

# Traffic Psychology 1

## Course Syllabus

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Course name	Traffic Psychology 1 (Dopravní psychologie 1)
Code	PCH/DP1
Supervisor	PhDr. Matúš Šucha, Ph.D.
Teacher	PhDr. Matúš Šucha, Ph.D.
Year	5
Semester	Winter
Number of lessons	1 + 1 / week
ECTS	2
Course completion	Pre-exam credit

The main aim of this course is to familiarise the students with the basic theories, objectives, and methods of traffic psychology, including road users' behaviour and the assessment of mental fitness to drive. The students will learn how to conduct a traffic-psychology assessment and how to write the final report.

Course completion requirements: to conduct a traffic-psychology assessment using VTS TEST in the department's laboratory and draw up the report, including the successful defence of the report, and a one-day internship in a traffic psychology laboratory.

Optional 5-day internship at the Transport Faculty, University of Pardubice, or the Centre for Traffic Research, Brno.

### Content of the Course:

1. Theories, objectives, and methods
  - a. Traffic system and mobility
  - b. Modes of transport
  - c. What is traffic and transport psychology?
  - d. Key factors
    - i. Safety (objective and subjective)
    - ii. Quality of life
    - iii. Health and public health
    - iv. Environment
    - v. Land use
    - vi. Sustainability (sustainable safety - SWOV)
  - e. The main traffic-psychology models and theories (Vision 0, the theory of planned behaviour, the homeostasis theory, ...)
  
2. Driver's cognition, personality, behaviour, motivation, and emotions

- a. Driver's behaviour – theories (Gadget, subjective risk, self-regulation)
- b. Drivers' abilities (incl. visual attention and other senses)
- c. Driver's personality
- d. Emotions and motivation
- e. Driver's performance – hierarchical task levels
- f. Drivers' individual differences
- g. Main types of risky behaviour
  - i. Safety belt and child restraint use
  - ii. Driving under the influence of alcohol and drugs
  - iii. Speeding
  - iv. Aggressive driving
  - v. Driver's distraction and inattention
  - vi. Driver's fatigue
  - vii. Driver's stress and anger
  - viii. Running traffic lights
  - ix. Work-related road risk
- h. Eco-driving

### 3. Road users

- a. Drivers
  - i. Professional drivers
  - ii. Private drivers
- b. Pedestrians
- c. Motorcyclists
- d. Cyclists
- e. Young drivers
- f. Older drivers
- g. Children

### 4. Fitness to drive

- a. Assessing mental fitness to drive
- b. Traffic-psychology assessment
  - i. Process
  - ii. Exploration, anamnesis, and interview
  - iii. Ethical issues
- c. Assessment of cognitive functions and the assessment methods
  - i. Attention and resilience to monotony
  - ii. Memory
  - iii. IQ
  - iv. Peripheral visual perception
  - v. Reaction time
- d. Assessment of personality traits and the assessment methods
  - i. Sensation seeking
  - ii. Anger and hostility
- e. Hazard perception assessment

## Literature:

### Required:

- Porter, B. E. (Ed.) (2011). Handbook of Traffic Psychology. San Diego: Elsevier.
- Šucha, M., et al. (2013). Dopravní psychologie pro praxi [Traffic Psychology for Practice]. Praha: Grada.

### Recommended:

- Transportation Research Part F: Traffic Psychology and Behaviour
- Journal Transactions on Transport Sciences
- Traffic Injury Prevention
- Accident Analysis & Prevention
- Barjonet, P. E. (Ed.) (2001). Traffic Psychology Today. Massachusetts: Kluwer Academic Publishers.
- Dorn, L. (2005). Driver Behaviour and Training. Hampshire: Ashgate Publishing Limited.
- Hennessy, D. (Ed.) (2011). Traffic Psychology – An international perspective. New York: Nova Science Publishers.
- Rothengatter, T. & Huguenin, R. D. (2004). Traffic and Transport Psychology. London: Elsevier.
- Sullman, M. & Dorn, L. (2012). Advances in Traffic Psychology. Hampshire: Ashgate Publishing Limited.
- Theeuwes, J., van der Horst, R., & Kuiken, M. (2012). Designing Safe Road Systems. Hampshire: Ashgate Publishing Limited.
- Vanderbilt, T. (2008). Traffic. London: Penguin books.