and Postdocs	IBEC
	Python Advanced	29 th of June and 4 th , 6 th of July	Master's students, PhD students and Postdocs	IBEC
	Matlab I: Basic	2 nd semester	Master students, PhD students	IBEC
	Matlab II: Medium	2 nd semester	Master students, PhD students	IBEC

	Tips and tricks to achieve good results at the bench	2 nd semester	Master Students and 1 st year PhDs	IBEC
	ImageJ Advanced	2 nd semester	Master students, PhD students and Postdocs	IBEC
Gender & Diversity	Inclusive Training (ONCE)	10 th and 21 st of April	All IBEC	IBEC
	Integration of Gender dimension into research	13 th of June	All IBEC	IBEC
Health & Safety and Wellbeing	How to work safely with biological agents and biological samples	9 th of Feb and October	All IBEC	IBEC
	Cybersecurity (Spanish)	13 th of Feb	All IBEC	IBEC
	Cybersecurity (English)	14 th of Feb	All IBEC	IBEC
	Healthy food habits in companies	20 th of March	All IBEC	IBEC
	Achieving objectives - Going beyond New Year's resolutions	April	All IBEC	BIST
	Physical and postural health training (ergonomics)	25 th of April	All IBEC	IBEC
	Anxiety Management Workshop	May	All IBEC	BIST
	Mindfulness	October	All IBEC	BIST
	Breathing and visual relaxation	22 nd of November	All IBEC	IBEC
Languages	Spanish beginners	April to June	All IBEC members with an IBEC-labour contract	IBEC
	Catalan	All year	All IBEC members	Consorci Normalització Lingüística
	Tandem program	All year	All IBEC members	IBEC

Transferable skills

Communication

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: 27th of April and 2nd of May, 09:00 – 18:00 (two in-classroom sessions)

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 Presentation. Strengthen critical awareness of successful presentations to enhance your on-going learning.

Trainer: Ana Paola is a lead facilitator, train the trainer and chief of operations at the agency Performing Ideas, helping individuals and organizations strengthen their leadership skills, sharing practical advice on how to express their ideas convincingly and confidently, and how to get ready for future challenges.

Non-violent communication to de-escalate conflicts at work

In this online course you will innovate, resolve and prevent how to deal with discrepancies; understand why conflicts occur; acquire knowledge, skills and abilities to prevent conflicts; develop effective communication; improve social skills and communication techniques; improve the internal climate and incorporate the culture of dialogue; feel comfortable in the face of conflicts, understanding their nature and knowing how to resolve them.

Dates: Start date: at your own pace as of April.

Format: Online course

Duration: up to three months

Dedication hours: 8-10 h

Target group: All IBEC

Training content:

- Why does a labor conflict arise?
- How beliefs can change your life
- Conflict and emotions in communication
- Do you know which ear you listen with?
- What is my responsibility? Taking control of the conflict.
- Non-violent communication
- Conflict escalation
- Non-violent communication and self-empathy
- Empathy: looking at the other with the eyes of the heart

Trainer: CMBMediala a leading consultancy in the prevention and management of situations that may cause conflict within organisations. Acknowledgements: ADR2019 Methodology Award Mediala as the best initiative in conflict management (Generalitat de Catalunya); AMMI Award for certification in the Mediala methodology for conflict resolution.

Becoming a Scientific Writer: Focusing on the ‘why’ and the ‘how’

Becoming a Scientific Writer – Focusing on the “why” and the “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.

Dates: 2nd semester 2023

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

Training content: 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 (the why). And at the same time, it will be an opportunity to improve their writing skills through awareness of the elements of clear writing: focusing on the language (the how), participants will learn linguistic tools to transmit scientific messages.

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.

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 “Focusing on the ‘why’ and the ‘how’

Celia Ximenes, PhD student at Biomaterials for regenerative therapies group

What was the focus and main take-away from the workshop? *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.*

Who would you recommend the workshop for? *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.*

Would you like to comment anything else about the workshop? *Such a good workshop and a very good trainer.*

Melika Parchehbaf Kashani PhD student

What was the focus and main take-away from the workshop? *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.*

Who would you recommend the workshop for? *PhD students as well as other early-stage researchers that they aren't familiar with writing scientific papers*

Galyna Malieieva, postdoctoral researcher, Nanoprobes and Nanoswitches

What was the focus and main take-away from the workshop “Becoming a scientific writer, putting ‘why’ before ‘how’”? *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.*

Who would you recommend the workshop for? *PhD students*

What was the focus and main take-away from the ‘how’ of good scientific writing workshop? *Its focus is on how to build the sentences and paragraphs of your paper in a way that at the end you have a clear and coherent story.*

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

Leadership and management skills

Group coaching: communication and collaboration in research groups

The aim of the course is to improve communicative and relational competencies in 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 agreed with the Group Leader. In-person class sessions 10 hours.

