



AO CMF Course— Point-of-Care: Virtual Surgical Planning, AR/VR & Mixed Reality and 3D Printing

July 11-12, 2023

Basel (Allschwil), Switzerland

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Course description

This two-day course addresses current patient-specific and practical applications of 3D Planning (Virtual Surgical Planning – VSP), Mixed Reality, and 3D Printing in a hospital environment. Set up of a working 3D Printing Laboratory is explained in detail. Practical exercises include 3D planning of a patient-specific solution with the ultimate production of accurate patient individual 3D printed models. This course is delivered using a combination of lectures, case discussions, and practical exercises on computers, mixed reality stations, and 3D printers.

Target participants

Surgeons, radiologists, and biomedical engineers with three years or more experience with a specific interest in 3D printing, AR/VR and MR technology and 3D planning in treating facial trauma and craniomaxillofacial defects, deformities, and facial reconstruction, as well as in using this technology for surgery training and education.

Registration fee

Non-member: Fr. 950.00

AO CMF Member: Fr. 900.00

AO CMF Member Plus: Fr. 855.00

Learning objectives

After the course, participants will be able to:

- Describe the principles of Virtual Surgical Planning (VSP), AR/VR and Mixed reality and medical 3D printing
- Explain what 3D printing technology is and how it can be applied to imaging data to create anatomic models and guides for CMF surgery
- Describe the creation process from DICOM images to a realistic/virtual 3D model
- Describe the use and implementation process of mixed reality in the 3D visualization of imaging data
- Describe how to produce your own 3D models from medical imaging data by 3D printing
- Describe typical applications of VSP and 3D printing in CMF surgery
- Recognize the importance of quality assurance in 3D printing, especially in a point-of-care setting
- Discuss the role anatomic models play in preoperative surgical planning

Faculty



Chairperson
Florian Thieringer
Switzerland



Co-Chairperson
Max Heiland
Germany

AO Foundation

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