

**Computer Science for Autonomous Systems MSc
Fall semester**

Core Courses

| Code | Courses | Lecture (L) | Labor | Practice (Pr) | Consultation | Requirement | Credit | Semester | Subject requirement | 1st Semester | 2nd Semester | 3rd Semester | 4th Semester |
|-----------------|--|-------------|-------|---------------|--------------|-------------|-----------|----------|----------------------|--------------|--------------|--------------|--------------|
| IPM-22AUTCVEG | 3D Computer Vision L+Pr.* | 2 | 2 | 0 | 2 | XE | 6 | 1 | | 2+2+0+2 | | | |
| IPM-22AUTISPE | Image and Signal Processing L.* | 2 | 0 | 0 | 1 | E | 3 | 1 | IPM-22AUTISPG (weak) | 2+0+0+1 | | | |
| IPM-22AUTISPG | Image and Signal Processing Pr.* | 0 | 2 | 0 | 1 | PG | 3 | 1 | | 0+2+0+1 | | | |
| IPM-22AUTIVSEG | Introduction to Vehicles and Sensors L.+Pr.* | 2 | 0 | 1 | | XE | 4 | 1 | | 2+0+0+1 | | | |
| IPM-22AUTRMG | Research methodology L+Pr. | 1 | 0 | 2 | 2 | XPG | 5 | 1 | | 1+0+2+2 | | | |
| IPM-22AUTAIPAEG | Deep Reinforcement Learning L+Pr.* | 2 | 0 | 2 | 2 | XPG | 6 | 2 | | | 2+0+2+2 | | |
| IPM-22AUTDAAE | Design and Analysis of Algorithms L.* | 2 | 0 | 0 | 2 | E | 4 | 2 | | | 2+0+0+2 | | |
| IPM-22AUTIDSEG | Introduction to Data Science L+Pr. | 2 | 2 | 0 | 2 | XE | 6 | 2 | | | 2+2+0+2 | | |
| IPM-22AUTNMEG | Numerical Methods for Optimization L+Pr. | 2 | 2 | 0 | 2 | PG | 6 | 2 | | | 2+2+0+2 | | |
| IPM-22AUTSCTE | System and Control Theory L.* | 2 | 0 | 0 | 1 | E | 3 | 3 | IPM-22AUTSCTG (weak) | | | 2+0+0+1 | |
| IPM-22AUTSCTG | System and Control Theory Pr.* | 0 | 2 | 0 | 1 | PG | 3 | 3 | | | | 0+2+0+1 | |
| IPM-22fPRG | Internship | | | | | | 0 | 2-4 | | | | | 240 hours |
| | Core course credits | | | | | | 49 | | | 21 | 22 | 6 | |