Target group: All IBEC members from the same research group. In 2023 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 Institute 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 and Heads of Unit

The coaching process consists of 7 individual sessions between Coach and Coachee, with a duration of around 1 hour. 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.

Dates: All year

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 Institute 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



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: 27th and 28th February, 2 full days at BIST

Target Group: 1st year PhD Students.

Training 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 2 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. **Andreu Gual**, co-founder of Corkscrew Thinking and Nexgen Careers and **Holly Blondin**, adjunct professor at Parsons School of Design

Mentoring Skills

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

Dates:

- BIST Mentoring: March
- Bottom-up IBEC Mentoring
 - 15th of March for Mentees, 11:00-14:00h
 - 16th of March for Mentors, 11:00-14:00h

Target group: Postdoc and Senior researchers (mentors) participating in the BIST and IBEC's Bottom-up Mentoring Programs.

Training content:

- Objectives for and the overall programs
- Individual Expectations.
- What is Mentoring?
- Preparation of Learning Action Plan
- Follow up of the scheme.

Trainer: Different trainers, to be decided.

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.

Research management: an aligned shared vision about our function at IBEC

A shared definition of our strategy and role of research management professionals at IBEC and the behaviours we want to display as professionals, all contributing to IBEC's Mission and Strategy. We will address together systemic situations that take place in our day-to-day work at the Research Management Area of IBEC.

Dates:

May 4th : 1,5 hours

May 18th : 2,5 hours

June 1st : 2,5 hours

Target group: All members of the Research Management area of IBEC, organized in two groups

Training content:

- In session one: A shared definition of research management is shared. Identify behaviours described in the shared definition.
- In session two: Availability, adaptability (flexibility) and creativity will be explored. Conversations between research management and researchers. How to respond to researcher's needs.
- Session three: Research management Units as a whole. Mutual support. Conversations between Units and agreement settings

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

Career development: Transition to Academia

Basic things to consider when transitioning to academia in Spain and Catalonia. These skills and mindsets will help you make the most of your new career.

Dates: 11th of May, 10:00 – 12:00

Target group: Postdocs

Training content:

- Overview of the Spanish and Catalan academic system
- Evaluation and accreditation agencies
- Examples of requirements in academic positions
- How and when to apply: the importance of being prepared at the right time

Trainer: Dr. Elena Martínez is Deputy Director Talent and Training at IBEC, Group Leader at the Biomimetic systems for cell engineering and Associate Professor at the UB.

Time management & Personal Effectiveness

The training course will equip the participants with tools and techniques to maximize personal effectiveness looking at areas such as how to organize their time in line with their personal, work/study commitments and deal with varying life/work pressures.

Dates: 24th and 25th of May (in-classroom training)

Target group: Postdocs

Training content: At the of the end of the course you will be able to:

- Have a better understanding of productivity and how it applies to your work.
- Appreciate the importance of setting long-term and medium-term goals.
- Be able to distinguish between urgent & important tasks as a tool of prioritization.
- Find it easier to develop disciplined habits for scheduling work that 'has no schedule'.
- Learn strategies for creating personalized effective to-do lists.
- Understand where & why you procrastinate and take steps to avoid it.
- Become more skilled in communicating more assertively.
- Be able to identify and deal with potential and real conflict.

Trainer: Janice Haywood is a coach and trainer helping non-native speakers of English to improve their communication, presentation, and public speaking skills. She works with managers and directors from multinational companies who give business presentations in English.

Scientific Project Management for Researchers



**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: May-June. 5 sessions of 5h each.

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

Skills to hold difficult conversations and avoid conflicts

Communication and conflict management skills for supervisors, with practical tools for managing tense or difficult situations that arise in everyday life. Learning to manage tensions through dialogue to deal with differences. Methods and competencies to conflict management (negotiation, collaboration, mediation) that contribute to social peace. Personalized training preparation with case studies.

