

INVENT  
MEDICAL

# ZBRUSH FOR ANAPLASTOLOGY

Basic Course

6-8th November, Ostrava

ZBRUSH FOR  
ANAPLASTOLOGY  
OPENS NEW  
POSSIBILITIES

# Introduction

## ZBRUSH

Digital sculpting and 3D printing represent an option to standard manual procedures in Anaplastology.

ZBrush software is a powerful tool for digital sculpting of facial and somato prostheses.

## COURSES

The courses are designed for anaplastologists who would like to introduce digital sculpting method into their clinical practice.

We organize 3-day courses for beginners (Basic Course) and for advanced users (Advanced Course).

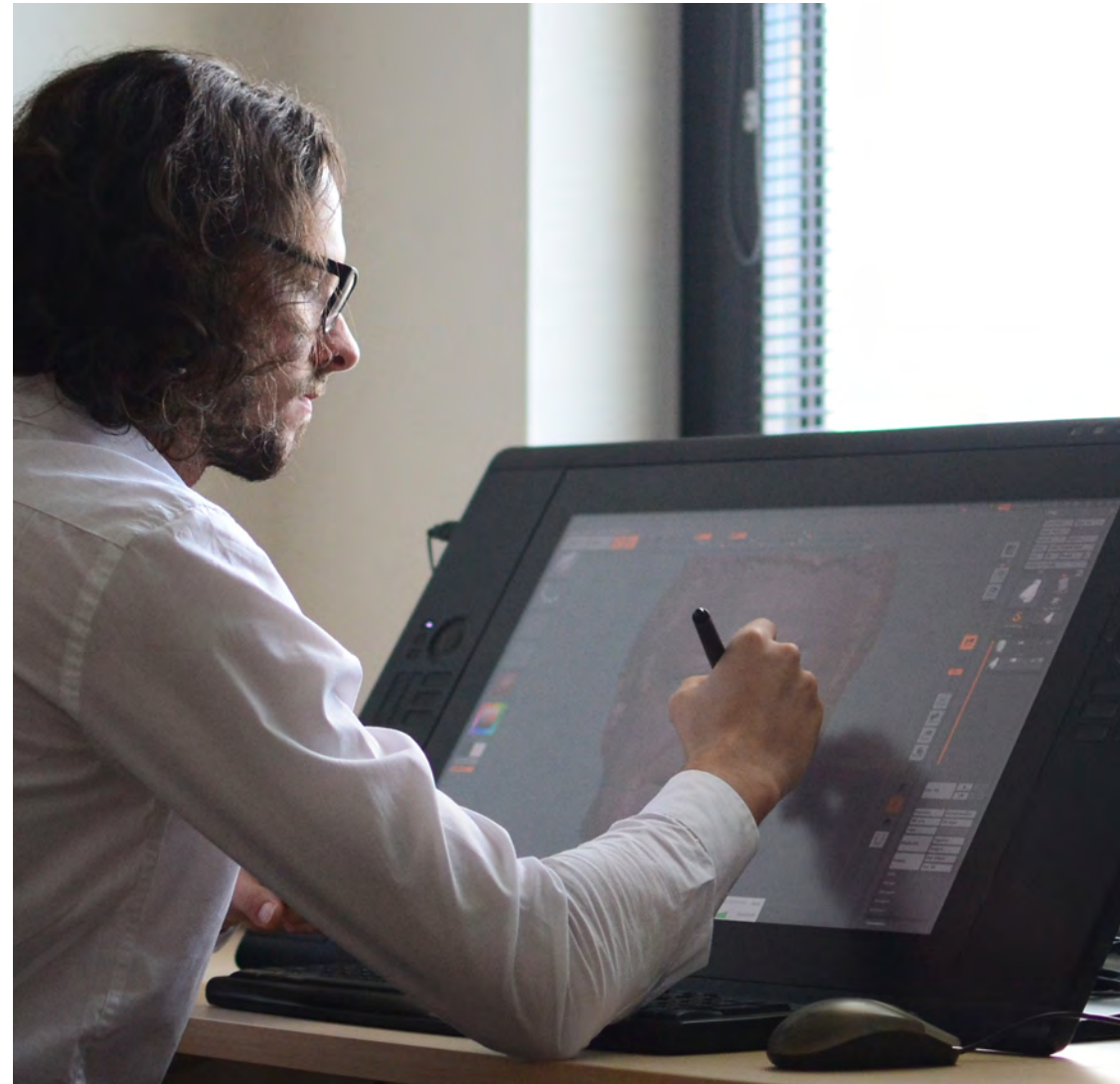
## COURSE LEADER

The course leader is Ales Grygar who is an experienced lecturer of Zbrush courses and also a Chief designer and Co-founder at Invent Medical.

