

"Gheorghe Asachi" Technical University of Iași
Faculty of Electronics, Telecommunications and
Information Technology
Department of Telecommunications and Information Technologies

Information Technologies for Telecommunications

Master of Science Program



<http://study.tuiasi.ro/information-technologies-for-telecommunications/program-overview/>

Program structure

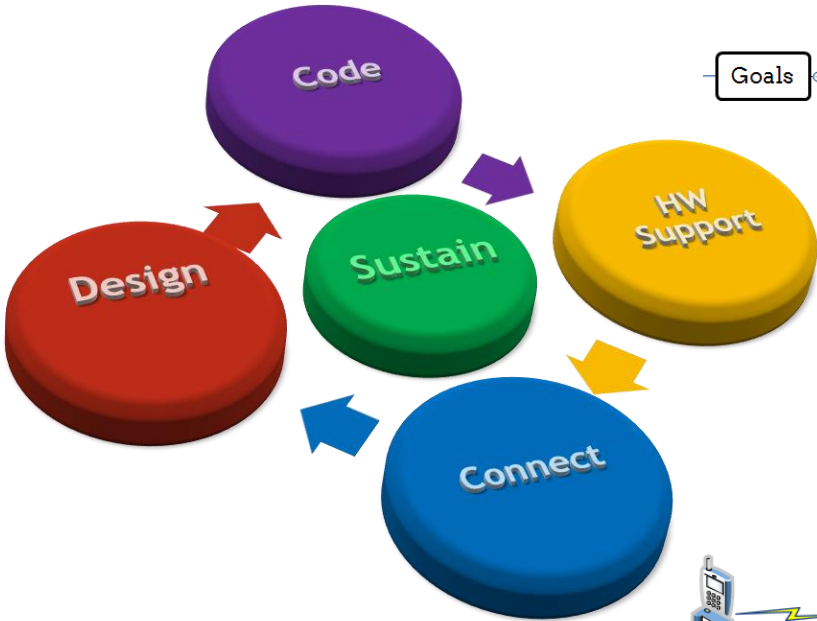


IT4T Master: Information Technologies
for Telecommunications @ ETTI Iași

1 SW / Algorithm Design	<ul style="list-style-type: none"> Topics <ul style="list-style-type: none"> 1 Advanced Signal Processing Techniques 2 Object Oriented Software Design 3 Machine Learning 4 Software Engineering Keywords: Thinking, Analysis, Planning, Processing, Algorithms Goal: Ensure knowledge for usage of tools and methods for architectural and algorithm design for information systems in telecommunications
2 Programming / Coding	<ul style="list-style-type: none"> Topics <ul style="list-style-type: none"> 1 Advanced Programming for Communication Systems (Java, Android) 2 Databases and Web Programming and Interfacing (e.g., HTML, CSS, PHP, MySQL, XML, M.S.Access) 4 Model Based Development (Simulink, Stateflow, code generation) 3 Scripting for Communication Systems (with Python) Keywords: Programming, SW Development, SW Tools, Coding, Testing, Deployment on Embedded platform such as Raspberry Pi Goal: Ensure knowledge and usage of telecommunications relevant programming languages for computers and embedded devices (SW tools)
3 HW Support	<ul style="list-style-type: none"> Topics <ul style="list-style-type: none"> 2 Smart Sensors and Sensor Networks 3 Applications of Smart Sensors 4 Hardware Acceleration for Communication Systems Keywords: HW devices, HW accelerated processing, Smart Sensing Goal: Ensure Functional understanding of hardware support components: devices, platforms, sensors and actuators (HW tools)
4 Connectivity and Integration	<ul style="list-style-type: none"> Topics <ul style="list-style-type: none"> 1 Networking, Cloud Computing and Cyber-security 2 Mobility and Wireless Technologies 3 Control Systems and Virtual Instrumentation 4 Smart Home with Internet of Things 5 Software Defined Radio Keywords: Connectivity, Communication, Mobility, Protection, Integration, Testing Goal: Deployment of communication techniques into the design and implementation of information systems. Model, simulate and analyze designed information systems.
5 Sustainability	<ul style="list-style-type: none"> Topics <ul style="list-style-type: none"> 1 Project Management for Information Systems 2 Social Competence & Interpersonal Skills 3 Application Project Keywords: Sustainability, Career Path, Personal Development, Engineering, Soft Skills, Research, Development Project Goal: Apply knowledge on process, methods and tools for information systems and product development within the context of an organizational culture