Dates: 8th of June. in-classroom session. Training only in Spanish/Catalan.

Duration: 5 hours.

Target group: Supervisors (15 attendees max).

Training content:

- Understand why conflicts occur. Identify the most common conflicts within the organization and teams.
- To deepen in the different conflict resolution techniques.
- Incorporate the characteristics and behaviours of an effective leader.
- Improve the internal climate and incorporate the culture of dialogue in the organization/team.
- To develop effective communication and a more integrated, motivated and proactive work team.
- Acquire knowledge, skills and abilities to prevent conflicts.
- Promote good business health, conflict management in all its forms and the consequent reduction of associated costs.

Trainer: **Carol Pinilla and Montse Mir** are founders of **CMBMediala** a leading consultancy in the prevention and management of situations that may cause conflict within organisations. Acknowledgements: ADR2019 Methodology Award Mediala as the best initiative in conflict management (Generalitat de Catalunya); AMMI Award for certification in the Mediala methodology for conflict resolution.

How to succeed in your PhD II: Writing your thesis



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

Dates: 4 sessions of 3 hours each (12 hours), in June 2023

Target Group: PhD students in their last year

Content:

- Thesis writing
- Peer support group

Trainer: Dr. Geraint Wyn has been a Researcher Development Consultant in the University of Cambridge since 2008. He completed his undergraduate and master's 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.

Leadership in action



The workshop will introduce theories and strategies to support the development of leadership skills for postdoctoral 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: May. 4 online sessions of 3hours each and one final session of 1,5ours.
13,5hours in total

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.

Research Integrity for researchers at early career stages

Course in good research practices and Research Integrity.

Dates: September.

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

Training content:

Theoretical introduction to Research Integrity (RI)

- What do we understand by RI and its importance
- Examples of misconduct, frequency, and consequences
- Types of misconduct (FFP and QRP), who can misconduct
- General guidelines for good conduct (international and other codes)

Practical introduction to RI

- Dilemma games or work in groups (motivations and frustrations in science, trust, the importance of context)
- Discussion about Open Science

Tools to help you maintain your RI

- Importance of Planning, Data Management and Record Keeping
- Conflicts of interest (potential role play)
- Other concepts: sharing of data, biases

Trainer: Maruxa Martínez-Campos, PhD in Biology and in charge of digital media and scientific affairs at PRBB. Coordinator of the Good Scientific Practices Group of the PRBB. Associate Professor at UPF.

How to interview effectively and get the best candidate

The workshop will be an opportunity for interviewers to practice and improve their interviewing techniques by sharing knowledge and good practices.

It is proven that the Competency Based Method of Interview can help us achieve better understanding of the candidate.

Using the recognized principle that past and present behaviours are best predictors for future performance and evaluating not only his/her aptitude or technical skills for the job, but also the alignment and match with the research group and IBEC, the recruitment process will be lead successfully and professionally. Likewise, as interviewer, in order to successfully identify the best candidates, it is necessary to be as objective as possible and detect any bias we may have.

Have you asked yourself:

- Am I an objective interviewer?
- Am I aware of my implicit bias? how can I reduce it?
- Do I follow standard techniques and best practices when interviewing?

Dates: November 5 hours (in-classroom session)

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

Training content:

- Awareness of implicit bias, how it influence our decisions and how to reduce it
- Competency Based Interviews: framework at IBEC
- Interview techniques and practical examples

Trainer: **Carolina Marí** is the Head of Human Resources at IBEC since 2009. She studied Sociology, a Master in HR and a postgraduate in HR Strategy. She has been working for more than 20 years as an HR professional in the field of organisation, development, recruitment and the implementation of strategic HR initiatives.

Testimonials Workshops “How to interview effectively and get the best candidate”

Teresa Galán, MicrofabSpace and Microscopy Characterization facility Coordinator

What was the focus and main take-away from the workshop? *How to obtain the right information from a candidate in an interview and how to evaluate it efficiently.*

Who would you recommend the workshop for? *Group leaders, senior post docs, heads and coordinators*

Would you like to comment anything else about the workshop? Complete and useful

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

What was the focus and main take-away from the workshop? *During the interview never ask a close question. An open ended question gives a better idea about the candidate.*

Who would you recommend the workshop for? *Postdocs and junior group leader*

Would you like to comment anything else about the workshop? 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.