Compulsory Elective Courses of the Specialization

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|------------------------|---|-------------|-------|---------------|--------------|-------------|------------|------------|----------------------|--------------|--------------|--------------|------------------|
| IPM-22AUTPHFTG | Human Factors in Traffic Environment Pr.* | 0 | 0 | 2 | 0 | PG | 2 | 1,3 | | 0+0+2+0 | | 0+0+2+0 | |
| IPM-22AUTLFADE | Legal Framework for Autonomous Driving L. | 2 | 0 | 0 | 0 | E | 2 | 1,3 | | 2+0+0+0 | | 2+0+0+0 | |
| IPM-22AUTPME | Project Management L. | 2 | 0 | 0 | 0 | E | 2 | 1,3 | | 2+0+0+0 | | 2+0+0+0 | |
| IPM-22AUTPREPG | Preparation course for master studies and developing learning skills Pr.* | 0 | 0 | 3 | 0 | PG | 2 | 1 | | 0+0+3+0 | | | |
| IPM-22AUTTAMEG | Topics in Applied Mathematics L+Pr. | 2 | 0 | 2 | 1 | XPG | 5 | 1 | | 2+0+2+1 | | | |
| IPM-22AUTASTE | Advanced Software Technology L. | 2 | 0 | 0 | 2 | E | 4 | 2 | | | 2+0+0+2 | | |
| IPM-22AUTAUSLAB1 | AUS Lab I. | 0 | 3 | 0 | 2 | PG | 5 | 2 | | | 0+3+0+2 | | |
| IPM-22AUTCGE | Computer graphics L. | 2 | 0 | 0 | 1 | E | 3 | 2 | IPM-22AUTCGG (weak) | | 2+0+0+1 | | |
| IPM-22AUTCGG | Computer graphics Pr. | 0 | 0 | 2 | 1 | PG | 3 | 2 | | | 0+0+2+1 | | |
| IPM-22AUTDAAG | Design and analysis of algorithms Pr. | 0 | 0 | 2 | 1 | PG | 3 | 2 | | | 0+0+2+1 | | |
| IPM-22AUTERTSEG | Embedded and Real-Time Systems L+Pr.* | 2 | 2 | 0 | 2 | XE | 6 | 2 | | | 2+2+0+2 | | |
| IPM-22AUTSQTE | Software quality and testing L. | 2 | 0 | 0 | 1 | E | 3 | 2 | IPM-22AUTSQTG (weak) | | 2+0+0+1 | | |
| IPM-22AUTSQTG | Software quality and testing Pr. | 0 | 2 | 0 | 1 | PG | 3 | 2 | | | 0+2+0+1 | | |
| IPM-22AUTSSFEG | 3D Sensing and Sensor Fusion L.+Pr.* | 2 | 0 | 2 | 2 | XE | 6 | 3 | | | | 2+0+2+2 | |
| IPM-22AUTADLEG | Advanced Deep Network Development L+Pr.* | 2 | 0 | 2 | 2 | XE | 6 | 3 | | | | 2+0+2+2 | |
| IPM-22AUTAUSLAB2 | AUS Lab II | 0 | 3 | 0 | 2 | PG | 5 | 3 | | | | 0+3+0+2 | |
| IPM-22AUTIVPEG | Image and Video Processing L.+Pr.* | 2 | 0 | 2 | 2 | XE | 6 | 3 | | | | 2+0+2+2 | |
| | Compulsory elective courses credits | | | | | | 35 | | | 9 | 7 | 19 | |
| | Optional course | | | | | | 6 | 2,3 | | | 1+0+0 | 5+0+0 | |
| IPM-22AUTTHESIS | Thesis consultation | | | 1 | 0 | PG | 30 | 4 | | | | | signature |
| | Summa credit in semester | | | | | | | | | 30 | 30 | 30 | 30 |
| | Summa credit | | | | | | 120 | | | | | | |

| I&E modul | | | | | | | | | | | | | |
|------------------|--|-------------|-------|---------------|--------------|-------------|------------|----------|---------------------|--------------|--------------|--------------|--------------|
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| IPM-22fi&EBEG | I&E Basics | 2 | 0 | 2 | 2 | XPG | 6 | 1 | | 2+0+2+2 | | | |
| IPM-22fi&EBDL1G | Business Development Lab I. | 0 | 0 | 2 | 2 | PG | 4 | 1 | | 0+0+2+2 | | | |
| IPM-22fi&EBDL2G | Business Development Lab II. | 0 | 0 | 2 | 2 | PG | 4 | 2 | | | 0+0+2+2 | | |
| IPM-22fi&EIAOEEG | Innosocial aspects of the entrepreneurship | 2 | 0 | 2 | 2 | XPG | 6 | 2 | | | 2+0+2+2 | | |
| IPM-22fi&ETSSG | Thematic Summer Schools with I&E project | 1 | 0 | 1 | 2 | XPG | 4 | 2 | | | 1+0+1+2 | | |
| IPM-22fi&ESTEG | I&E Study | 2 | 0 | 2 | 2 | XPG | 6 | 3 | | | | 2+0+2+2 | |
| | Summa credit in semester | | | | | | | | | 30 | 30 | 30 | 30 |
| | Summa credit | | | | | | 120 | | | | | | |

PG: Practical Grade E: Exam XPG: Lecture+Practice with Practical Grade XE: Lecture+Practice with Exam

- Az EIT-es hallgatók számára I&E modul mellett a *-gal megjelölt tárgyak elvégzése kötelező.
- Az EIT-s hallgatók az utolsó félévükben végzik a szakmai gyakorlatot a diplomamunka készítésével párhuzamosan

- EIT students are required to complete the Innovation&Entrepreneurship (I&E) module and required to complete all subjects indicated by asterisk (*) in the sample curriculum of the specialization.
- EIT students fulfill the requirements of the internship and complete their thesis work (parallelly), in the last semester of their academic studies.