Ales led Zbrush for Anaplastology courses and presentations at Hamburg (GER), Heidelberg (GER), Augusta (USA), Denver (USA), Rio de Janeiro (BRA) and Ostrava (CZE).

Ales specialises in application of modern processes and 3D digital technologies within the medical field, with special interest in anaplastology and design of 3D-printed orthoses, prostheses and implants.

Prior to his job at Invent Medical and ING corporation he worked as a designer in Valencia, Spain.



# Basic Course

6-8 th November 2017, Ostrava

## TARGET AUDIENCE

Basic course is adjusted for maximum 6 beginner users who would like to use ZBrush for handling and sculpting 3D models.

## WHAT WILL YOU NEED

Own laptop computer MAC or PC  
Trial or full version of ZBrush 4R7 P3  
Graphic tablet Wacom Intuos PRO  
*(Medium size recommended)*  
Basic skills of working with graphic tablet



# Basic Course

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## WHAT WILL YOU LEARN

Segmentation and manipulation with CT and MRI data

Import of scanned 3D models (from various scanners)

Create mirrored copies and 3D print of master models

Sculpt and adjust models in order to change their shape.

Use boolean functions to create contact surfaces and fitting models

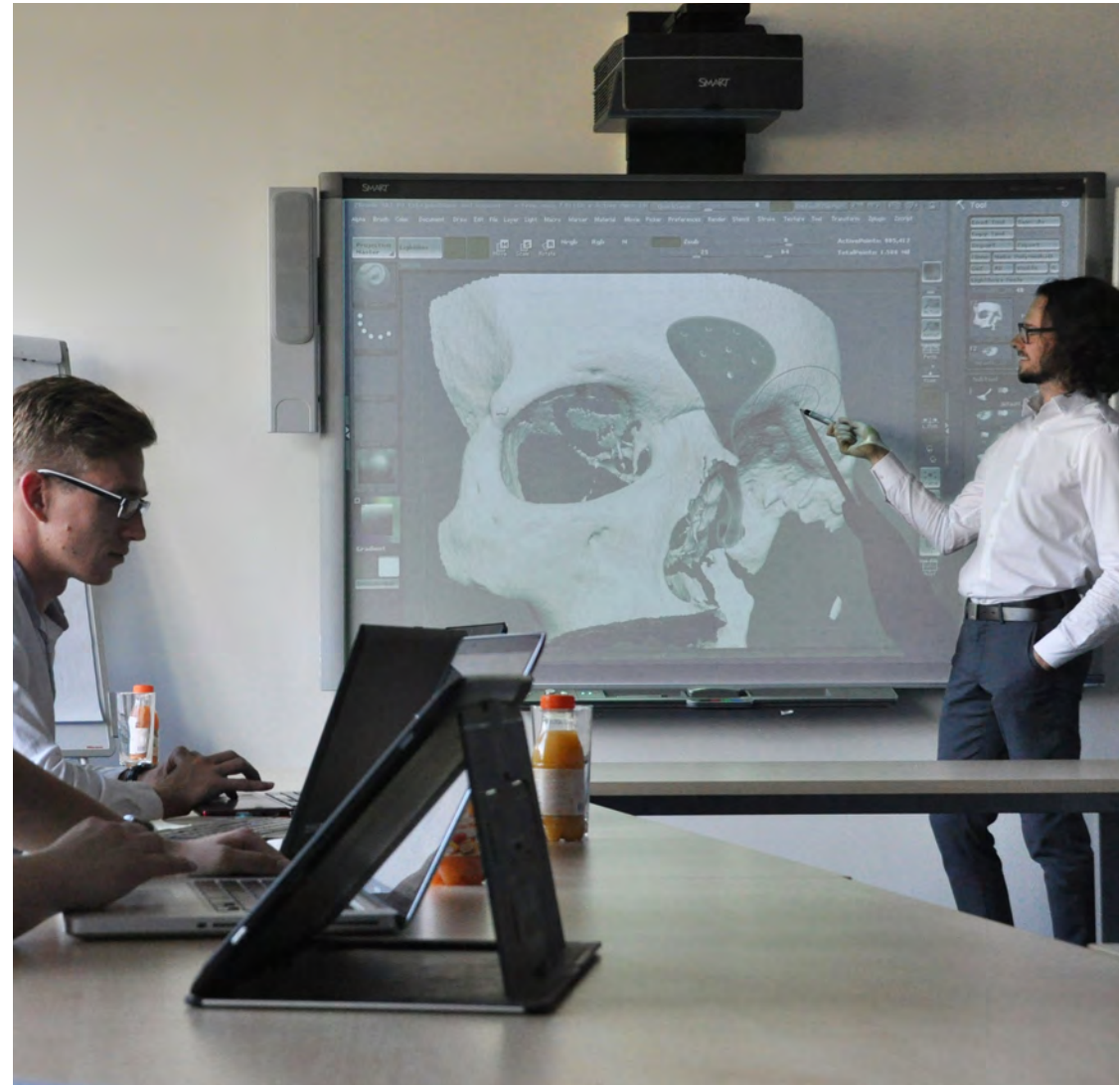
Use transformation functions to create natural transitions

