AO RECON

AO Competency-Based Curriculum

AO Recon Course—

Complex Total Hip and Knee Arthroplasty (With Human Anatomical Specimens)

February 25 – 27, 2026 Madrid, Spain **PROGRAM**



Mission

The AO's mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

Purpose statement

AO Recon is a global network of orthopedic surgeons committed to best-in-class education in joint preservation and replacement.

The AO principles of fracture management

1



Fracture reduction and fixation to restore anatomical relationships.

2



Fracture fixation providing absolute or relative stability, as required by the "personality" of the fracture, the patient, and the injury.

3



Preservation of the blood supply to soft-tissues and bone by gentle reduction techniques and careful handling.

4



Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.

Welcome
Dear participant,

It is with great pleasure that we welcome you to our principles course that offers newly certified surgeons a training on the key principles of primary hip and knee arthroplasty.

Over the program's two days, renowned expert surgeons will lead interactive discussion groups and instructional lectures and deliver technical know-how in practical exercises to develop your decision-making competency.

Your current level of knowledge, attitudes, and skills will be challenged throughout the course. The best-in-class curriculum and faculty will provide you a memorable learning experience that will remain with you for a lifetime.

We hope that you will immediately integrate these insights into your daily practice, in order to reach our shared goal: to improve patient care through surgical excellence.

Yours sincerely,



Carsten Perka
Chairperson AO Recon
Steering Board



Bassam Masri
Chairperson AO Recon
Education Forum

Goal of the event

The AO Recon Course—Complex Total Hip and Knee Arthroplasty teaches current concepts in the treatment of patients with a need for revision or complex primary arthroplasty in the hip and knee.

Target participants

This course is targeted at certified, experienced orthopedic surgeons who wish to enhance their knowledge and skills in complex arthroplasty.

Learning objectives

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

- Describe a systematic clinical, laboratory, and radiographic evaluation in revision and complex primary arthroplasty
- Optimize preoperative planning
- Adopt a patient-centered approach
- Optimize patients preoperatively to reduce complications
- Describe and discuss safe and effective procedures for revision and complex primary arthroplasty
- Discuss the management of early and late problems or complications
- Communicate and facilitate a multidisciplinary team-based approach
- Apply best practice to optimize and document patient outcomes

Event description

This course is modular in structure and highly interactive. Short, evidence-based lectures cover the key information required. Moderated case discussions in small groups will expand on each topic and help participants to develop decision-making skills. Surgical skills are enhanced in the anatomical specimen laboratory. Participants will have the opportunity to share their experience with peers and international faculty. All factors related to achieving the best possible outcomes in revision arthroplasty will be covered.



Chairpersons



Eduardo García-Rey
University Hospital La Paz
Madrid, Spain



Theofilos Karachalios
University General Hospital of Larissa,
Faculty Of Medicine, School of Health Sciences,
University of Thessaly, Larissa, Greece

International faculty

Dario E. Garin, New City Hospital, Tijuana, Baja California, Mexico

Regional faculty

Yves Acklin, Kantonsspital Graubünden, Chur, Switzerland

Lazaros Poultsides, Aristotle university of Thessaloniki, Thessaloniki, Greece

Dinko Vidovic, University Hospital Sisters of Charity, Zagreb, Croatia

National faculty

José Cordero, University Hospital La Princesa, Madrid

Rodrigo García Crespo, Hospital Clínico Universitario San Carlos, Madrid

Enrique Gómez-Barrena, University Hospital La Paz, Madrid

Pablo Hernández Esteban, University Hospital La Paz, Madrid

José A Hernández-Hermoso, Germans Trias i Pujol University Hospital, Badalona

Pablo Sanz Ruiz, Gregorio Marañón General Hospital, Madrid

Plácido Zamora, Servicio Andaluz de Salud. Universidad de Málaga, Málaga

Wednesday

February 25, 2026

12:30–13:00	Registration	
13:00–13:10	Opening remarks and introduction	E García-Rey, T Karachalios

Module 1
Moderator: J Cordero
Indications for revision hip arthroplasty and preoperative planning

13:10–13:30	Overview of failure mechanisms and indications for revision hip arthroplasty	T Karachalios
13:30–13:40	Preoperative investigation and planning for revision hip arthroplasty	P Zamora
13:40–13:50	Assessment of acetabular bone loss	E García-Rey
13:50–14:00	Discussion	All faculty