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

Grants 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.

Entrepreneurial skills and Technology Transfer

Introduction to patents and intellectual property protection

The objective of the course is to provide an overview to patents and intellectual property protection

Dates: March 29th, 10:00 – 12:30 (In-classroom)

Target group: All IBEC members.

Training content:

- 1) Intellectual property and mechanisms of protection
- 2) Patenting
- 3) Necessary requisites for patentability
- 4) Inventors and applicants
- 5) Structure of a patent
- 6) Main free patent search tools
- 7) Internal IBEC process to protect an invention

Trainer: Martina Giovanella, obtained her BSc and MSc in Physics at the University of Pisa (Pisa, Italy). After a research stay in the Technical University of Berlin (Berlin, Germany), she completed her PhD in Medical Photonics from ICFO (Barcelona, Spain). As a researcher, she gained experience in applied research for development and validation of medical devices, in a collaboration between a research and technological centre, a medical device company and a research hospital (Rigshospitalet, Copenhagen, Denmark). Since 2019, she has been working as a professional in Technology Transfer Offices of research centres.

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: April 19th , 12:00 – 13:30 (in-classroom and online)

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: Asli Raman holds a PhD in chemistry and an MSc in Nanotechnology and Materials Science from Universitat Autònoma de Barcelona. Her research mainly focused on nanomaterials for biological applications. In addition to being involved in research, she delivered classes to undergraduate students across different disciplines and acted as a final degree project supervisor at Universitat Autònoma de Barcelona. She has over ten years of experience in both academia and the life sciences industry, leading projects in business development, healthcare consulting, communications, and marketing. She has worked on several different projects with a range of clients from big pharma to small start-ups or university spin-offs.

The valorization plan

A valorisation plan designs the development process for a project to reach the market and the ways to obtain the necessary financial support.

Dates: May 17th, 12:00 – 13:30 (In-classroom training)

Target group: All IBEC members.

Training Content:

A valorization plan designs the development process for a project to reach the market and the ways to obtain the necessary financial support. We will see:

- Phases of the Valorization process
- Risk vs Value
- Valorization actions
- Innovation Maturity Level
- Funding the valorization of an R&D project in Biotech

Trainer: Agostino Romeo. Innovation manager with 3 years' experience in valorization and tech transfer of R+D+I project in the Life Sciences area. He has an enterprise and scientific mindset, acquired respectively as Innovation & Tech Transfer Project Manager and as former Postdoctoral Research Scientist in the field of Bioelectronics and Point-of-Care diagnostics.

Experience of some researchers in IBEC and Entrepreneurship

The objective of the course is to share the experience of company creation and management.

Dates: June (to be defined)

Target group: All IBEC members.

Training Content:

Round table with two IBEC entrepreneurs.

Trainer: Irene Marco-Rius and Samuel Sánchez.

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: September

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: From **Asphalion**. To be defined

How to elaborate a business case

The business case is a key piece of information to convince the financial agents to invest money in your company.

Dates: October - (online)

Target group: All IBEC members.

Training Content: The attendants will learn how to elaborate a business case that properly describes the financial needs of the company for the purpose to develop the project to the market, also identifying the estimated sources to obtain that financial support and the estimated financial income for the commercialization of the developed project.

Trainer: to be defined.

How to elaborate a pitch

Learn how to elaborate a pitch

Dates: November - (online)

Target group: All IBEC members.

Training Content: A pitch is a short presentation (1-5 min) showing how your product is better than the solution used today for a relevant medical need. The pitch together with the business plan are the two tools you must convince investors to invest in the development of your idea

Trainer: to be defined

Basic notions to understand and deal with Venture Capital companies

Learn how Venture Capital funds are structured and how they operate to be able to present your proposal successfully.

Dates: December - (online)

Target group: All IBEC members.

Training Content: If you are in the process of establishing a spin-off, you need to present your proposal to venture capital companies to get them to finance your development. You will also need to negotiate with them their role in the company and the exit strategy of the investor.

Trainer: to be defined

Open Science

Workshop Open Science I: Open Publishing / 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: 30th of March 2023, 10:00 – 14:00 (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 right 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 Strategy 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 of data management issues and learn how to handle them. This workshop introduces research data management to achieve better scientific outputs.

