

Global BioImaging international recommendation: Training courses for facility staff

Abstract

Global Bioimaging (GBI) has brought together imaging facility directors, experienced trainers in imaging technologies and core facility management from all over the world, to develop an international recommendation for 'Training courses for facility staff'. Its elaboration was based on community feedback, existing recommendations and direct responses from GBI training course participants.



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International recommendation for facility staff training

An advanced imaging core facility not only provides technical support, but also training tailored to the individual expertise and scientific needs of the end user. Thus, the quality of services in imaging technologies is determined by the highly specialized technical and scientific expert competence. To ensure that the qualified personnel of a core facility is developed to the highest level, coordinated and modular systems of advanced training is required. These training offers will qualify imaging facility staff to reach the highest technical expertise in order to exceptionally support their users.

Courses for staff and managers of imaging core facilities should focus on one topic per time, addressing for example facility management and administration; OR new imaging technologies; OR image data management training. For a given topic, GBI suggests organizing a one-week course comprising several different modules. The course could be divided for example into 2-3 modules during one week. Several modules can be offered together as a package within a one-week course, or to be taken individually in a 1-2 day course. The GBI international recommendation on training for imaging facility staff is summarized in Figure 1.

When designing the content for a course, organizers should clearly indicate their target audience and distinguish between facility staff (rather junior with 0 – 3 years experience in working as facility staff, focus on day-to-day operation and technical tasks), versus facility managers and directors (at least 3 years of working experience in a facility position, staff supervision, focus on future directions, facility metrics). This distinction is also relevant for the character of the course, as senior participants might appreciate a more interactive workshop, where they have sufficient time for exchange of experience among the participants.

For facility management and administration, the course should be designed as a curriculum consisting of modules that address staff with increasing levels of working experience (see Figure 2). Audiences with different levels of experience also demonstrate distinct preferences regarding the modules. Young facility staff members appreciate training in soft skills (e.g. time management, user communication, conflict management), whereas experienced facility managers emphasize the importance of budget administration, negotiation skills with leadership and demonstration of facility impact. Participants from previous training courses which apply for the next course level (e.g. from “Beginners’ level” to “Intermediate level”) should be informed timely about upcoming training opportunities and their previous participation should be considered in the evaluation of the application.

In more advanced courses the audience could be divided for some parts of the course into parallel sessions which address questions that are more specific for biological or biomedical imaging facilities (e.g. new imaging technologies, regulatory affairs, etc.).

Figure 1: Recommended general out-set of training courses for imaging core facility staff.

Recommended general out-set of training courses for imaging core facility staff

- The course should focus on one overarching topic (e.g. facility management OR image data management OR emerging technologies).
- Duration: 3-5 days depending on topic, level of detail and type of modules.
- Hands-on versus theoretical training should be well balanced (if possible: 50:50).
- Split into different courses for facility staff (junior) and facility managers (senior).
- Structured into a course series of increasing levels of detail and complexity.
- Maximum 25 participants per course.
- Openly advertised application process with evaluation of incoming proposals for their suitability and excellence.
- International courses aiming at participation from around the globe shall be taught in English*.
- Senior trainers should stay at least for a full day during the course to be available for questions and networking, and are encouraged to participate in the entire course.
- The value of networking should be emphasized and course participants should be given the opportunity to introduce themselves, their facility and work (e.g. via flash talks or posters).
- It is recommended that trainers should provide course participants with training material for preparation upfront to increase training efficiency.
- To optimize course organization and measure impact of specific training modules, feedback from course participants should be collected. This could take place a) in person directly at the end of the course; b) in online surveys after the course is concluded; c) e.g. 6 months after the course to understand what the participants actually used from the course to improve their practices in their own imaging core.

** Courses with only national or regional participation can be conducted in the local language if feasible.*

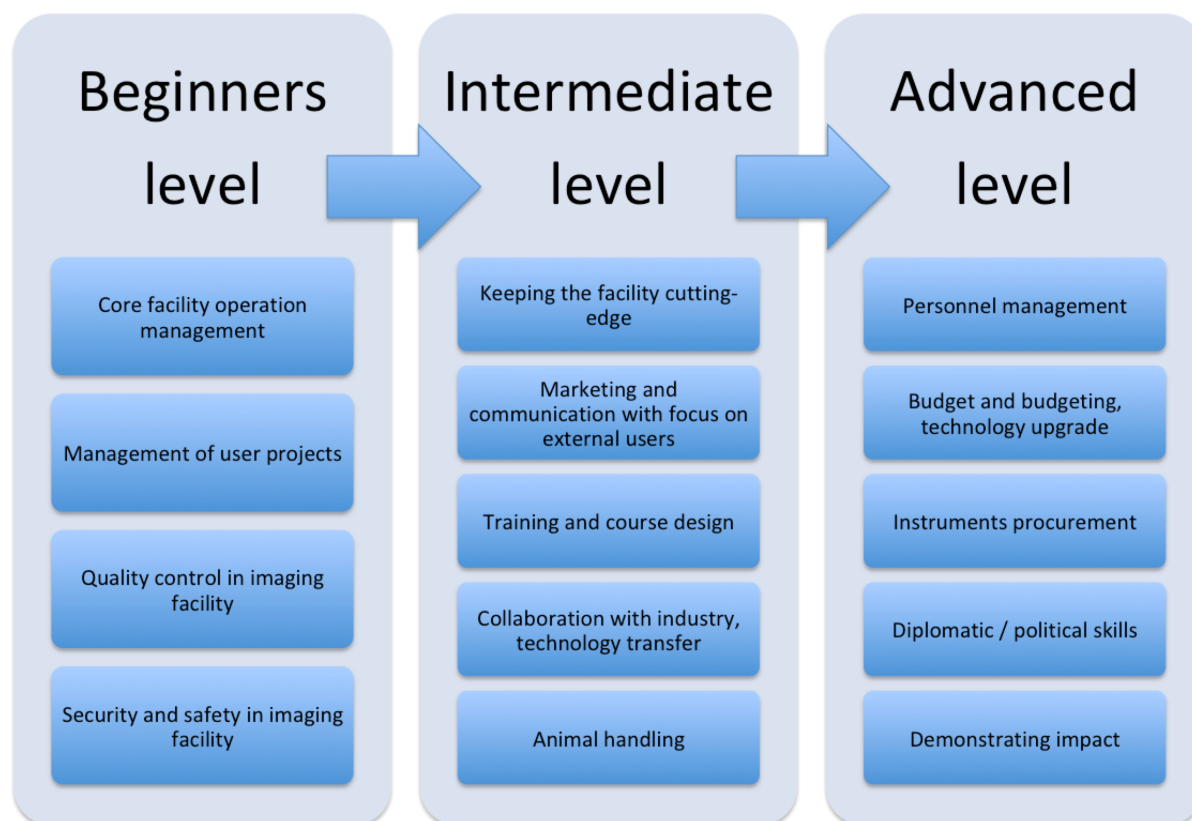


Figure 2: GBI recommends having three increasing levels of training courses addressing the topic of “imaging facility management and administration”. For each level, GBI suggests different modules for developing the course content.

Conclusions

The Global Bioimaging community recommends that training courses for facility staff and managers become part of their continuous professional development. As successfully demonstrated by the H2020-funded Global Bioimaging project, complementing training courses with staff exchange programmes (“facility shadowing”) for imaging facility managers and staff can be very beneficial for both, visiting staff and hosting institution. Therefore, GBI will continue organizing its own and advertising its partners’ training courses, and continue the international facility shadowing program also beyond GBI project duration.