Use detailing tools to create realistic details (pores, wrinkles, papilar lines)

Use ZBrush for preoperative planning (implant positioning, visualization etc.)

Create your own facial epithesis, septal obturator

And more...



# Course Package

## WHAT IS INCLUDED

Course fee (3 full days)

Lunch and refreshment during the course

Transfer from hotel to Invent Medical facility and back

1 social event - dinner

The course is located in modern facility equipped with cutting-edge 3D scanning and 3D printing technology

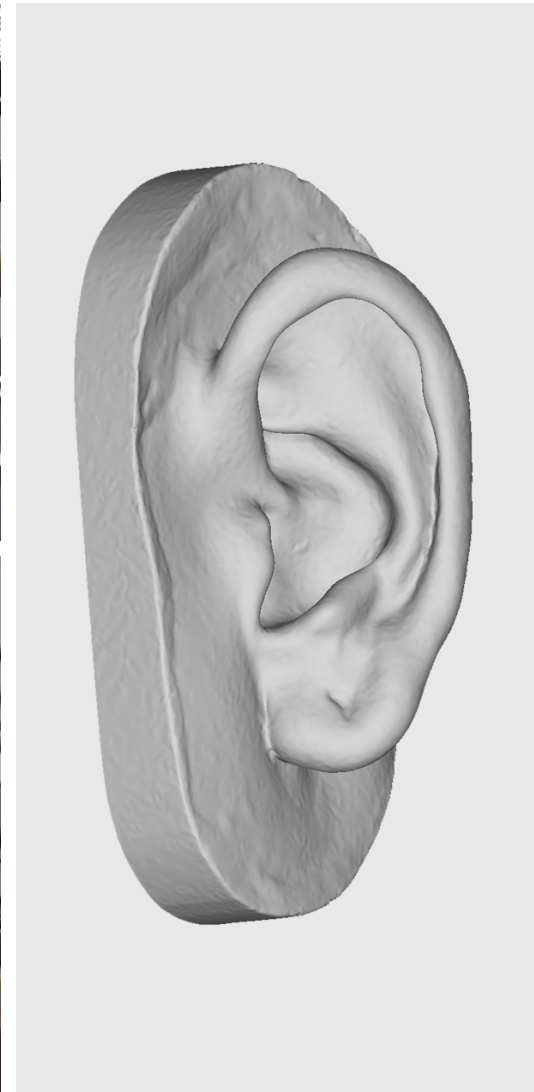
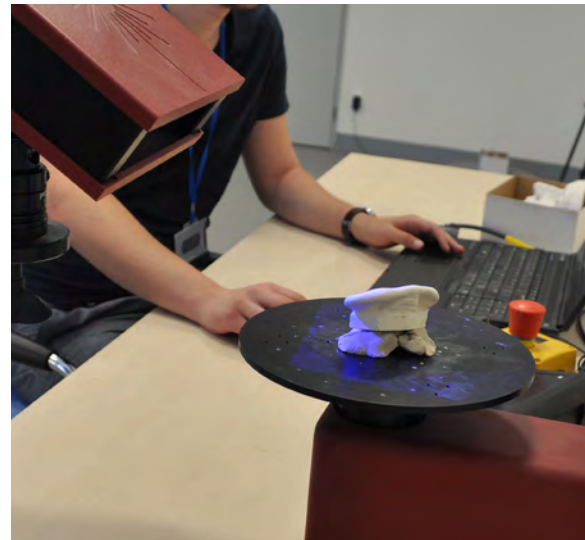
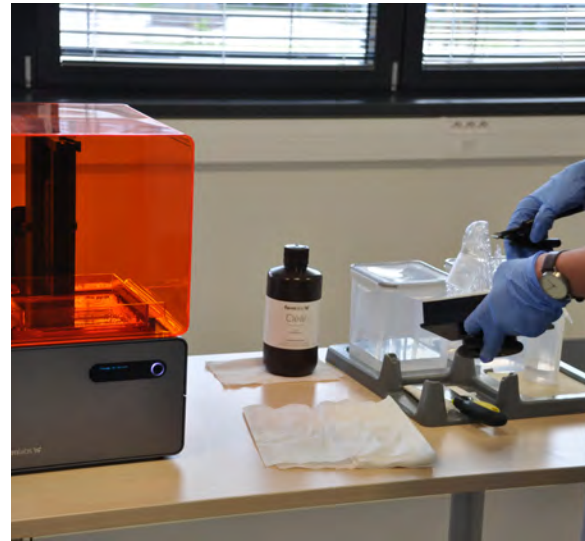
## COURSE PACKAGE PRICE