Module 2
Moderator: E García-Rey
Revision arthroplasty of the hip

14:00–14:10	Extended surgical approaches	J Cordero
14:10–14:20	Well-fixed implant removal	L Poultsides
14:20–14:30	Discussion	All faculty
14:30–14:50	*Coffee break*	
14:50–15:40	**Treatment options for acetabular bone loss** **Case-based lectures with discussion** Case 1: Jumbo cup (10 min) Case 2: Augments (10 min) Case 3: Cages (10 min) Case 4: Pelvic discontinuity (10 min) Discussion (10 min)	 E García-Rey D Garín L Poultsides T Karachalios

15:40–16:20	**Treatment options for femoral bone loss** **Case-based lectures with discussion** Case 1: Fluted titanium, tapered stem (10 min) Case 2: Cement within cement and impaction grafting (10 min) Case 3: Proximal femoral replacement (10 min) Discussion (10 min)	 P Zamora J Cordero E García-Rey
16:20–17:20	**Small group discussion 1** 4 cases Revision hip replacement (failed cups and failed stems)	All faculty (paired)
17:20–17:30	Take-home messages	E García-Rey, T Karachalios
17:00	End of Day 1	

Thursday

February 26, 2026

Module 3

Moderator: T Karachalios

Complex primary total hip arthroplasty (THA)

08:30–09:30	**Small group discussion 2** Case 1: Dysplasia (CROWE 3/4) Case 2: Conversion THA for posttraumatic acetabular fracture Case 3: Conversion THA for posttraumatic femoral fracture	All faculty (paired)

Module 4

Moderator: P Hernández-Esteban

Indications for revision knee arthroplasty and preoperative planning

09:30–09:40	Overview of failure mechanisms and indications for revision knee arthroplasty	E Gómez-Barrena
09:40–09:50	Preoperative planning for revision knee arthroplasty	JA Hernández-Hermoso
09:50–10:00	Discussion	All faculty

Module 5

Moderator: E Gómez-Barrena

Revision arthroplasty of the knee

10:00–10:10	Extended surgical approaches and implant removal	R García-Crespo
10:10–10:20	Step-by-step surgical technique for revision TKA	L Poultsides
10:20–10:30	Principles of fixation, including metaphyseal fixation techniques (cones and sleeves)	D Vidovic
10:30–10:40	Selection of level of constraint	P Hernández-Esteban
10:40–11:00	*Coffee break*	

11:00–12:00	**Small group discussion 3: Revision knee arthroplasty—Indications, investigation, and preparation** Case 1: Loosening with malalignment Case 2: Severe bone loss requiring bone or metal substitution Case 3: Severe instability requiring a hinge Case 4: Unicondylar knee revised to a total knee	All faculty (paired)
12:00–13:00	*Lunch break*	

Module 6
Moderator: L Poultsides
Complex primary total knee arthroplasty (TKA)

13:00–14:00	**Small group discussion 4** Case 1: Valgus knee (that requires a hinge) Case 2: TKA posttraumatic with hardware Case 3: TKA for extraarticular deformity	All faculty (paired)

Module 7
Moderator: R García-Crespo
Complications

14:00–14:40	**Infection** **Case-based lectures with discussion** Case 1: Infection after hip replacement (15 min) Case 2: Infection after knee replacement (15 min)	 J Cordero E Gómez-Barrena
14:40–15:30	**Periprosthetic fractures** **Case-based lectures with discussion** Presentation: Classification and treatment algorithm for hip and knee (5 min) Case 1: Internal fixation for hip femoral periprosthetic fracture (10 min) Case 2: Revision for hip femoral periprosthetic fracture (10 min) Case 3: Internal fixation for knee femoral periprosthetic fracture around the knee (10 min) Case 4: Complex revision for the unreconstructable knee femoral periprosthetic fracture Discussion (5 min)	 T Karachalios Y Acklin D Garín E Gómez-Barrena D Vidovic

15:30–15:50	*Coffee Break*	
15:50–16:40	**Dislocation** **Case-based lectures with discussion** Overview of instability after hip replacement (10 min) Case 1: Spinopelvic relationships in hip dislocation (10 min) Case 2: Dual mobility cups (10 min) Case 3: Constrained cups (10 min) Discussion (10 min)	 P Zamora L Poultsides E García-Rey J Cordero
16:40–16:45	Wrap-up and take-home messages	E García-Rey, T Karachalios
16:45–17:30	**Robotic surgery / Knee robotic surgery** o Set-up and technique (10') o Case-based lectures with discussion: ▪ Case 1: Balance and bone cuts in the varus knee (10') ▪ Case 2: Balance and bone cuts in the valgus knee (10') o Practical demonstration and discussion (15')	**Moderator**: T Karachalios P Sanz P Hernández R Garcia Crespo P Sanz
17:30	End of Day 2	

