

# Orthodontic Biomechanics European Course 2024

## Biomed Biomechanics General Program

This is the scientific program for the **Five Weeks of the Biomed Orthodontic Biomechanics European Course (OBEC)**.

The full program has a total duration of 175 hours of didactic activities, and is an adaptation of the Biomed Biomechanics General Program. In every OBEC minor changes are possible, while the core of the course will always be the same.

Other Biomed shorter courses, are offering part of this program.

The OBEC is structured in two blocks of lectures and practical activities. The first three weeks and the last two weeks of the course are generally taking place in different periods, with a minimum distance of two months.

Week 1									
Monday		Tuesday		Wednesday		Thursday		Friday	
Introduction to the Course	1	Dental Movements, C. of Rotation Equivalent Force Systems with Exercises	4	Force Systems: Active/Passive Units - Frictional/Non Frictional – Statical Determination – Consistency	3	Occlusogram Introduction - Digital Models and The DDP Software	3	Use of Virtual Articulator for mandibular repositioning	2
Basics of Biomechanics, Forces and Moments, Center of Resistance	3	Relation between the force system and the dental movement Exercises	3	Equilibrium - Anchorage Needs Estimation --- EXERCISE	3	First Occlusogram (2d) Executed both by instructors and students	2	3d Occlusogram and Virtual Set Up Exercise	2
Vector Calculations with Exercises	3			Occlusal Anchorage Management.	2	More occlusograms exercises (2d)		Dma Software and Exercises Introduction to 3d Biomechanics Analysis	3

Week 2									
Monday		Tuesday		Wednesday		Thursday		Friday	
Statically Determinate Mechanics and Cantilevers	5	Exercise in designing Statically Determinate Mechanics	2	Instruction: How to prepare a Case for Presentation	2	Statically indeterminate systems: The Six Geometries	3	V Bends and Alpha beta Springs	4
Typodont Passive segments and lingual arches	2	Two Vector Mechanics	2	Typodont: Cantilevers with configuration. Composite Cantilevers and Welding Exercises	5	The Dynamic of Geometries. Alignment with linear segments	2	Typodont: Six Geometries, V Bend, Alpha Beta Springs	3
		Typodont: Basic Cantilevers	3			Typodont, Understand geometries during alignment with segments	2		

