

Bionics4Education: Learning Path

Bionics Kit - Bionic Fish, Bionic Elephant, Bionic Chameleon



Pure practice

Assembly with brief instructions.
(One project or all three projects)



each 2 hrs.



6 hrs.



12 - 15 hrs.



15 - 20 hrs.

Theory and practice

Biology background knowledge, team building, project planning, assembly, control of the robots, competition and use of the Interactive Learning Poster (gamification with Augmented Reality).



20+ hrs.

Strengthen digital competences

- Coding the bionic robots with the Open Roberta Lab or coding activities on GitHub (Bionics4Education).
- Use of digital learning platform (Festo LX).
- Use digital tools such as 3D printing and online CAD-Design and prototyping of components and spare parts (partly OER materials).

Advanced learning fields

- Scrum - agile project management method and teaching of the 4 C competencies.
- Information about interdisciplinary teams in bionics and possible STEM career paths.