

# COURSE DETAIL

## FROM BRAIN TO BEHAVIOR

**Country**

United Kingdom - England

**Host Institution**

University of Cambridge, Pembroke College

**Program(s)**

Summer in Cambridge

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Biological Sciences

**UCEAP Course Number**

104

**UCEAP Course Suffix**

S

**UCEAP Official Title**

FROM BRAIN TO BEHAVIOR

**UCEAP Transcript Title**

BRAIN TO BEHAVIOR

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

3.30

### **Course Description**

Our brains enable all we do, think, and remember, yet we know little about how this happens and why it sometimes fails. This course gives a thorough, yet approachable, introduction to theoretical neuroscience, highlighting the key areas where it has already made seminal contributions, and introducing students to modern themes. The course begins with an introduction to the biology of nerve cells, and works its way towards compact mathematical descriptions of the behavior of single neurons and neural networks. The course goes through various types of networks, and investigates how they may support specific computations such as perception or decision-making. Lectures are complemented by practical programming exercises, to be run in the browser during the seminars, thus giving students a chance to explore models of neurons and networks in detail.

### **Language(s) of Instruction**

English

### **Host Institution Course Number**

### **Host Institution Course Title**

FROM BRAIN TO BEHAVIOUR

### **Host Institution Course Details**

### **Host Institution Campus**

University of Cambridge

### **Host Institution Faculty**

### **Host Institution Degree**

### **Host Institution Department**

Science and Maths

### **Course Last Reviewed**

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