AO PEER Course—Grant Writing
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Mission
The AO’s mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

Purpose statement
In its work to advance the AO’s mission, AO PEER’s purpose is to support surgeons in their clinical and translational research activities with innovative education and tools.

AO PEER offerings

Level 1
Principles of clinical research course
8 modules
- Importance of research
- Basics of GCP
- Study questions
- Literature review
- Research environment
- Basics of statistical thinking
- Basics of medical writing
- Make your research project a success

Level 2
Advanced courses
- Grant writing
- Study management and GCP
- Publication writing

Level 3
Research mentorship program
Welcome
Dear AO PEER course participant,

It is our distinct pleasure to welcome you to the AO PEER course. Like you, we understand that research is key to advancing patient outcomes and—like you—we know that initiating, planning and conducting research can be challenging. AO PEER learning opportunities are designed for by surgeons, for surgeons, and the AO PEER Level II Grant Writing course is designed to take your grant writing skills to the next level.

It is an interactive course on how to successfully write grant application for your clinical study proposal. Designing and conducting a clinical study can sometimes be a daunting task. We will give you the tools needed to write your study idea with a methodical, step-by-step approach. We are committed to advancing clinical research for the benefit of your patients.

Sincerely yours,

Name
Job, Work place
Course description

This one-day course is organized in four modules that give participants the opportunity to experience the process of a grant application. The course comprises of interactive discussions, workshops, and lectures and requires online precourse activities. Practical examples and workshops explain the sections of a grant and the simulation of a grant review panel gives participants a personal insight into the grant review process, followed by tips on how to deal with grant rejections.

For more information, please visit www.aopeer.org. Access is free for all members of an AO Clinical Division.

Goal of the course

The goal of the AO PEER Grant Writing course is to explain the structure of a typical research grant with a special focus on the organization, rationale, project management, and feasibility. The course also gives an insight into the grant review process and how to deal with grant rejections.

Target participants

This course targets individuals who want to apply for mid-sized grants, wish to initiate a multicenter study and establish a research environment. Furthermore, this course addresses individuals who need to mentor/supervise students, PhD candidates, or residents in their grant writing efforts.

Learning objectives

At the end of this course, participants should be able to:

• Explain the difference between grant writing and scientific writing
• Write a grant by following the given structure
• Set up a detailed research plan including feasible milestones and timelines
• Explain the grant review process through critically reviewing a grant application
• Deal with grant rejection
Chairperson(s)

Name
Job, Work place

Teacher
## Mandatory precourse activities for participants

- Read through the Step-by-step guide to grant writing
- Read through the example grant proposal
- Research and compile a list of (local or regional) funding opportunities relevant to your field of research
- Take the online learning module about “Study designs” and read through the presentation with specific study design examples.
- Watch the recorded lecture about “Evidence, causality, and confounding”
- Complete the online learning module “Outcome Measures”

## Course prerequisite

AO PEER Principles of Clinical Research course (or similar education on the principles of clinical research)

## Day

### Location: xxx

### Module 1

#### Understanding the grant application process

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Welcome</td>
</tr>
<tr>
<td>50</td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>• Types of grants</td>
</tr>
<tr>
<td></td>
<td>• Rationale to apply for a grant (interactive discussions)</td>
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<tr>
<td></td>
<td>• Difference between grant writing and publication writing (interactive discussions)</td>
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<tr>
<td>10</td>
<td>Grant application process (recap of homework)</td>
</tr>
</tbody>
</table>

### Module 2

#### The structure of a grant proposal: section by section

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>Introduction: Organization and formatting</td>
</tr>
<tr>
<td></td>
<td>Investigators, subinvestigators and study coordinators</td>
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<td></td>
<td>Sponsors and Contract Research Organizations (CRO)</td>
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<tr>
<td>15</td>
<td>Break</td>
</tr>
<tr>
<td>40</td>
<td>Part I: Specific Aims (with practical exercises and/or examples integrated for each point)</td>
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<tr>
<td></td>
<td>• Title (Exercise, interactive practice: formulate a title)</td>
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<tr>
<td></td>
<td>• Background</td>
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<td>• Outline of the problem</td>
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<td>• Hypothesis/Rationale</td>
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<td></td>
<td>• Aims (objectives)</td>
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<td>• Closing/Relevance</td>
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<tr>
<td>60</td>
<td>Part I exercise: Specific Aims / Defining a project goal</td>
</tr>
<tr>
<td>80</td>
<td>Part II: Research strategy:</td>
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<tr>
<td></td>
<td>• Significance</td>
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<td>• Innovations</td>
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<td></td>
<td>• Approach: Study design and methods</td>
</tr>
<tr>
<td>60</td>
<td>Practical exercise: Grant review</td>
</tr>
<tr>
<td>15</td>
<td>Break</td>
</tr>
</tbody>
</table>
## Module 3
**Project Management**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td><strong>Project management aspects of a grant proposal</strong></td>
</tr>
<tr>
<td></td>
<td>• Milestones (interactive discussion and exercises)</td>
</tr>
<tr>
<td></td>
<td>• Risks/alternatives (interactive discussion)</td>
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<td></td>
<td>• Related projects</td>
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<tr>
<td></td>
<td>• Budget</td>
</tr>
<tr>
<td></td>
<td>• Infrastructure</td>
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<tr>
<td>15</td>
<td><strong>Break</strong></td>
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<tr>
<td>90</td>
<td><strong>Exercise: putting together a budget</strong></td>
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</tbody>
</table>

