Welcome to the first global diploma training program for spine surgery

The Global Spine Diploma Program is the first globally developed, systematic training for spine surgeons, creating a new worldwide standard. It helps orthopedic and neurosurgeons to bring their knowledge and skills across multiple spinal pathologies to a new level. A syllabus describing the curriculum content, educational methods, and resources has been developed to achieve defined learning objectives.

Boost your career...

With the Global Spine Diploma Program by AO Spine, you participate in the worldwide advancement of spinal care. Acquire vast knowledge in spine surgery, conveyed by faculty-trained experts.

The program is CME accredited by UEMS-EACCME®.

...conveniently at your own pace

The outstanding online learning environment and the clearly defined syllabus assure efficient learning to get the most out of your time. Following a weekly schedule with a fixed time period, learning mainly takes place in the form of self-study. This gives you maximum flexibility to study at any place, respecting your individual agenda.

Curriculum-based
Efficient and flexible learning
Program duration 12 months
International expert faculty with regular live sessions
Value for money
CME accredited by UEMS-EACCME®
The AO Spine curriculum
Learn with a clear plan

The syllabus of the Global Spine Diploma Program follows the AO Spine curriculum, which forms the basis for all educational AO Spine events and programs. The curriculum-based approach ensures targeted development of cognitive, procedural, nontechnical, and nonoperative skills.

Up-to-date content

Our contributors review and align the AO Spine curriculum with current challenges in global spine surgery on a regular basis. The 2020 update introduced a whole new approach based on Entrustable Professional Activities (EPA). With this line of action, we ensure the curriculum remains fit for purpose as a framework for continuing professional development (CPD) in the surgical management of spinal disorders.

EPA: from competencies to competence

EPAs describe the units of day-to-day work of spine surgeons, being linked to the specific competencies that are required to perform this work. They convey broader skills beyond medical and surgical expertise. Each EPA is defined by key competencies in all of the pathology domains.
“Competence is the broader holistic view of professional practice that encompasses critical thinking, judgement, and experience when choosing which competencies to apply to a given clinical situation.”

De Cossart and Fish 2005

The domains of pathology

Trauma
Degeneration
Pediatric deformity
Adult deformity

Oncology
Infection
Spinal fragility fractures
Inflammatory spondyloarthropathy

The core EPAs

1. Make a diagnosis
2. Formulate a treatment plan
3. Explain treatment options to patients
4. Collaborate with multidisciplinary teams
5. Perform an appropriate procedure when indicated
6. Review patient progress and prevent or manage complication
7. Participate in quality improvement activities
We know your time is precious

The Global Spine Diploma Program follows the ultimate syllabus to complete your profession. An attractive mix of different learning formats, self-study, and synchronous training parts assures flexible learning. The amount of time required is approximately 3–5 hours weekly, including self-study time. Total program duration is 12 months.

**Flexible and state-of-the-art learning**

The Moodle-based learning management system features state-of-the-art multimedia-based learning tools for efficient self-study at an individual pace. In parallel, participants attend instructor-led training sessions and can join informal forum discussions. Small groups of participants are supervised by a faculty-trained expert.

**Exhaustive and up-to-date content**

The modular training structure offers participants the chance to gain breadth of competencies and depth of experience at the same time. The program is structured into five modules, eight weeks each, total duration 12 months.

**Proof of knowledge**

During each of the five core modules, the participants’ progress is checked with a case presentation and subsequent discussion. The presentation is peer reviewed by one faculty and one group member. Formative assessments take place after each module to evaluate participants’ knowledge.

**Syllabus**: 12 months of training activities. To ensure individual tuition, we allocate participants to one of two streams—each covers the same comprehensive syllabus, but the order of the five modules is different.
A vast mix of different learning formats: In parallel to small learning groups with individual mentoring, participants learn self-directed, which allows them to follow their own time schedule.
Global Spine Diploma Program

Modules—What’s inside

There are five modules. Each consists of live online case presentations at fixed times, plus online resources and forum discussions to be completed at your own pace.