Friday

February 27, 2026

ALL DAY IN THE ANATOMICAL LABORATORY		
08:15–08:30	Preparation for the anatomical specimen laboratory	E García-Rey
08:30–08:45	Introduction to the laboratory and overview of day's activities	
08:45–12:45 *(including 20 min break –- coffee break)*	Anatomical specimen laboratory—hip arthroplasty • Posterior approach to the hip (30 min) • Reconstruction of acetabular defect with augments and revision cup (70 min) • Implantation of an uncemented stem (simulated by leaving the last broach in place) (10 min) (No video) • Extended trochanteric osteotomy (ETO) (20 min) • Implantation of a modular revision stem (60 min) • Refixation of ETO with cerclage wires (10 min) • Anatomical dissection (if time allows)	E García-Rey All faculty
12:45–13:45	*Lunch break*	

13:45–17:30
 	
(including 30 min break – coffee break)
	Anatomical specimen laboratory—knee arthroplasty
	
	• Perform a primary TKA (90 min)
	  ○ Tibial preparation
	  ○ Femoral preparation
	  ○ Trials
	  ○ Tibial tubercle osteotomy (TTO) and fixation
	• Perform a revision TKA, including quadriceps snip (90 min)
	• Closure and fixation with screws or wires (optional - 15 min)
		T Karachalios
		
		All faculty

17:30–17:45	Open questions, discussion, and course evaluation	E García-Rey T Karachalios
17:45	End of the course	

Event information

Organization
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Participants' contact
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Registration fee
1,760 EUR
Included in the course fee are coffee breaks (Day 1,2,3), lunch breaks (Day 2,3), and course certificates.

Cancellation policy
Cancellation policy: 50% until 30 days before the event. No refund thereafter.

Online registration
https://eduevents.aofoundation.org/evt/s/evt-event/a1oTG00000Bl8X5

Language
English

European CME accreditation
This course has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) for a maximum of 17.5 European CME credits (ECMEC®s).

Venues

Wednesday 25 (1/2 day) & Thursday 26 February (full day) 2026 – Lectures, Small Group Discussions

Hotel Princesa Plaza Madrid
c/ de Serrano Jover, 3, Centro
28015 Madrid
Spain
T: +34 915 42 21 00
https://www.marriott.com/en-us/hotels/madpp-madrid-marriott-hotel-princesa-plaza

Friday, 27 February (all day) 2026 – Practicals at the Wet lab

Universidad Complutense de Madrid
Centro de Donación de Cuerpos y Salas de Disección (CDC&SD) / Bodies Donation Centre
Plaza de Ramón y Cajal, s/n – Facultad de Medicina
Pavilion 6, 1st floor
28040 Madrid
Spain
www.ucm.es/cdcysd

General information

Event organization compliance
In certain countries where AO has no office but offers educational events, the AO cooperates with third party companies to conduct local organization and logistics, as well as to communicate with participants in the local language. In these cases, the AO has put rules and guidelines in place to ensure that this cooperation has no impact on the curricula, scientific program, or faculty selection.

AO funding sources
Unrestricted educational grants from different sources are collected and pooled together centrally by the AO. All events are planned and scheduled by local and regional AO surgeon groups based on local needs assessments. We rely on industrial/commercial partners for in-kind support to run simulations/skills training if educationally needed.

Evaluation guidelines
The same evaluation process applies to all AO courses: via an electronic form that you can find active during the course dates by logging in through your AO profile.
This will help the AO Foundation ensure that we continue to meet your training needs.

Disclosures and conflicts of interest
Disclosure information and potential conflicts of interest (COI) can be viewed at the event webpage.

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 of lectures, practical exercises, case discussions, or any course materials is absolutely forbidden.



The AO Foundation reserves the right to film, photograph, and audio record during their 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 AO marketing and other purposes and made available to the public.

Security
There will be a security check at the entrance of the building. Wearing of a name tag is compulsory during lectures, workshops, and group discussions.

No insurance
The event organization does not take out insurance to cover any individual against accidents, theft, or other risks.

Use of mobile phone
Mobile phone use is not allowed in the lecture halls and in other rooms during educational activities. Please be considerate of others by turning off your mobile phone.

Sponsor

We thank our major industry partner **DePuy Synthes** for contributing key in-kind support (material, technical staff, and logistics), without which this event would not be possible, as well as an unrestricted educational grant.



Principles of AO educational events

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 practical sessions
In case practical sessions are chosen as an educational method to educate skills, the technologies and products used have been approved or reviewed by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer-reviewing new technology on behalf of the AO Foundation.
Any technology and/or products used in the practical sessions of this event have been found suitable to serve the defined educational purposes.
This does not imply any statement about its use and performance in actual clinical scenarios.
More information on the AO Technical Commission can be found on the AO's website: www.aofoundation.org/tc.

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