## Module 4
**Components of a winning grant proposal**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td><strong>Grantsmanship</strong></td>
</tr>
<tr>
<td>50</td>
<td><strong>Grant review panel: what do reviewers look for?</strong></td>
</tr>
<tr>
<td></td>
<td>• Scientific content</td>
</tr>
<tr>
<td></td>
<td>• Research environment</td>
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<tr>
<td>10</td>
<td><strong>What if a grant was rejected?</strong></td>
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<tr>
<td>10</td>
<td><strong>Why has a grant (application) failed?</strong></td>
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<tr>
<td>20</td>
<td><strong>Wrap up and writing tips</strong></td>
</tr>
</tbody>
</table>

End of course
Course organization

Course venue
Event information

Event fee
CHF xxx for non-AO members
CHF xxx for AO members
CHF xxx for other non-for-profit organizations and SwAPP members
Your registration fee includes:
- Attendance of all lectures/practical sessions
- Teaching material for the course
- Coffee breaks and lunch

Intellectual property
Event materials, presentations, and case studies are the intellectual property of the event faculty. All rights are reserved. For more information, please see: www.aofoundation.org/legal.

Recording, photographing, or copying lectures, practical exercises, case discussions, or any event materials is strictly forbidden. Participants violating intellectual property will be dismissed.

The AO Foundation reserves the right to film, photograph, and audio record during its events. Participants must understand that in this context they may appear in these recorded materials. The AO Foundation assumes participants agree that these recorded materials may be used for the AO's marketing and other purposes, and that they may be made available to the public.

Security
If applicable

Insurance
The event organization does not take out insurance to cover any individual against accident, theft, or other risks.

Use of mobile phones
Use of mobile phones is not permitted in the lecture halls or in other rooms during educational activities. Please be considerate of others by turning off your mobile phone.

Dress code
Business casual
1. Academic independence
Development of all curricula, design of scientific event programs, and selection of faculty are the sole responsibilities of volunteer AO network surgeons. All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and reflects the expertise of the AO Education Institute (www.aofoundation.org).
Industry participation is not allowed during the entire curriculum development and planning process to ensure academic independence and to keep content free from bias.

2. Compliance to accreditation and industry codes
All planning, organization, and execution of educational activities follow existing codes for accreditation of high-quality education:
- Accreditation Criteria of the Accreditation Council for Continuing Medical Education, US (www.accme.org)
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities (www.accme.org)
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education (www.uems.eu)
Events that receive direct or indirect unrestricted educational grants or in-kind support from industry also follow the ethical codes of the medical industry, such as:
- Eucomed Guidelines on Interactions with Healthcare Professionals (www.medtecheurope.org)
- Advamed Code of Ethics on Interactions with Health Care Professionals (advamed.org)
- Mecomed Guidelines on Interactions with Healthcare Professionals (www.mecomed.org)

3. Branding and advertising
No industry logos or advertising (apart from the AO Foundation and its clinical divisions) are permitted in the area where educational activities take place.
Sponsors providing financial or in-kind support are allowed to have a promotional booth or run activities outside the educational area with approval from the event chairperson.

4. Use of technologies and products in simulations
In case simulations are chosen as an educational method to educate skills, we only use technology approved by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer reviewing new technology.
More information about the AO Technical Commission and its development and approval processes can be found on the AO’s website: www.aofoundation.org.

5. Personnel
Industry staff members are not permitted to interfere with the educational content or engage in educational activities during the event.
Upcoming AO PEER courses

For upcoming AO PEER courses please visit www.aopeer.org
The AO is a medically-guided, not-for-profit organization, a global network of surgeons, and the world’s leading education, innovation, and research organization specializing in the surgical treatment of trauma and musculoskeletal disorders. Today the AO has a global community of over 215,000 health care professionals in the fields of trauma, spine, craniomaxillofacial, veterinary, and reconstructive surgery. Each year the AO offers over 830 educational events globally with over 58,000 participants and supported by 9,000 faculty.