BIKE FITTING COURSE

In-person Course Outline

Residential course · Calpe, Costa Blanca, Spain

TEACHING DAYS	SESSIONS	FORMAT	AFTERWARDS
4	12	Presentation and practical workshop	Three months of individual mentoring

The in-person course is designed for experienced bike fitters who want to strengthen the scientific reasoning behind their practical work.

Rather than teaching a fixed fitting formula, the course develops a repeatable way to work from observation to explanation, intervention and reassessment. Students use three connected ideas throughout:

01

Variables

What differs between riders or can be changed during a fit

02

Mechanisms

How and why a variable may affect the rider

03

Forces

How loads pass between the rider and bicycle

The prerequisite online course establishes the anatomy, biomechanics and professional-scope foundations. The four in-person days concentrate on applying that knowledge to riders, equipment and fitting decisions.

Course format

The practical course contains four teaching days and twelve sessions. Each session combines a focused presentation with an extended practical workshop.

Students rotate through fitter, rider and observer roles. This provides repeated opportunities to assess different bodies, movement strategies and responses without relying on a single demonstration rider.

> **OPTIONAL GROUP RIDES**
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> Optional group rides take place before the teaching sessions. These provide time to experience the local riding environment and arrive at the practical work with a realistic appreciation of how fatigue can influence movement and perception.

FOUR DAYS AT A GLANCE

DAY 1

Building the reasoning process

01 From observation to a testable hypothesis

02 Functional anatomy as a constraint on position

03 Saddle and pelvis interaction

DAY 2

Feet, shoes and pedals

04 Foot evaluation and shoe selection

05 Pedal forces, cleat position and float

06 Insoles and metatarsal support

DAY 3

Whole-body support and compensation

07 Centre of mass, support and weight distribution

08 Handlebar and cockpit selection

09 Interpreting asymmetry and advanced visual cues

DAY 4

Integration and complete fitting decisions

10 Designing efficient fitting experiments

11 Supervised full fit

12 Defending and communicating the fit

DAY 1

1. Building the reasoning process

The first day establishes the method used throughout the course. Students learn to turn observations into testable fitting hypotheses while accounting for rider goals, task demands, physical capacity, equipment constraints and measurement uncertainty.

S01 From observation to a testable hypothesis

Students conduct a structured rider history, establish a repeatable baseline and begin separating what has been observed from what has been calculated, interpreted or assumed.

The practical introduces the complete reasoning chain that will be used throughout the course: identify the relevant variable, propose a plausible mechanism, consider the forces involved and choose an appropriate test.

S02 Functional anatomy as a constraint on position

Off-bike observations can provide useful context, but they do not automatically predict how someone will ride.

Students explore how joint function, muscle architecture and individual movement options may constrain a cycling position. They then compare their predictions with the rider's response on the bike and consider alternative compensations.

S03 Saddle and pelvis interaction

Saddle selection involves more than width or sit-bone measurements. Shape, profile, padding, pelvic orientation, riding task and the rider's movement strategy all influence the result.

Students compare saddle options using rider feedback, movement observations and pressure information where available. The goal is to justify a saddle decision from evidence rather than category, convention or brand.

DAY 2

2. Feet, shoes and pedals

The second day concentrates on the rider's connection with the pedal. Students examine how shoe, insole, cleat and pedal choices alter the interface through which force is transmitted.

S04 Foot evaluation and shoe selection

Students assess foot dimensions, shape, volume and functional characteristics relevant to shoe selection. They compare these findings with shoe construction, fit and available cleat adjustment.

The emphasis is on recognising constraints, accommodating the rider and knowing when an observation falls outside the fitter's scope.

S05 Pedal forces, cleat position and float

Cleat changes can affect the direction and application of force, but visible movement alone does not reveal internal joint loading.

Students map the available adjustments within different pedal systems, predict the likely mechanical effect of a change and then test one variable at a time. Movement, pedalling data, symptoms and rider perception are treated as separate evidence sources.

S06 Insoles and metatarsal support

Insoles can change the shoe-foot interface, pressure distribution, sensory input and available shoe volume. They should therefore be selected for a defined purpose rather than added routinely.

Students compare different approaches, configure or produce an insole, apply metatarsal support and reassess the result on the bike.

DAY 3

3. Whole-body support and compensation

The third day expands the analysis beyond individual joints and contact points. Students consider how the rider organises their body between the saddle, handlebars and pedals.

S07 Centre of mass, support and weight distribution

Students examine how rider position changes the distribution of load across the bicycle and why static weight measurements do not tell the complete story.

The practical compares predicted and measured changes in support, balance and contact-point loading while keeping the limitations of each measurement explicit.

S08 Handlebar and cockpit selection

Cockpit selection affects support, breathing, control and the demands placed on the upper body. The appropriate solution also changes with the cycling discipline and intended task.

Students evaluate road, mountain-bike and time-trial examples, then test cockpit changes against the rider's anatomy, position and control requirements.

S09 Interpreting asymmetry and advanced visual cues

Asymmetry is common, but it is not automatically a problem and rarely has only one explanation.

Students practise describing advanced visual cues before interpreting them, developing competing hypotheses and selecting observations or tests that could distinguish between those explanations. The session also covers conservative experimentation, referral and communication when certainty is limited.

DAY 4

4. Integration and complete fitting decisions

The final day turns the preceding material into an efficient, repeatable fitting process. Students plan and conduct fitting experiments, defend their decisions and communicate the outcome clearly.

S10 Designing efficient fitting experiments

A good fit does not require changing every available variable. It requires identifying which change is most relevant, safe and informative.

Students prioritise possible interventions, control avoidable confounders and create a short sequence of reversible tests before changing the bicycle.

S11 Supervised full fit

Students complete a full fit in rotating roles, applying the course framework to rider history, assessment, equipment choices, movement observations and competing hypotheses.

Assessment focuses on safety, reasoning, sequencing, communication and the ability to explain why each decision was made.

S12 Defending and communicating the fit

The final session concentrates on explaining a fit without diagnosis, false precision or unsupported certainty.

Students present their case, identify the strongest and weakest parts of their reasoning and respond to peer review. They then establish appropriate follow-up expectations, warning signs and reasons for further assessment or referral.

What students leave with

By the end of the course, students should be able to:

- Approach complex fits through a consistent reasoning process
- Connect fitting variables to plausible biomechanical mechanisms
- Interpret movement and measurement data without overstating what they reveal
- Evaluate saddle, shoe, insole, pedal and cockpit choices against individual needs
- Design controlled and reversible fitting experiments
- Recognise uncertainty and remain within professional scope
- Explain fitting decisions clearly to riders and other professionals

Students build a cumulative case record across the four days rather than completing a series of disconnected exercises. The course concludes with a full fit and case presentation that integrate the complete process.

> **THE WIDER COURSE**
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> The wider course also includes the prerequisite online learning and three months of individual mentoring following the residential course.

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