Dates: 22nd of June, 10:00 – 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 Strategy 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 2023

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 IV: 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 2023

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

Scientific tools & techniques

Quantitative Light Microscopy at CRG

This five-day comprehensive and intensive course covers the entire spectrum of bioimaging, starting from the fundamental basis of optical microscopy, instrumentation, specimen preparation, molecular markers, right up to the most recent and revolutionary development in bioimaging and bioimage data analysis, including artificial intelligence in microscopy.

Dates: 20th-24th February 2023 from 9:00 to 18:00h

Target group: The course is intended for predoctoral students, postdoctoral or biomedical researchers involved with microscopy.

Training content:

- Understand the theoretical and practical aspects of optical microscopy
- Understand the different imaging modalities and its applications in biomedical research
- Learn about bioimage data handling and bioimage analysis and appreciate the significance of AI
- Understand the design and built considerations of bespoke microscopes

Trainers: Belén Aguilera, Evident/Olympus; Lorenzo Albertazzi, Eindhoven Uni. of Technology; Jordi Andilla, ICFO; Sebastian Beer, Hamamatsu; Maria Calvo, Uni. of Barcelona Ares Castillo, Leica; Heiko Gäthje, Evident/Olympus; Raquel Garcia Olivas, CRG; Raul Gomez, CRG; Pablo Guerra Lahoz, CSI; Nadia Halidi, CRG; Christoffer Lagerholm Åbo Akademi University, Pablo Loza, ICFO, Arrate Mallabiabarrena Ormaechea, CRG; Minh-Son Phan, Institut Pasteur; Francisco Porto, Leica; Gerry Sexton, Zeiss; James Swoger, EMBL Barcelona.

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: 1st, 2nd, 6th, 8th, 15th, 16th of March (In-classroom training)

Target group: All IBEC Community

Training content:

- 1. March 1st: Introduction. Descriptive statistics. Sampling distribution. Confidence Intervals.
- 2. March 2nd: Introduction to hypothesis testing. T-student test.
- 3. March 6th: Comparing means, one way-analysis of variance.
- 4. March 8th: Two-way ANOVA. Multiple comparison procedures.
- 5. March 15th: Correlation and regression. Partial correlation.
- 6. March 16th: Categorical Data. Introduction to Experimental Design and Effect size.

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).

Basics of Magnetic Resonance Imaging and Spectroscopy (MRI/MRS)

This introductory course on MRI will cover the physics of NMR, contrast mechanisms for MRI, spectroscopy, hyperpolarisation and more. To benefit from this course, a strong physics and/or chemistry background and interest on MRI are a must

Dates: 4th, 11th, 28th of March from 09:30 to 13:30 (In-classroom training)

Target group: Researchers interested in MRI/MRS

Training content:

- Safety considerations of an NMR facility
- Description of MRI hardware
- NMR and MRI basic principles
- Description of MRI acquisition parameters
- MRI quantification
- Common MRI artefacts
- Spectroscopy and diffusion techniques
- Hyperpolarisation techniques and applications
- Visit to the Molecular Imaging for Precision Medicine MRI/NMR lab at IBEC

Trainers:

Silvia Lope Piedrafita, -PhD. Associate Professor in the Dept. of Biochemistry and Molecular Biology, UAB.

Irene Marco-Rius, PhD. Junior Group Leader, Molecular Imaging for Precision Medicine Group, IBEC

ImageJ 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: 23rd of March, 09:30–12:30 (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 Trepas, 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.

Graphic design for presentations and scientific communication

A course where the principles of design applied to graphics and posters are reviewed.

Dates: April 13th, 10:00 – 12:30 (In-classroom training)

Target group: All IBEC community

Training content: Workshop on how to improve infographics, graphics, and scientific posters. Does not go into the operation of specific software.

Trainer: **Anna Molinet**, from the agency of scientific communication Eduscopi, holds a degree in Human Biology, specialized in Scientific Communication. She is now finishing her degree in Graphic Design at the UOC. She has experience in writing divulgation articles, development of medical education platforms, audiovisual creation, web design, press releases, social networks, event organization, development of promotional materials, moderation of debates.

Python (Basic)

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

Dates: 8th, 13th, 16th of June, 09:30–12:30 (In-classroom training)

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

Training content:

- Introduction to Python.
- The Python interpreter.
- Python programming environment:
- Python distributions and module install:
- Python language syntax.
- Libraries.
- Introduction to Python's scientific libraries:
- Working with “.csv” files.
- Introduction to parallel computing.