Assessment tasks for modules include a pre-module quiz, logbook, contribution to forum discussions, participation in live case presentation sessions, accessing online resources, and a post-module quiz with feedback.

The Program Chairperson is Bryan Ashman. Each regional group has a moderator who will organize the live case sessions and the weekly discussion forums.

Trauma

Module outline
Week 1: Acute spinal trauma—initial management  
Week 2: Radiological assessment and injury classification systems  
Week 3: Upper cervical injuries  
Week 4: Lower cervical injuries  
Week 5: Thoracolumbar injuries  
Week 6: Osteoporotic and ankylosis fractures  
Week 7: Sacral and spinopelvic injuries  
Week 8: Outcomes and complications

Oncology and Infection

Module outline
Week 1: Assessment of the patient with a spinal tumor  
Week 2: Treatment planning  
Week 3: Surgical procedures—primary  
Week 4: Surgical procedures—metastatic  
Week 5: Assessing the patient with spinal infection  
Week 6: Postoperative infection  
Week 7: Pyogenic spondylodiscitis  
Week 8: Spinal tuberculosis
Cervical degeneration

Module outline
- **Week 1:** Clinical and radiological assessment
- **Week 2:** Non-operative management
- **Week 3:** Cervical radiculopathy
- **Week 4:** Degenerative cervical myelopathy
- **Week 5:** Anterior surgery for DCM
- **Week 6:** Posterior surgery for DCM
- **Week 7:** Cervical rheumatoid disease
- **Week 8:** Outcomes and complications

Lumbar degeneration

Module outline
- **Week 1:** Clinical and radiological assessment
- **Week 2:** Biopsychosocial model of pain
- **Week 3:** Non-operative treatment
- **Week 4:** Lumbar disc herniation
- **Week 5:** Degenerative spondylolisthesis
- **Week 6:** Lumbar stenosis
- **Week 7:** Lumbar fusion—open and MISS
- **Week 8:** Outcomes and complications

Adult/pediatric deformity

Module outline
- **Week 1:** Adult deformity—assessment and treatment planning
- **Week 2:** Surgical procedures—choosing the approach: anterior, posterior, or both
- **Week 3:** Surgical procedures—augmentation and proximal junctional fixation
- **Week 4:** Outcomes and complications
- **Week 5:** Paediatric deformity—assessment and treatment planning
- **Week 6:** Surgical procedures—idiopathic scoliosis
- **Week 7:** Spondylolisthesis
- **Week 8:** Complications and outcomes
### Key competencies