Total price of the course is **859 €**

Order your course by email at:  
**hello@inventmedical.com**

**Deadline is October 6th.**

However the number of participants is limited. We suggest registering your place sooner.



# About Invent Medical

## DRIVEN BY INNOVATION

Invent Medical is a high-tech medical company focused on research and development, advanced technologies and their clinical application.

We focus deeply on the synergy of cutting-edge technology with the human touch to produce the most personal wearables ever.

We are proudly based in Ostrava, Czech Republic. We cooperate with medical partners in 10 countries and our ambition is to reinvent the application of cutting-edge technology in medical field world-wide.

## PROFESSIONALS IN ANAPLASTOLOGY

We are constantly looking for breakthrough technology and processes to be applied in Anaplastology to make the process of creating prostheses faster and more convenient.

We have won multiple awards in last years by International Anaplastology Association including the Award for the best clinical solution, DaVinci award and the Best presentation award.

Our mentors are people with long-time experience in Anaplastology and digital technologies.



# How To Get To Ostrava

## OSTRAVA / KATOWICE / KRAKOW AIRPORT

The cheapest and most convenient way to get to Ostrava is by plane to nearby modern airports in Ostrava, Katowice or Krakow. The flights are frequent and the transportation from airport is included in the course package.

### Ostrava airport - Ostrava

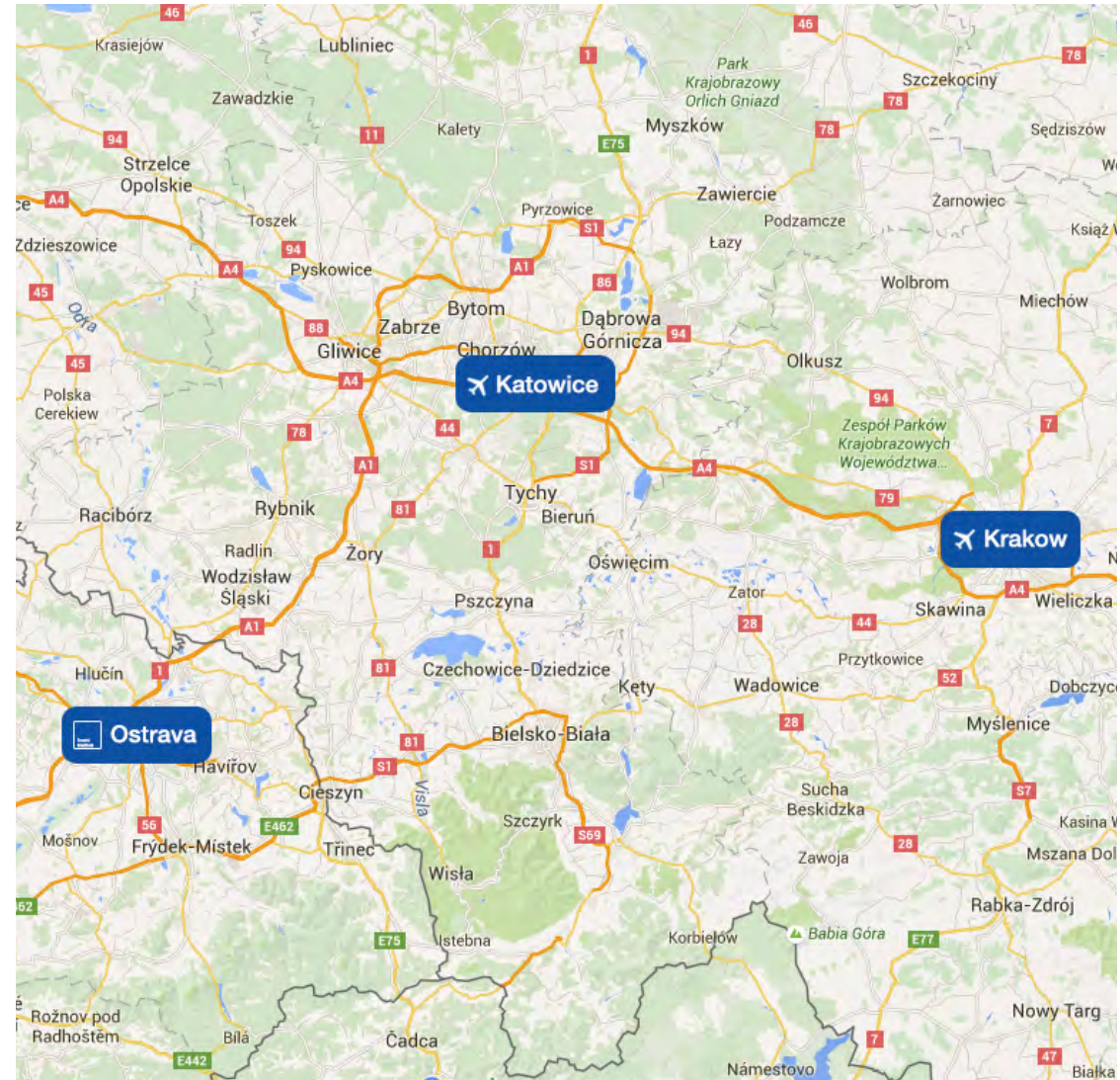
Distance: 20 km  
Driving time: 20 min

### Katowice airport - Ostrava

Distance: 110 km  
Driving time: 1 hour

### Krakow airport - Ostrava

Distance: 160 km  
Driving time: 2 hours





We are looking forward to seeing you in Ostrava!

[www.zbrush4anaplastology.com](http://www.zbrush4anaplastology.com)  
[www.inventmedical.com](http://www.inventmedical.com)

