

**课程号 (Course Number) :** 21130002

**课程名称 (Course Title) :** 植物知道生命的答案/What A Plant Knows:The surprising world of plant senses

**开课院系 (School/Department) :** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits) :** 2

**授课教师 (Faculty) :** 邓兴旺, Daniel Chamovitz(校外)

**先修课程 (Prerequisites) :** 无先修课程

### 中文简介:

走进你不知道的植物世界, 思考生命真实的存在!

捕蝇草是怎样知道闭拢叶子的时机的? 它真的能感觉到昆虫微小、细长的腿吗? 樱花树又是怎样知道何时应该开花的? 它们真的能记住天气吗?

几个世纪以来, 我们不断惊异于植物的多样性和形态。著名生物学家丹尼尔查莫维茨现在将在《植物知道生命的答案》课程中, 对植物如何体验世界给以严谨而引人入胜的讲解, 包括它们所看到的颜色还是它们所遵守的时刻表。

通过着重介绍遗传学等领域的最新研究成果, 丹尼尔查莫维茨将带领我们走进植物的内在世界, 把它们的感觉和人类感觉做对比, 揭示出如下事实我们和向日葵及栎树的共同之处, 比你知道的更多。丹尼尔查莫维茨将在课程中展示植物如何分辨上和下, 如何知道邻近的同类已经遭到了一群饥饿甲虫的侵害, 是否能够欣赏你一直放给它们听的齐柏林飞艇乐队的音乐, 或者是否更偏好于巴赫那旋律优美的连复段。通过对植物触觉、听觉、嗅觉、视觉以至记忆的考察, 促使我们不得不去思考: 植物会不会对周围环境有意识?

《植物知道生命的答案》课程难能可贵地对我们踏过的草丛、我们嗅过花朵、我们爬过的树木给以深入关注, 让我们能够更好地理解科学和我们在自然界中的位置。

### 英文简介 (Course Description) :

For centuries we have collectively marveled at plant diversity and form—from Charles Darwin's early fascination with stems and flowers to modern science fiction. This course intends to present an intriguing and scientifically valid look at how plants themselves experience the world—from the colors they see to the sensations they feel. Highlighting the latest research in genetics and more, we will delve into the inner lives of plants and draw parallels with the human senses to reveal that we have much more in common with sunflowers and oak trees than we may realize. We'll learn how plants know up from down, how they know when a neighbor has been infested by a group of hungry beetles, and whether they appreciate the music you've been playing for them or if they're just deaf to the sounds around them. We'll explore definitions of memory and consciousness as they relate to plants in asking whether we can say that plants might even be aware of their surroundings. This highly interdisciplinary course meshes historical studies with cutting edge modern research and will be relevant to all students intrigued by nature.