#### ELP

<table>
<thead>
<tr>
<th>Trauma</th>
<th>Degeneration</th>
<th>Pediatric deformity</th>
<th>Adult deformity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Make a diagnosis</strong></td>
<td>Examine the patient for a possible spinal cord injury and reexamine serially if a neurological deficit is found</td>
<td>Analyze the patient history, comorbidities, disability, and quality of life</td>
<td>Analyze the patient history and understand the conditions associated with childhood spinal deformity</td>
</tr>
<tr>
<td><strong>Suspect a spinal injury in the unconscious polytrauma patient</strong></td>
<td>Examine the patient, including neurological assessment, to exclude myelopathy/radiculopathy</td>
<td>Examine the child with spinal deformity, including neurology, abdominal reflexes, and syndromic features</td>
<td>Examine the patient for spinal imbalance and neurological deficit</td>
</tr>
<tr>
<td><strong>Maintain spinal immobilization until spinal trauma is excluded</strong></td>
<td>Select the appropriate diagnostic tests and exclude non-spinal conditions</td>
<td>Order and interpret appropriate imaging to assess spinal alignment</td>
<td>Order appropriate imaging, including bone density</td>
</tr>
<tr>
<td><strong>Arrange appropriate imaging</strong></td>
<td>Measure and interpret spinal alignment and spinopelvic parameters</td>
<td>Describe the classifications of pediatric deformities: scoliosis, kyphosis, spondylolisthesis</td>
<td>Measure and interpret spinal alignment and spinopelvic parameters</td>
</tr>
<tr>
<td><strong>Recognize the radiographic features of instability and cord injury</strong></td>
<td>Correlate clinical and imaging findings, distinguishing between aging changes and pathology</td>
<td>Describe the classifications of adult deformities</td>
<td>Describe the classifications of adult deformities</td>
</tr>
<tr>
<td><strong>Formulate a treatment plan</strong></td>
<td>Classify the spinal injury using the AO Spine classification systems</td>
<td>Critically review the best available evidence when considering operative and nonoperative interventions</td>
<td>Critically review the best available evidence to support surgical intervention for severe or progressive deformity</td>
</tr>
<tr>
<td><strong>Use evidence-based decision-making for treatment of the spinal injury, including spinal cord injury management</strong></td>
<td>Describe the biopsychosocial model of pain and recognize the risks for chronification</td>
<td>Monitor mild to moderate deformities and identify factors that indicate the possibility of progression</td>
<td>Assess the need for medical optimization of the patient before surgery, including osteoporosis treatment</td>
</tr>
<tr>
<td><strong>Explain treatment options to patients</strong></td>
<td>Describe the risks and benefits of surgical versus conservative management</td>
<td>Discuss with patients/parents the risks and benefits of surgery compared with conservative treatment</td>
<td>Discuss with patients the risks and benefits of surgery compared with conservative treatment</td>
</tr>
<tr>
<td><strong>Consider the patient’s preferences and expectations</strong></td>
<td>Consider the patient’s preferences and expectations</td>
<td>Consider the patient’s preferences and expectations</td>
<td>Consider the patient’s preferences and expectations</td>
</tr>
<tr>
<td><strong>Collaborate with MDTs</strong></td>
<td>Be involved in rehabilitation planning</td>
<td>Involve medical colleagues in preoperative assessment and postoperative care</td>
<td>Involve medical colleagues in preoperative optimization and postoperative care</td>
</tr>
<tr>
<td><strong>Perform appropriate procedures</strong></td>
<td>Reduction/stabilization/decompression/fusion when indicated</td>
<td>Consider the need for reduction, osteotomies, instrumentation, distal fixation, posterior and/or anterior fusion</td>
<td>Address spinal balance and consider osteotomies, stabilization, augmentation, distal fixation, proximal junction, posterior and/or anterior fusion</td>
</tr>
<tr>
<td><strong>Preserve function at uninjured levels where possible</strong></td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
</tr>
<tr>
<td><strong>Manage or prevent complications</strong></td>
<td>Postinjury, intraoperative, and postoperative</td>
<td>Intraoperative and postoperative</td>
<td>Monitor spinal cord function intraoperatively</td>
</tr>
<tr>
<td><strong>Identify postoperative complications early and treat promptly</strong></td>
<td>Describe the biological agents and other techniques available to increase fusion rate</td>
<td>Identify postoperative complications early and treat promptly</td>
<td></td>
</tr>
<tr>
<td><strong>Participate in quality improvement</strong></td>
<td>Perform surgical audit on outcomes and complications</td>
<td>Use validated outcome measures to assess effectiveness of interventions</td>
<td>Use validated outcome measures to monitor safety and quality</td>
</tr>
<tr>
<td><strong>Enroll patients in a trauma registry/database</strong></td>
<td>Enroll patients in a surgical registry/database</td>
<td>Enroll patients in a surgical registry/database</td>
<td>Enroll patients in a surgical registry/database</td>
</tr>
<tr>
<td></td>
<td>Oncology</td>
<td>Infection</td>
<td>Inflammatory spondyloarthropathy and Arthritis</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Make a diagnosis</td>
<td>Clinically assess and stage patients with spinal neoplasm</td>
<td>Describe the clinical features of and differences between pyogenic spondyloepididymitis, epidural abscess, and spinal tuberculosis</td>
<td>Assess the patient history, physical findings, disability, and quality of life</td>
</tr>
<tr>
<td>Classify spinal column neoplasms</td>
