

# Neural Engineering

## Prerequisite Course (درس جبرانی)

- Mathematics for neuroscience\*
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## Statistics and Learning Courses

- Causal inference\*
- Estimation theory and optimal filters
- Machine learning / Pattern recognition
- Time series analysis\*\*

## Signal and Image Processing Courses

- Computer vision (Equivalent courses: Digital image processing / Medical image processing)
- Biological signal processing
- Time frequency analysis
- Adaptive filters
- Speech processing

## Neuroscience Courses

- Current topics in system and behavioral neuroscience\*
- Neuroscience of learning, memory, cognition
- Systems biology

## Technology Courses

- Neurotechnology\*\*
- Advanced biosensors\*\*
- Advanced bioelectronics\*\*
- Fabrication technology