

| Subject | Description | Nr of peopl | Mentor | Student |
|---|---|-------------|--|---------|
| Technical issue solving Tool based on Knowledge Data Base | Tool developed in an OO programming language for gathering the technical issues encountered during a project lifetime. | 1 | Daniel Oniciu | x |
| Automatic generation tool for Test Report CAPL test suites generated automatically based on Doors | Tool developed in an OO programming language for generating a test report and for generating a test suite composed of automated tests from a test specification | 1 | Gabriel Dema/Daniel Oniciu | x |
| Framework for automated release notes / documentation generation at Software & System Integration. | Tool (preferably Python script; or C#) which based on appropriate inputs will automatically generate integration documents. | 1 | Claudiu Guran | x |
| Intersection assist using RADAR sensors. | Using RADAR sensors & technology, we want to implement an algorithm (C language used) on RADAR uC which is able to detect if an intersection is free and the user / driver can continue and pass the intersection. | 1 | Eduard Sebestyen | x |
| Extend RADAR specific tools (.xml merge tool and internal errors generator tool) with new features. | Extension of an existing tool in order to provide the possibility to perform generation of the C source files based on an excel file (instead of Doors document) Extension of an existing tool in order to provide the possibility to perform generation of the C source files based on a particular baseline of the document stored in DOORS | 1 | Iuliana Indries | |
| Test Vehicle Gateway Standardization | | 1 | Sebastian Pop | x |
| Requirements Management tool | Requirements Management : Understanding Hella's requirements management strategy from 2 perspectives: •Information flow across domains (i.e. attributes, traceability) •Quality related (i.e. rules for writing requirements) Work with the project team in order to measure and identify the gaps. Support in closing out the open points. Working with tools like DOORS, ReqPat. | 1 | Cosmin Morosanu | x |
| Data Decoding tool | Tool that has an input binary format and generates the logical information out of it. | 1 | Oana Chirita | x |
| Automotive diagnostics implementation | Embeeded software development for diagnosis. | 1 | Oana Chirita | x |
| E-learning training materials | Preparation of e-learning materials related to various radar functional development and radar tooling topics. | 1 | Cristi Vesa | x |
| Radar Signal Processing | Target detection algortihms using radard technology. | 1 | Cristi Vesa | x |
| Mini HIL for Fuel Control Module projects | Build-up mini-HIL software (Embedded C) and corresponding control tool (PC-based, Vector CANoe) for generating and testing hardware signals (KL15, PWM, CAN signals, SENT interface simulator) | 1 | Alexandra Roscovici | x |
| SBC reset circuit development | Create and program an electronic circuit for SBC. (HW background needed) | 1 | Marius Ungurean | |
| Module Design updating Tool in Doors | Check current design diagram and compare with the diagram generated based on code. Update Doors if needed. | 1 | Marius Ungurean | |
| Automatic extract compiler errors | Automatic extract compiler errors from build process and categorize them. | 1 | Marius Ungurean | x |
| SW Module Test for Energy Management projects (Battery Management Systems, Fuel Control Modules, DCDC Converters, Intelligent Battery Sensor) | Understand SW Module Test as testing level, tools usage, develop and execute testcases. | 4 | Alex Paven Alexandru Bucataru Andreea Lengyel Catalin Vladu | x |
| SW Test for Energy Management projects (Battery Management Systems, DCDC Converters) | Understand SW Test as testing level, tools usage, develop testcases in CAPL and execute testcases. | 2 | Cristian Vranceanu Madalina Botoaca | |

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| System Test automation for Energy Management Projects. | Learn how to create/automate test cases for system testing | 4 | Alin Staicu Claudiu Tustean Corneliu Pricochi Adrian Preda | x |
| System Integration test for IFM projects | Learn to create and execute system integration tests. | 1 | Ionut Avramoni | |
| Tool for SW Integration Test automation for Intelligent Battery Sensor projects | Migration of TAE test cases to CAPL. (Vector tooling) | 1 | Catalin Vladu | x |
| Dynamic HBM | Windows application for monitoring Intelligent Battery Sensor outputs and configuring parameters. | 2 | Alexandru Draghici/Mihaela Urban | |
| Intelligent Battery Sensor flash equipment for customer use | HW device which allows reflash of Intelligent Battery Sensor SW at customer site. | 3 | Monica Tanase/Paul Purece | |
| Tool to generate Embedded flashtool | Windows application to generate Embedded flashtool based on GUI which allows the selection of the corresponding configuraiton. | 1 | Paul Purece | |
| System test tools SW development | 1. LIN Load Box creation for EMC tests (simulate up to 14 ECUs from the car) with variable number of the ECUs. 2. Control with CANoe the light functionality (ambient, front) of RCP. (knowledge needed: MATLAB, CAPL) 3. The xls results comparing tool is not working accordingly. Transfer it to Python and integrate with the Qualification log analysis tool. | 1 | Silviu Stanila | x |
| Mechanical system test activities | 1. Geometrical measurements 2. Pedal potentiometer adjustment – Contactless programing 3. Test execution (depends on the case) 4. Force test 5. Durability test 6. Environmental test 7. Evaluation of test results and Creation of test report | 1 | Mihai Bala | x |
| Design of plastic bracket for vacuum pump | | 1 | Ciprian Jurca | x |
| BH meter – using Digilent Discovery or Red Pitatya | FPGA, programing knowledge – C,C++, JS or python | 1 | Chis Marcel | x |
| IOT – Internet of Things | Programing knowledge – C,C++, JS or python | 1 | Chisozan Stefan | x |
| SCR- Synchronous Controlled Rectifier using SiC | | 1 | Chis Marcel | x |
| Traction Motor Drive | | 1 | Damian Emanuela | x |
| Machine Vision systems | Programing knowledge – C,C++, JS or python / Mobile apps | 1 | Chisozan Stefan | x |