Trainer: **Manuel Gómez González** is a postdoc at the Integrative Cell Tissue and Dynamics group, under the supervision of Prof. Xavier Trepap, 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.

Python (Advanced)

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

Dates: 29th of June, 4th and 6th of July, 09:30–12:30 (In-classroom training)

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

Training content:

- Day 1: Data Analysis and Statistics
- Day 2: Creating publication-quality figures with Python
- Day 3: Introduction to image processing using Python

Trainer: Manuel Gómez González is a postdoc at the Integrative Cell Tissue and Dynamics group, under the supervision of Prof. Xavier Trepas, 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.

Matlab I (Basic)

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

Dates: Second semester 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)

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

Dates: Second semester 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."

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 results.

Dates: October, 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.

ImageJ 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, 09:30–12:30 (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 Trepas, 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 “ImageJ basic & advanced”

Miquel Bosch, PhD Student, Integrative Cell and Tissue Dynamics

What was the focus and main take-away from the workshop Image j basic? *Learn basic Image J techniques. The take away was to know the possibilities it offers.*

Who would you recommend the workshop for? *Undergraduate students, Master students and PhD students who start to do research.*

What was the focus and main take-away from the workshop Image j advances? *To automatize 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.*

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

Gender and Diversity

Inclusive training for IBEC researchers. Project FECYT/ONCE

Within the framework of an inclusive science education project of the FECYT (Spanish Foundation for Science and Technology), ONCE (Spain's Blinds National Organizations) offers training for our researchers, so you can have enough information about colleagues with visual impairment.

Dates: 10th of March and 21st of April, 09:30 a 14:00h. (Two independent sessions)

Target group: All IBEC members

Training content:

1. Presentation of the Service: organization, structure, characteristics of the population we serve, and supports and resources we offer.
2. Digital accessibility. Access to information for visually impaired students.
3. Accessibility of STEAM activities for visually impaired students.
4. Generic guidelines and orientations to carry out an optimal accompaniment of students with visual impairment.

Trainer: Trainers from **ONCE**.

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: 13th of June, 10:00-13:00h (online)

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.

Health & Safety and Wellbeing

Biosafety: How to work with biological agents and samples

IBEC must declare to the authorities 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:

- February 9th
- October

Target group: All IBEC members

Training 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.

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:

13th of March, 13:30– 12:30 (online): Spanish edition

14th of March, 15:30– 17:30 (online): English edition

Target group: All IBEC members

Training 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: Grup CIEF experts on cybersecurity for organizations from the CIEF group.
<https://www.grupcief.com/>

Healthy food habits in companies

**Do you know your food choice could make change your attention or decisions at work?
Join this session to learn how you can improve your diet to be healthier and become more productive.**

Dates: 20th of March, 13:00-14:00 (online)

Target group: All IBEC members

Content:

The goal is to raise awareness about the benefits of healthy eating routines:

- Nutrition and productivity. Caffeine, sugar, energy food.
- How to avoid snacking all day under control. Mindful eating.
- How to be in healthy weight and fat without a diet. Balanced diet for families.
- Batch cooking.

Trainer: Núria Fernández, nutritionist expert in Health programs for companies. She is an expert on Health & Safety from the *Preving Group* (<https://www.preving.com/>)

Achieving objectives - Going beyond New Year's resolutions



Did you fit in some time to reflect on your objectives for 2023? If so, how do you maintain those goals? Do you want to learn how to keep those goals effectively?

Many of us spend most of our time focusing on producing scientific results to get publications and grants to progress in our careers and we are left with very little or no time for reflection.

In this interactive coaching session, we will share tips for sticking to our New Year's resolutions and other goals, and to promote healthy habits we set for ourselves. We will dedicate time for self-reflection to gain clarity and develop strategic thinking abilities to support participants build their careers with engagement.

