TU/E Bachelor College

Eindhoven University of Technology (TU/e) combines its bachelor education in the Bachelor College. As a student of the TU/e Bachelor College, you have the freedom to define your study program based on your own interests and ambitions. A large part of your Bachelor’s program is made up of your major, in which you choose the specialized field that you want to work in later as an engineer. This forms the basis of your study program.

**Major Psychology & Technology**

Half of the three-year Bachelor’s program is made up by your major, which forms the basis of your study program. If you choose the Psychology & Technology major, you’ll combine courses in psychology and technology subjects. The technology courses are in ICT, Living or Robotics. On average you’ll spend a third of your time on technology subjects, a third on psychology subjects and a third on research methods and practical assignments. The language of communication of this major is English.

**Free electives**

A quarter of the Bachelor’s program consists of elective courses that you can choose yourself. These allow you to change the emphasis in your program. You can opt to broaden your knowledge by following courses in a different specialization, or alternatively you can gain more in-depth knowledge in your own specialization.

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* This major is formally part of the Innovation Sciences Bachelor’s program
Compulsory basic courses
As well as your major you’ll follow a number of basic courses such as mathematics and physics. You’ll also learn technological design, and you’ll gain professional skills like teamworking and organization. These courses will give you the sound basis that you’ll need as an engineer.

The Bachelor’s program Psychology & Technology has the following structure:

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<td>Calculus</td>
<td>Physics</td>
<td>Data Analytics for Engineers</td>
<td>USE</td>
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<td>Introduction Psychology &amp; Technology</td>
<td>Social Psychology &amp; Consumer Behavior</td>
<td>Technology course</td>
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<td>Programming for Psychology &amp; Technology</td>
<td>Electives</td>
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<td></td>
<td>Technology course</td>
<td>Technology course</td>
<td>OGO Qualitative Research</td>
<td>Technology course</td>
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<td>Electives</td>
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<th>Year 3</th>
<th>HTI in Social Context</th>
<th>Human Factors</th>
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<td>Advanced Research Methodology &amp; Research Ethics</td>
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Technology courses
The technology courses are in ICT, Living or Robotics, and at the start of your major you can choose which specialization you prefer.

Obligatory technology courses for the Living specialization:
- Designing based on building physics and materials
- Building physics and building services engineering
- Integration of human, building and environment
- Built Environment Project for PT

Obligatory technology courses for the ICT specialization:
- Logic and Set Theory
- Programming
- Data Modeling and Databases
- DBL Human-Technology Interaction and Web Technology

Obligatory technology courses for the Robotics specialization:
- Mathematics
- Computation I
- Signal Processing basics
- Sensing, computing and actuation

Electives - USE
Finally you choose USE (User, Society and Enterprise) courses. These show you that technology always functions in a broader context. Engineers develop technology for users, to contribute to solving societal problems and to create economic opportunities for enterprises.

First-year courses in the psychology & technology major
In your first year you’ll follow technology courses as well as psychology subjects. The technology courses are in ICT, Living or Robotics, and at the start of your major you can choose which specialization you prefer. You’ll find a list of the first-year courses in the Psychology & Technology major below.

Introduction to Psychology & Technology
This course is about human-technology interaction, a subject that is of great importance for successful innovation. The course covers the basic principles of psychology, such as awareness, perception, learning, thinking and emotion, and their application in human-technology interaction.

Programming for Psychology & Technology
This course covers the basic principles of object-oriented programming, starting with the theory behind the Java programming language. This theory is then put into practice in writing a number of simple programs.
The Bachelor’s program Psychology & Technology has the following structure:

- **Sensing, computing and actuation**
- **Signal Processing basics**
- **Mathematics**

**Obligatory technology courses for the robotics specialization**
- **DBL Human-Technology Interaction**
- **Data Modeling and Databases**
- **Programming**
- **Logic and Set Theory**

**Obligatory technology courses for the Built Environment Project for PT**
- **Integration of human, building and environment**

The technology courses are in ICT, Living or Robotics, and at the start of your major you’ll follow a number of basic courses such as mathematics and physics. You’ll also practice in writing a number of simple programs. This theory is then put into practice in writing a number of simple programs. This theory is then put into practice in writing a number of simple programs.