<td>Describe the general risk factors for spine infections</td>
<td>Describe the classification of inflammatory spondyloarthropathy</td>
<td>List diagnostic tests and imaging modalities for assessing bone density</td>
</tr>
<tr>
<td>Describe the pathology of tumors of the spinal column and spinal cord</td>
<td>Order and interpret hematological, microbiological, and imaging tests to confirm spinal infection</td>
<td>List diagnostic tests and imaging modalities for spinal infection</td>
<td>Recognize the radiographic features of spinal fragility fractures</td>
</tr>
<tr>
<td>List diagnostic imaging appropriate for tumors of the spine</td>
<td>Isolate and identify the causative organism by aspiration or biopsy, if possible</td>
<td>Recognize the radiographic features of spinal instability or ankylosis</td>
<td>Classify osteoporotic fractures of the spine and sacrum</td>
</tr>
<tr>
<td>Describe mechanical instability as it relates to spinal column tumors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establish a diagnosis based on histological verification (biopsy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulate a treatment plan</td>
<td>Critical review the evidence supporting surgical versus nonsurgical treatment of spinal tumors</td>
<td>Identify preoperative risk factors for developing surgical-site infections after spine surgery and discuss the preventive strategies to minimize risks</td>
<td>Describe the principles of medical management of inflammatory arthritis</td>
</tr>
<tr>
<td>For primary tumors, discuss the balance between cure and morbidity</td>
<td>Consider surgical intervention for neurological compression, spinal instability, and debridement</td>
<td>List surgical indications for spinal instability, and debridement</td>
<td>List surgical indications in the management of spondyloarthropathy</td>
</tr>
<tr>
<td>For metastatic tumors, discuss the balance between prognosis and quality of life</td>
<td>Describe surgical strategies in ankylosing spondylitis for kyphosis correction, fracture fixation</td>
<td>Describe surgical strategies in rheumatoid arthritis for osteotomy decompression/stabilization</td>
<td>Critically review the best evidence for surgical management of acute spinal fragility fractures</td>
</tr>
<tr>
<td>Explain treatment options to patients</td>
<td>List the options for radiotherapy and chemotherapy for primary and secondary tumors</td>
<td>Discuss with patients the indications for surgical intervention in spinal infection and the potential risks and benefits</td>
<td>Discuss with patients the indications for surgical intervention in spondyloarthropathy and the potential risks and benefits</td>
</tr>
<tr>
<td>Discuss with patients and family the surgical and nonsurgical options in view of expected prognosis, risks, outcomes, and quality of life</td>
<td>Consider surgical intervention for neurological compression, spinal instability, and debridement</td>
<td>List surgical indications in the management of spondyloarthropathy</td>
<td>List surgical indications in the management of spondyloarthropathy</td>
</tr>
<tr>
<td>Review the unique considerations in the management of pediatric spinal column tumors</td>
<td>Consider the patient's preferences and expectations</td>
<td>Consider the patient's preferences and expectations</td>
<td>Consider the patient's preferences and expectations</td>
</tr>
<tr>
<td>Collaborate with MDTs</td>
<td>Discuss the importance of a multidisciplinary team approach to the management of spinal column tumors</td>
<td>Collaborate with the infectious diseases team to prescribe appropriate antimicrobial therapy according to the sensitivities of the isolated organism and evidence-based guidelines</td>
<td>Involve rheumatology colleagues in preoperative optimization and postoperative care</td>
</tr>
<tr>
<td>Perform appropriate procedures</td>
<td>Discuss the surgical principles of resection of primary vertebral tumors</td>
<td>Debridement, decompression, reconstruction, fusion</td>
<td>Reduction, stabilization, decompression, osteotomies, fusion</td>
</tr>
<tr>
<td>Describe the principles of surgical tumor resection for metastatic tumors</td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
</tr>
<tr>
<td>Review the role of minimally invasive surgical techniques/separation surgery for treatment of spinal metastases</td>
<td>Describe the place of instrumentation in spinal infection</td>
<td>Preserve function at unaffected levels where possible</td>
<td>Consider prophylactic treatment at unaffected levels where indicated</td>
</tr>
<tr>
<td>Discuss reconstruction options for resected spinal tumors</td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
<td>Use safety protocols to protect the patient and team members</td>
</tr>
<tr>
<td>Manage or prevent complications</td>
<td>Recognize the increased risk of wound problems in patients with debility, prior surgery, or radiation</td>
<td>Manage post-infective complications, including deformity, loss of fixation, pseudarthrosis</td>
<td>Intraoperative and postoperative complications</td>
</tr>
<tr>
<td>Recognize recurrent disease postoperatively</td>
<td>Perform regular clinical and hematological review until resolution of the infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in quality improvement</td>
<td>Use validated outcome measures to monitor safety and quality</td>
<td>Regularly review the incidence and outcomes of spinal infections in the local healthcare setting</td>
<td>Perform surgical audit on outcomes and complications</td>
</tr>
<tr>
<td>Enroll patients in a tumor registry/database</td>
<td>Enroll patients in a registry/database</td>
<td>Enroll patients in a registry/database</td>
<td>Enroll patients in a registry/database</td>
</tr>
</tbody>
</table>
Expand your network