**Order your course at: [hello@inventmedical.com](mailto:hello@inventmedical.com)**

## Zbrush for Anaplastology - Basic Course

	DAY 1	DAY 2	DAY 3
09.00 - 10.40	Welcome	Review skills from Day 1	Review skills from Day 2
	Digital technologies in Anaplastology - Introduction	Using deformation for changing shape of 3D scan (scale, mirror, etc)	Using InVesalius for CT segmentation
	Design of Nasal Prostheses in Zbrush - Demonstration	Practical case - manipulating and mirroring of an ear epithetic	Practical case - segmentation and ZBrush import of a skull model
10.40 - 11.00	Coffee break	Coffee break	Coffee break
11.00 - 12.40	Importing different data types into ZBrush, subtools	Using trimming and selection brushes	Using advanced brushes for cleaning imported CT
	Manipulating data within brush, move, scale, rotate tools	Cutting the shape of a 3D scan	Using polygroups for separating parts of the CT
	Practical Case - positioning epithesis on top of a 3D scan	Practical case - cleaning and modifications of an ear epithetic	Practical case - designing a septal obturator
12.40 - 13.20	Lunch	Lunch	Lunch
13.20 - 15.00	Basic sculpting (Z-add, Z-sub, Z-intensity, DrawSize, Focal Shift)	Using the dynamesh function	Using primitive objects for positioning of implants
	Brushes - description and application	Using boolean functions	Explaining polygroups and extract functions for creating surfaces
	Practical case - modifying shape of an epithetic	Practical case - creating contact surface for the ear	Practical case - modeling a simple or advanced surgical guide
15.00 - 15.20	Coffee break	Coffee break	Coffee break
15.20 - 17.00	Description of masks, alphas	Topological optimization of the model	Explaining layers and simple animation
	Using topology subdivision to add details	Exporting models out of Zbrush for 3D printing	Using video and image functions for presentation
	Practical case - using masks and alphas to detail an epithetic	Practical case- exporting and 3D print of a master model	Summary of the Zbrush course