As well as your major you’ll follow a number of basic courses such as mathematics and physics. These show you that technology always functions in a broader context. Engineers develop technology for users, to contribute to solving societal enterprises.

Finally you choose USE (User, Society and Enterprise) as psychology subjects. The technology courses are in ICT, Living or Robotics, and at the start of your major you’ll follow a number of basic courses such as mathematics and physics. These show you that technology always functions in a broader context. Engineers develop technology for users, to contribute to solving societal enterprises.

The obligatory technology courses of your technical specialization are in Living, ICT or Robotics. In the first year you follow one course from your chosen technology specialization in quarter 3. In the second year you follow another three technology courses that further extend your knowledge in this area.

**Social Psychology & Consumer Behavior**
Social Psychology is about the thoughts, emotions and behavior of individuals and how these are influenced by the actual, imagined or suggested presence of others. This knowledge is used when introducing new technology or changing people’s behavior (for example in relation to energy consumption). Consumer Behavior looks at these aspects from a specific perspective: consumers are people who purchase, use and dispose of products made by other people. In this part of the course you study the factors and processes on which consumer behavior is based.

**Research Methods**
In this course you learn about scientific research and the method used in empirical research. You learn how to formulate a research question, which forms of research you can use to answer it, and how to process and interpret the results of a simple research project. You also develop the skills needed to carry out research yourself.

**Brain, Body, Behavior**
You gain an overall view of how the nervous system works, with the focus on its functioning: how our brain, body and behavior all work together. The aspects covered in the course include the development and structure of the brain, functional specialization and the effects of drugs and hormones. Attention is also given to brain-computer interfaces.

**Technology course for the Living specialization**
The technology course for the Living specialization is Designing based on building physics and materials, given by the Built Environment department. This covers the properties and qualities of building materials, as well as which materials are suitable for which applications.

**Technology course for the ICT specialization**
The technology course for the ICT specialization is Logic and Set Theory, taught by the Mathematics and Computer Science Department. In this course you learn to work with formulas from propositional logic and predicate logic, and to know their meaning and use.

**Technology course for the Robotics specialization**
The technology course for the Robotics specialisation is Mathematics, taught by the Electrical Engineering department. This course provides a sound basis in Linear Algebra for the electrical engineering courses in your program.

www.tue.nl/bachelorprograms/pt
ELECTIVES AND COACHING

Free electives
As well as the Psychology & Technology courses, the Bachelor’s program includes electives to match the program to your own interests. You can choose to broaden your knowledge by following courses in another field, or you can choose to gain extra in-depth knowledge within Psychology & Technology. For example you can choose electives in the following areas:

- Gaming
- Light and sound
- Robotics
- Healthcare
- Sustainability
- Smart Mobility
- Sports Technology

Intensive coaching
You’re not on your own while you’re studying. At TU/e, experienced coaches help you right through your program with personal advice. That starts from day one, when together with your coach you decide on the right courses to choose in the elective part of your program. That means you define your own study program, to match your own interests and ambitions. And if you discover in your first year that you’d prefer to do a different major, your coach will help you find a way to change during the year.
As well as a personal coach, you’ll receive support from your student counselor and students in later years – they act as mentors to your first-year group, and will help you to make a good start on your studies.

LIKE TO KNOW MORE ABOUT PSYCHOLOGY & TECHNOLOGY?

Study information Psychology & Technology
e-mail: voorlichting.pt@tue.nl
www.tue.nl/bachelorprograms/pt

Information days
www.tue.nl/informationdays

Stay informed about studying at TU/e:
start.tue.nl

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