Program planning

Competency: Program planning

➢ Identify the **appropriate competencies** defined in the curriculum

➢ **Adjust contents** according to the identified gaps

➢ **Assign faculty** based on their surgical & educational expertise (based on gaps)

➢ Maximize learning by using appropriate **methods**

➢ Choose the appropriate **learning location** to facilitate learning

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Curriculum includes

- ➢ **Learning objectives:** *What ?*

- ➢ **Educational methods:** *How ?*

- ➢ **Evaluation:** *Did it work?*

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What ? (Needs assessment)

➢ **AO – Spine principles (4)**

➢ **Spine pathologies (6)**

➢ **Competencies (48)**
(What a surgeon must be able to do to diagnose & treat patients)

➢ **Key learning outcomes (173)**

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The 4 AOSpine principles

for proper spine patient management underpin design & delivery of the curriculum

Alignment:

Balancing the spine in three dimensions

Biology:

Etiology, pathogenesis, neural protection, and tissue healing

Function:

Preservation and restoration of function to prevent disability

Stability:

Stabilization to achieve a specific therapeutic outcome

Look to the compass!

	Stability	Alignment	Biology	Function
TRAUMA	Biomechanical principles of internal fixation	Postraumatic deformity	Neural protection and bone healing	Motion segment preservation
DEFORMITY	Lumosacral & craniocervocal instability	Balanced versus unbalanced deformity	Etiology, pathogenesis, & natural history	Motion segment preservation
DEGENERATION	Degenerative instability	Degenerative deformity	Pathogenesis of spinal degeneration	Measuring outcomes of interventions
TUMOR	Reconstruction for pathological instability	Pathological deformity	Medical & surgical interventions based on type, grade, & stage	Quality of life
INFECTION	Internal fixation in infection	Postinfective deformity	Chemotherapy	Preserving neurological function
METABOLIC INFLAMMATORY GENETIC	Internal fixation in the osteoporotic spine	Deformity associated with inflammatory & genetic disorders	Medical therapies & surgical augmentation	Quality of life

Select the competencies to be covered for the pathology(ies) & focus on the audience needs

Tumor

1. **Recognize the possibility of spinal tumor** in a patient presenting with common symptoms of spinal pathology
2. **Establish a diagnosis based on histological verification** and plan appropriate treatment
3. **Optimize the physical condition of the patient** before treatment
4. **Recognize** the presence or possibility of **spinal ins...**
5. **Re...** ber...
6. **Pe...**
7. **An...**

Degeneration

1. **Analyze the patient history and physical examination findings**
2. **Use** appropriate **diagnostic tools**
3. **Use evidence-based decision making** when recommending operative and nonoperative interven...
4. **Use appropriate nonoperative treatments**
5. **Select and perform appropriate surgical proced...** for specific indications
6. **Prevent/manage operative and postoperative complications**
7. **Use outcome measures** to assess the effectiveness of each intervention

Deformity

1. **Analyze the history** and physical examination of the patient presenting with spinal deformity
2. **Order and interpret appropriate imaging** to assess spinal balance, flexibility, and spinal cord anomalies
3. **Assess the patient**
4. **Use evidence-based decision making** when recommending operative and nonoperative interventions
5. **Safely perform appropriate surgical procedures**
6. **Manage** intraoperative and postoperative **complications**
7. **Use outcome measures** to assess the effectiveness of interventions

Select the key learning outcomes that should be covered for each competency

(thus providing guidance to faculty for each activity)

Competencies	Key learning outcomes
1. Analyze the patient history and physical examination findings	• Assess the patient's pain • Assess the patient's disability and quality of life • Assess the patient's psychosocial situation and its relevance • Assess relevant comorbidities • Recognize abnormal findings in the history, including 'red flags' • Perform a comprehensive clinical examination • Exclude non-spine pathologies
2. Use appropriate diagnostic tools	• Order appropriate imaging studies based on the history and physical examination findings • Use additional diagnostic tools if indicated • Critically evaluate the use of invasive tests • Recognize the limitations of each diagnostic tool • Correlate the diagnostic test results with the clinical findings
3. Use evidence-based decision making when recommending operative and nonoperative interventions	• Critically review the benefits and risks of each operative and nonoperative intervention • Select operative and nonoperative interventions based on the best available evidence and on the natural history • Consider the patient's treatment preferences and expectations • Consider the psychosocial, cultural, and ethical implications of the recommended treatment

How ?

Advantages   **Disadvantages**

➢*Lecture*

➢**Discussion Group (panel discussion)**

➢**Case discussion**

➢**Saw bones**

➢**Cadaver lab**

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How (2)

➢ **Methods should be congruent with learners objectives**

➢ **Multiple better than single**

➢ **Use frequent individual assessments (e.g. ARS)**

➢ **Choice of methods is often driven by resource limitations**

Did it work ?

➢ **Evaluation form**

➢ **Change of practice**

➢ **Post-course virtual learning room**

The 5 W

Why: The goal is described in few sentences

Who: Number of participants & prerequisite for participation

What: Competencies/key learning outcomes

When & Where: Date & proposed location

The steps…

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1. Assess **learner needs**
   (preCourse assessment, personal knowledge, Co-Chairperson opinion)

2. Overall **course goals** (what participants should learn)

3. Develop course schedule & specify
   competencies/key learning outcomes for each session

4. Develop **draft scientific program**

5. Define **formats**
   (lectures, discussion groups, practicals, ARS!)

The Steps (ctd.)

6. Determine **how learner outcomes** will be **assessed**

7. Allocate **resources** to support teaching (AV, bone models, etc)

8. Submit **draft** for **final** review

9. **Publish** scientific **program**

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