

上海交通大学 致远学院 2016 年秋季学期

《科学思想背后的“小”故事(1)》课程教学说明

一、课程基本信息

1. 开课学院(系): 致远学院
2. 课程名称:《科学思想背后的“小”故事(1)》(Little Stories Behind Scientific Thoughts I)
3. 学时/学分: 32 学时/2 学分
4. 先修课程: 无
5. 上课时间: 星期三 14:00-15:40 (第 6-13 周)
6. 上课地点: 东上院 500 (第 7 周) & 上院 500 (第 6, 8-13 周)
7. 任课教师: 王维克(负责人)、郑杭、孙淮、何士刚、俞勇、彭志科等

二、课程简介(中英文)

这是一门面对致远学院所有一年级新生的科学导论课。每堂课的设计均按照“讲好一个故事, 引导一次探究, 展现一片领域”的原则设计。

- 1、每次课均以故事的形式引出科学原理或自然定理, 凸显“小故事隐藏大道理”的真谛, 倡导对简单问题的深入思考;
- 2、课堂上引导学生从思想上重走先辈走过的学术之路, 真实体会科学问题的提出和研究, 并在每节课最后提出可以尝试研究的问题。让学生在课堂的学习和课后的研究探索过程中感受到这是一次有趣的科学研究和科学探索经历;
- 3、经历过故事讲述和科研探索阶段, 适度展现相关的学术研究领域, 使学生看到一片开阔的学术领域, 激发学术研究的热情。

This is a science introduction course open for all freshmen in Zhiyuan College. Each lesson is designed in accordance with “telling a good story, leading to an inquiry, and opening up a field”.

(1) Each class is in the form of stories to introduce scientific principles and mathematical theorems, echoing with the truth of “small fable whispers great wisdom”, to encourage deeper exploration from easy questions.

(2) In class, students are guided ideologically traveling back to the academic progress their predecessors used to accomplish, to realize how a scientific issue is proposed and put into researches, thus trying out some problems worth studying at the end of each class. In class studying and exploration afterwards made students feel that it is a truly interesting scientific study and learning experience.

(3) By the phase of storytelling and scientific exploration, to reveal the related academic research fields in a modest sense would expose students to an open academic field with their enthusiasm in academic study.

三、课程主要内容(中英文)

- 1、致远学院数学、物理学、生命科学、计算机科学、化学、工科等 6 个方向每个方向提出 3-5 个题目, 并附上简短介绍, 供课程委员会审核;
- 2、课程委员会审核通过的题目, 按照课程总体安排进行讲授。

(1) Each of the six concentrations in Zhiyuan College, Mathematics, Physics, Life Sciences, Computer Sciences, Chemistry, and Engineering, offers 3 to 5 topics, attached with brief introduction, for Curriculum Committee evaluation.

(2) Topics approved by Curriculum Committee are instructed following the overall curriculum.

四、课程教学进度安排（中英文）

每学年的课程内容会随课题的选定与授课教师而相应变化

Curriculum would adjust by different topics and instructors correspondingly each academic year.

五、课程考核方式及说明

考核方法：三人一个小组，提交一份报告即可，且三人最好不同专业方向，评分标准待定。

六、教材与参考书