Dates: 2 hours online session in April

Target group: All IBEC members

Training Content:

- Goal setting and career action plan
- Share tips on the creation of plan using smart goals, backup planning
- Activity: Create a career action plan with smart goals
- Expectations and productivity
- Share tips on promoting and prioritising healthy habits, strategies to control work-life balance, bring up motivation vs frustration and adjusting expectations
- Interactive exercise to reflect on expectations vs productivity
- Embracing change and challenges

Trainer: Marie Trussart. As a senior-postdoctoral researcher and a coach from the IECL, I founded Kintsugi Coaching in 2019. I am passionate about helping researchers progress in their career and enjoy providing strategies to grow and thrive among STEM professions. I give individual coaching sessions enabling researchers to develop essential skills and tools to navigate barriers surrounding career advancement. I have been formed through different programs of leadership, coaching and entrepreneurship to stimulate opportunities for successful leadership in academia

Physical and postural health training (Ergonomics)

Ergonomics is important because when you're doing a job and your body is stressed by an awkward posture, extreme temperature, or repeated movement, your musculoskeletal system is affected.

Dates: 25th of April, 1h (In-classroom training)

Target group: All IBEC members

Content: We will propose tools for the prevention and reduction of chronic and musculoskeletal problems that may occur during the working day. The idea is to introduce healthy lifestyle habits to improve the worker's work and personal life.

Trainer:

Jorge García, a personal trainer for work (physical exercise).

Anxiety Management Workshop



Anxiety is a normal part of everyday life. However, when people experience frequent, intense or persistent anxiety it can have a negative impact on daily activities, can be difficult to control, and become out of proportion or inappropriate to the situation. This can lead to avoiding places or situations to prevent these feelings.

The objective of this interactive, in person workshop is to build knowledge and awareness of anxiety, to understand why we have it and how we can better manage it to reduce its negative impact on our lives. Using techniques related to cognitive behaviour therapy and mindfulness, participants will start to understand better how anxiety affects them personally and learn how they can manage it better

Dates: 3 hours in person workshop in October

Target group: All IBEC members

Training Content:

Anxiety: What is it?

- Fight, flight, freeze response
- Causes
- CBT view of anxiety

What can we do about Anxiety?

- Physical techniques – relaxed breathing, progressive muscle relaxation
- Identifying unhelpful thoughts, challenging, practising helpful ones
- Exposure to anxiety
- Sleep hygiene, putting limits
- Grounding exercises, Mindfulness
- Procrastination and Imposter syndrome applying CBT techniques

Trainer: Chris Barratt. Psychotherapist specialised in Cognitive Behaviour Therapy with an interest in Mindfulness and a member of the British Psychological Society. Graduated with an honours degree in psychology in the UK and worked for many years in the UK in the mental health field, helping people with a wide range of mental health issues, as well as their careers. Now lives in Barcelona where he completed a Masters in Cognitive Behaviour Therapy. Helps people with a wide range of difficulties in their lives with a particular interest in mood and anxiety issues.

Mindfulness for improved self-mastery and resiliency



Workshop of two ½ day sessions will feature the benefits of mindfulness, a tool to develop self-efficacy and improve stress management and resilience. This training is based on the MBSR (Mindfulness-based Stress Reduction, Center for Mindfulness, Univ. Massachusetts) program and has been designed as an experiential and interactive workshop, aiming to guide participants towards self-reflection and self-regulation. The program emphasizes the importance of stop and see before acting, and then learning to respond instead of reacting to stressful events.

Dates: 2 session of 4 hours each (In-classroom training) in October.

Target group: All IBEC members

Training Content:

- Mindfulness as a tool to develop self-awareness and personal efficiency
- Explore emotional intelligence and develop emotion regulation.
- Understand and apply the principles of stress management.
- Improve Personal Mastery and Resilience

Trainer: **Dr. Andrés Martin Asuero** holds a MSc. a MBA and a PhD in Psychology from Univ. A. Barcelona. He completed his education in France (INSEAD) and USA (MIT and UMass).

Breathing and visual relaxation

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: 22nd of November, 1h (online)

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.

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

Languages

Spanish classes (beginner)

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

Dates: One trimester, from April to June.

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

Target group: The course is aimed at non-Spanish speakers with no knowledge of Spanish language.

Minimum 7 participants. 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 **Consorti 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/>

Tandem program

If you want to practice a language and are willing to offer conversation in your mother tongue(s), join our language-tandem program.

Dates: All year.

Target group: All IBEC members

Content: The program consists of an informal language exchange between IBEC members. IBEC's HR will gather information on all interested IBEC members and find as many learning couples as possible. It's up to the couples if they prefer to meet in-person (e.g. over lunch) or to meet virtually. Contact HR if you want to participate.

