

“Scientists Need More“

Advanced courses for IMPRS NeuroCom

Priv.-Doz. Dr. ès sc. Alexander Schiller

Friedrich-Schiller-Universität Jena

www.schiller-chemistry.de



Priv.-Doz. Dr. rer. nat. Daniel Mertens

Universitätsklinikum Ulm, Deutsches Krebsforschungszentrum Heidelberg (DKFZ)

www.mertens-lab.de

„As scientists we focus on the results – as trainers we focus on the process!“

PROJECT AND TIME MANAGEMENT



Scientific guidance of Ph.D. students at Max Planck institutes is usually very good. However, while working hard on scientific output keeping an eye also on good scientific practice, project management skills and good communication within the research group is sometimes difficult. It is important to realize that Ph.D. students should always try to improve their project and time management, planning, communication skills, understand group dynamics and know how to use feedback in order to deliver a successful performance.

AIM – To provide Ph.D. students at Max Planck institutes with an opportunity to build their understanding, skills and confidence in project and time management and communication with their supervisor, their colleagues and peers. This will enhance their overall effectiveness as they pursue their research studies and maximize success of their future careers.

METHOD – Participants will experience interactive lectures, moderated group discussions and perform activities in order to learn from first-hand experience. We will safely move them outside of their “comfort zone” to the “learning zone” to enhance acquisition of novel competencies. This will be achieved through:

- Trainers who work as active scientists and group leaders in chemistry and biochemistry
- A safe, yet challenging course environment that will encourage participants to reflect the key elements of effective communication. Ground rules and feedback rules will be established by the participants to ensure course ownership and a respectful attitude.
- A balanced and structured program of plenaries, challenging activities and review sessions that will provide a variety of learning situations allowing participants to identify and take away relevant lessons
- Activities, games and role plays with participants that are filmed and reviewed by trainers and peers (activities outside are planned to install a diversified program)



- A range of group situations where participants will be encouraged to share feedback with their peers on their overall effectiveness
- A learning handout which will be offered to aid the training process of participants
- Encouragement to create an ongoing level of support from their learning groups that will enable continuing networking, coaching and further group interactions
- Program adoptable to the needs of the Ph.D. students and will be created in close cooperation with the coordinators of the IMPRS.

MODULES IN THE COURSE

Project and Time Management (Main Focus)

Research, teaching, professional development, private arrangements and not least the thesis: Time pressure results in many things only being half done. In the end there is not enough time for the important tasks and you are left with the uncomfortable feeling of again not having managed everything. It is however not difficult to improve dealing with the personal time budget. Through the implementation of planning and time management methods, individual disturbances can be minimized, priorities can be set and planning horizons can be determined in order to make the own work more effective.

Roles of Supervisor and Ph.D. student

As Ph.D. student it is important to develop greater awareness of the role and needs of the PI and others in the group. An impressive activity outside puts participants into the situation of being blind and being led by whistling sounds from a “shepherd”. Thereby, the interaction of trust, leadership and control in the relationship of supervisor and Ph.D. student is simulated. Review sessions after this activity are going often very deeply into the understanding of role models in the actual research group.

Group dynamics

Understanding group dynamics is essential for successful research in science. The Tuckman model (Forming, Storming, Norming, Performing) is used to describe typical group dynamics in (in)efficient teams. Several activities demonstrate this outside the comfort zone of the participants. Reflective sessions focus on group dynamics in new groups, loss and gain of team members and show problem solving approaches in the team (PISPAR model).

Feedback

Giving and receiving correct feedback is one of the most efficient tools in leadership. As it needs quite a lot of experience to use feedback in an authentic manner Ph.D. students should learn everything about it. While their studies they can try it out and develop the technique on a professional level. We focus on the importance of feedback for personal development with several activities: “Pass the Message”, Johari Window and role plays. We produce interactively feedback guidelines for the givers and receivers.

Conflicts & Collaboration

Conflicts about authorship can be handled with the following quote: “In a scientific career everyone will have his own war stories”. Ph.D. students should understand how important it is not to make enemies in the small world of science because this can be decisive on their career path. We will focus on origin and resources of conflicts and offer several conflict handling styles. Collaborations have to be cleverly and strategically planned and nurtured to render scientific projects and relationships sustainable.