

LEGO I -- Beginning LEGO Robotics (ID: 2421)

The course 2421 “Beginning LEGO Robotics” is a knowledge learning course. It uses LEGO WeDo 2.0 core set to make science, technology, engineering, mathematics, and coding come to life. In the class, 2~3 students share one set.

The set has a unique combination of the LEGO brick, classroom-friendly software, and engaging, standards-based projects. Results in a resource that builds students’ confidence to ask questions, define problems and design their own solutions by putting STEM learning directly in their hands.

The course curriculum pack is built on Next Generation Science Standards and delivers key science content to second through fourth grade students. The curriculum facilitates and supports a clear, easy-to-follow journey through subjects, including: life-, physical-, earth- and space sciences, and engineering. Features 24 projects total more than 40 hours of instructional content.

For further education, the instructor will explain basic robotics concepts. All students will learn how to explore the real world issues, how to create LEGO models to solve the problems, and how to program LEGO software controlling the models.

The pre-requirements for students:

1. Age: 7-8
2. Knowledge level: Beginner
3. Device: iPad with LEGO WeDo 2.0 installed (free download from iTunes Store)

LEGO I 初级课程 — 机器人之动力机械 (ID: 2421)

该课以学习知识为主线, 让孩子在课程中学习 STEM(科学,技术,工程,数学)和电脑编程.

使用 LEGO WeDo 2.0 基本套件,教学套件由 LEGO 零件,电脑专用程序和教学项目大纲三部分组成,通过学生参与标准的课题项目,以此培养学生的提出问题,确定课题,设计他们自己的解决方法. 从而达到学生能自学 STEM 的目的.

该套件使用了新一代的科学标准,课程包含了 24 个生命,物理,地球和太空科学方面的课题,共计 40 多个小时,由教师指导.教材思路清晰,易于掌握.

为了使学生们更好地完成课题,任课老师将讲解基本的机器人概念. 其中会牵涉到简单的数学,几何学,力学和机械理论知识,学生们将会学到如何探索真实世界的一些问题,如何用模拟的 LEGO 模型去解决现实问题,并且学习电脑编程,使用自己编写的简单程序控制 LEGO 模型.

选课要求:

1. 年龄: 7-8 岁
2. 程度: 初学者
3. 上课用品: iPad, 安装了 LEGO WeDo 2.0 (免费自苹果网站下载)

The Differences between two courses (2421 vs. 2441):

Course	ID2421 Beginning LEGO Robotics	ID2441 FLL Jr. Team
Curriculum	One-year course uses LEGO Education WeDo 2.0	One-year course LEGO Education WeDo 2.0 + FLL Jr. Team Guide
Goals	Knowledge learning based hand-on. Problem solving and coding	Team work based hand-on. Designing and project presentation
Expo	No	Yes
Age	7-8	8-10

两门课 2421 和 2441 之间的主要区别:

课名	ID:2421 Beginning LEGO Robotics	ID:2441 FLL Jr. Team
课程	课程为期一年(可只上一学期); 使用 LEGO Education WeDo 2.0	课程为期一年(建议上两学期);使用 LEGO Education WeDo 2.0 + FLL Jr. Team Guide
目标	通过搭建模型, 解决问题和电脑编程来学习科学知识和技能	团队共同设计, 搭建模型, 解决现实科学问题并参加展示比赛.
参展	无	有
适合年龄	7-8 岁	8-10 岁