

TSRE invites you to a course in

# Integrated Safety - Crash Avoidance and Crash Safety Technology

More information see next 



# Integrated Safety - Crash Avoidance and Crash Safety Technology

The course starts with an overview of the history of cars and crash safety research.

It then covers

- The problem – road casualty statistics
- The physics of car crashes
- The human anatomy, traffic injuries, injury coding and biomechanics
- Laboratory testing, test dummies and mathematical analysis of crashes
- Safety standards and consumer rating programs
- Integrated safety - active and passive safety technology

The course is unique being multidisciplinary covering almost all aspects of active and passive safety. All issues will be dealt with from an international perspective.

## Course Schedule

### Day 1

- Introduction
- The history of cars and crash safety technology
- Road casualty statistics and current trends and goals EU, USA, Asia
- The physics of car crashes
- The basics of human anatomy
- Typical traffic injuries and the AIS coding system
- Biomechanics – Injury criteria and tolerance levels

### Day 2

- Mechanical and Mathematical simulation of crashes
- Crash test dummies
- Safety regulations- USA, EG-directives, ECE, China
- Product liability
- Consumer information, New Car Assessment Programs (NCAP)
- Integrated safety
  - Active safety
  - Passive safety
- Crash Avoidance technology – ABS, ESP, Pre-braking etc.

### Day 3

- Passive safety
  - The car body – crash energy management, adaptive crash pulses and compatibility
  - Interior restraint systems – seat belts, air bags, seats, child restraints etc.
  - Adaptive restraints
  - Crash sensors and Event Data Recorders
- Future crash safety – driver information and training, intelligent cars, improved traffic environment? Where are we going?

## Lecturer Hugo Mellander Ph.D.

The president of TSRE AB Hugo Mellander has over thirty years of experience in crash safety technology and biomechanics.

He has previously worked for Volvo Cars and he is past president of AAAM – Association for the Advancement of Automotive Medicine and he is now a council member of IRCOBI – International Research Council on the Biomechanics of Injury.



## General Information

### Contact and course office

Traffic Safety Research and Engineering, TSRE AB.  
Sturegatan 4, SE-54433 Hjo, Sweden  
Phone +46(0)503 10820 Fax +46(0)503 10920  
Email: [tsre@trafficsafety.se](mailto:tsre@trafficsafety.se)  
Internet: [www.trafficsafety.se](http://www.trafficsafety.se)

### Registration

For registration use the registration form and send by Fax +46(0)503 10920 email or post the form.

### Course language

The course language will be English. Translation to Mandarin can be arranged.