The Global Spine Diploma Program is driven, written, and taught by world-renowned surgeons, tailored to surgeons’ needs. With their vast experience, local and international faculty members give mentoring support during the full program duration.

Learn from the best

Continuously improve your expertise, not only during the Global Spine Diploma Program itself, but also after completion: The program opens the door to a large network of the world’s leading spine surgery experts and other training participants. Training mentors make sure that spine surgeons of tomorrow who completed the program use well-established, evidence-based, approaches and techniques.

Over 60 expert online-faculty based worldwide

Each faculty member has undergone a dedicated faculty training program. Based on adult learning principles, this program promotes excellence in teaching, facilitation of surgeon learning, and curriculum development, and provides constructive feedback to the participating faculty members. The skills and strategies developed in this program have a positive impact on all our educational activities and contribute to our mission to deliver high-quality education—ultimately translating into clinical practice for the benefit of patients.

“With the Global Spine Diploma Program, we make sure that recent graduates from an orthopedic or a neurosurgery training mark the next generation of leading spine surgeons worldwide.”
Global Spine Diploma Program committee members

Bryan Ashman  
Canberra, Australia  
Training Program Director

Atiq Uz Zaman  
Lahore, Pakistan  
Current Oncology and Infection Module Chair

Bradley Jacobs  
Calgary, Canada  
Current Oncology and Infection, and Cervical Degeneration Module Chair

Evan Davies  
Southampton, England  
Current Adult/Pediatric Deformity Module Chair

Karsten Wiechert  
Munich, Germany  
Current Lumbar Degeneration Module Chair

Klaus Schnake  
Erlangen, Germany  
Current Trauma Module Chair
Apply now

Join the spine surgery elite of tomorrow

- First globally developed, systematic training for spine surgery
- Driven, written, and taught by world-renowned surgeons
- Modules tailored to specialize in spine surgery, leadership, or research
- Syllabus-based on thorough curriculum, flexible online learning
- Small groups of recent graduates from orthopedic or neurosurgery training
- 12 months overall duration
- On average 3–5 hours of work to be completed each week
- Choice of two starting dates to suit your needs, in February and August

Fees

The program includes a total of two semesters. The full program fee is CHF 2,500, which may be paid in two separate installments.

How to apply

Visit the website
- Download application form and read terms and conditions
- Valid AO Spine membership required
- Administration fee: CHF 100

Complete application requirements
- Upload certificate confirming training completion as orthopedic surgeons/neurosurgeon
- Upload CV
- Upload completed Application Form
- Submit administration fee: CHF 100

Review of application
- Application is reviewed by program director and AO Spine program manager

Registration
- If eligible, candidate can register and is enrolled in the learning management system before program starts

Questions?

Our AO Spine staff are happy to answer them and provide you with additional information. Contact us at globalspinediploma@aospine.org.

Apply now for the world’s first global diploma training program for spine surgery:

www.aospine.org