

# Introduction to Electrical Engineering

Why? Who?  
What? Where?



## Why Electrical Engineering?

Electrical engineers are trained to address a variety of the crucial engineering issues that societies face today.

The course includes research, development, design, creation and maintenance of a diverse set of objects ranging from global positioning systems to semi-conductor chips used in mobile phones.

## Who should be an Electrical Engineer?

Any student who has:

- A passion for electronic systems
- A keen interest in sciences and mathematics
- An analytical mind and can comprehend information
- Good computing ability

## Specialisations within Electrical Engineering:

- Power
- Computers
- Telecommunications
- Communication and Signal Processing
- Control Engineering Electromagnetics
- Electronics and Microelectronics Power
- Systems Optical Engineering
- Nanotechnology
- Instrumentation



**Did you know?** Rowan Atkinson, also famous as Mr. Beans is an electrical engineer from Oxford University!

## Upcoming Specialisations within Electrical Engineering:

- Remote Sensing and Space Systems
- Bioelectronics Engineering

## Best colleges for Electrical Engineering in:

### India

- IITs'
- NITs'
- BITS-Pilani
- Delhi College of Engineering-New Delhi

### USA

- Massachusetts Institute of Technology
- Stanford University
- University of California-Berkeley

### UK

- University of Cambridge
- University College-London
- Imperial College-London

### Canada

- University of Victoria
- University of British Columbia
- McGill University

HAPPY  
Discovering

What are the prospects after studying this subject? Does it open up international opportunities?

Answer these and other such questions by reading and watching expert views at [www.university.com/courses](http://www.university.com/courses)

**U**niversity   
Discover & be discovered

# Discover the Career Options Right for You

## 1 Initial Options



### What are your career ideas?

If you haven't already given it a thought, then base it on influences from:

- Parents, family and friends
- Passion towards a subject
- Personal experiences
- Media and internet

Univariety probes and provides answers

### Initial Options

Go to step 2

### Instructions

- Follow this process, one at a time, to finalise career choices
- If the answer is 'No' at any stage then start from stage 1
- Do in-depth self research
- Complete details of this process and the questions around a 'Typical Day' Test are at [www.univariety.com/courses](http://www.univariety.com/courses)

## 2 Hypothesis



### Do you like it?

Remember the activities from the past which gave you joy and happiness. Does this career option similarly excite you?

### Initial Hypothesis



### Can you do it?

- Do you know how long it takes to get the degree?
- Do you like the subjects which you will study?
- Can you perform to get through to good colleges?
- Do you have the financial resources to support the degree?

### Final Hypothesis

Go to step 3

## 3 Validation



### Do you want it?

Do you like the:

- Nature of work you will do?
- Type of people you will deal with?
- Physical and mental effort required?
- The challenge it poses?



### Will it fulfill your and your family's ambitions?

Will this give you a good:

- Lifestyle?
- Time with family and friends?
- Salary and money potential?
- Possibility of being famous?

### Validated Hypothesis

Go to step 4

## 4 Finalisation



### 'Typical Day' Test?

*"If you want to know the road ahead, then ask someone who has travelled it."*

- Ancient Chinese Proverb

Here, we ask you to identify 2 - 3 people who have the same career that you have chosen and brought to this stage. Observe and ask questions to understand the 'typical life' in that career



## Decision

### Tools

- Discussion within the family and friends
- Univariety Website – Career Section
- Sessions with Univariety Counsellors
- Internet, books and other media