

Bicycle Wheel Building (1-day workshop)

Tutor: David Green ((01223 449304, MOB 077 65954786,
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Time: 10 am to 5 pm
Duration: 1 day
Location: Technology Workshop, Coleridge Community College, Radegund Road,
Cambridge CB1 3RJ (map overleaf)
Max students: 8
Course level: Suitable for those with no experience of wheel building.

Course content: A knowledge of wheelbuilding can be invaluable to any cyclist who wishes to do their own maintenance and repair. This is a practical course where you learn to lace, build and true handbuilt wheels. Where necessary, the underlying theory behind the practice is also introduced, based on the standard textbook¹.

This course teaches you sound wheelbuilding principles and skills by building durable 'standard' (36 spoke cross-3) wheels which provides a solid foundation for those wishing to try building wheels with alternative patterns in future. (**Note** Radial, half-radial and other exotic lacing patterns are *not* covered on this course.) You can bring your own components to assemble, or use the practice hubs, spokes and rims provided. For advice on buying suitable components, contact the trainer (details below).

Numbers are restricted to eight students per instructor so that you get all the assistance you need in a small intimate group. Apart from being prepared to get your hands dirty, you should anticipate having a satisfying and enjoyable day. By the end of the course, you will have sufficient knowledge and skill to build reliable front and rear wheels.

Course aims: After the workshop you will be able to:
1. hand-build strong and durable front and rear wheels,
2. tune 'machine-built' wheels to make them more durable,
3. replace spokes and retrue wheels with confidence.

Topics:

- selecting components and tools**
- disassembling wheels
- lacing 36H wheels in a cross-3 pattern
- tensioning the wheel
- correcting spoke line
- lateral and radial truing
- centering (dishing)
- stress relieving

¹ *The Bicycle Wheel* Jobst Brandt ISBN: 0-9607236-6-8

Teaching method: Practical.

Specific learning objectives: By the end of the course you will be able to:

1. Select appropriate components for building wheels.
2. Correctly lace and true cross-3 wheels.
3. Correct spoke line and eliminate spoke wind up.
4. Tension spokes evenly and sufficiently for maximum strength.
5. Stress relieve wheels to ensure durability.
6. Replace broken spokes and/or retrue your existing wheels.

Equipment required:

- Hubs, spokes and rims (optional). You are free to bring your own components to assemble. **Note** If you want to do this, contact the trainer well before the workshop to discuss your intentions with him.
 - Spoke key (The "Spokey" type is strongly recommended in the 3.40mm size (black or yellow). It features a comfortable plastic body with a hardened metal insert. 'Universal' metal spoke keys with multiple slots should be avoided.)
 - screwdriver 3x80mm flat-bladed. (Optionally, an electric screwdriver with a small flat bit.)
 - pair of leather gloves (eg. gardening gloves)
 - 1 or 2 old rags
 - note-making materials
- It is advisable to wear suitable (old) clothes.

Equipment provided:

Loan hubs, spokes and rims (unless you bring your own)
Lubricants and hand cleaner
Truing stand
Dishing guage
Handout material

Lunch and refreshments:

Lunch is not provided, so please bring your own packed lunch. Tea and coffee is provided.