Facultative

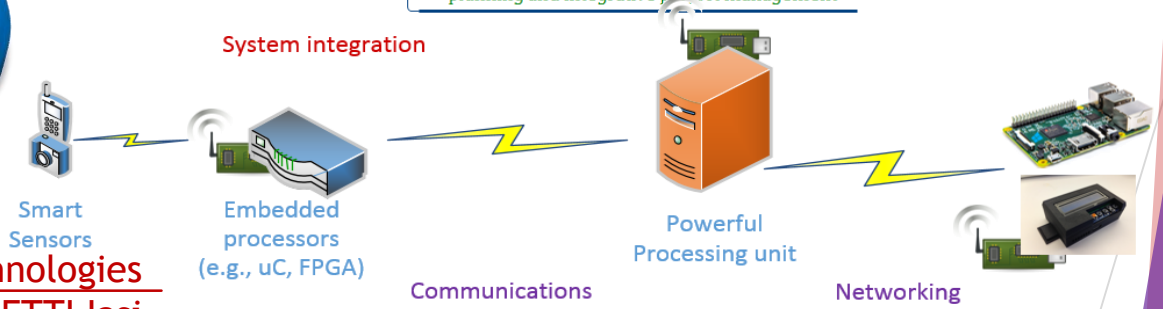
Objective



Goals

- Information systems understanding, design and programming
 - 1 Usage of tools and methods for architectural and algorithm design for information systems in telecommunications (SW Design)
 - 2 Usage of telecommunications relevant programming languages for computers and embedded devices (Programming)
- General professional competencies acquired
 - 3 Functional understanding of hardware support components: devices, platforms, sensors and actuators (HW Support)
 - 4 Deployment of communication techniques into the design and implementation of information systems (Connectivity)
 - 5 Model, simulate and analyze designed information systems (Connectivity)
 - 6 Apply knowledge on process, methods and tools for information systems and product development within the context of an organizational culture (Sustainability)
- Specific professional competencies acquired
 - 1 Smart sensors and wireless sensor networks design. Remote control and interfacing in wireless sensor networks
 - 2 Wireless communications simulation with Simulink and implementation with Software Defined Radio
 - 3 Machine learning algorithms for multimedia signal acquisition, transmission and processing
 - 4 Software approaches for modeling and simulation of information systems and systems components
 - 5 Deployment of wireless and control systems by using the Raspberry Pi embedded platform
 - 6 Organizational culture, personal development planning and integrative project management

System integration



Program structure

Details - Sustainability



Application Project

One project example - Mobile phone build on Raspberry Pi

<https://www.raspberrypi.org/blog/piphone-home-raspberrypi-smartphone/>



One project example - Software Defined Radio / Radar with Raspberry Pi

<https://www.rtl-sdr.com/tag/raspber>



Examples

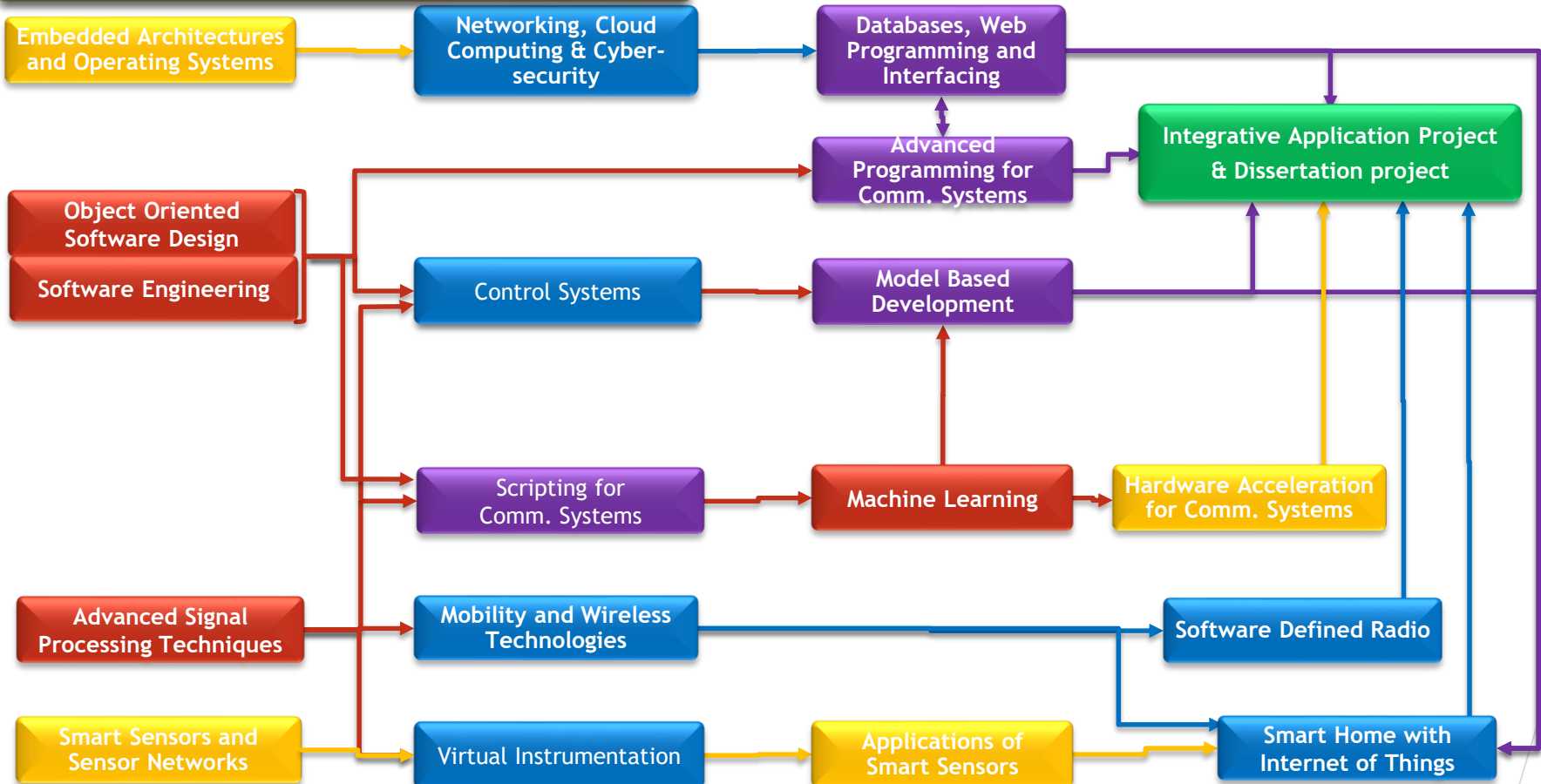
One project example - Smart House with Raspberry Pi



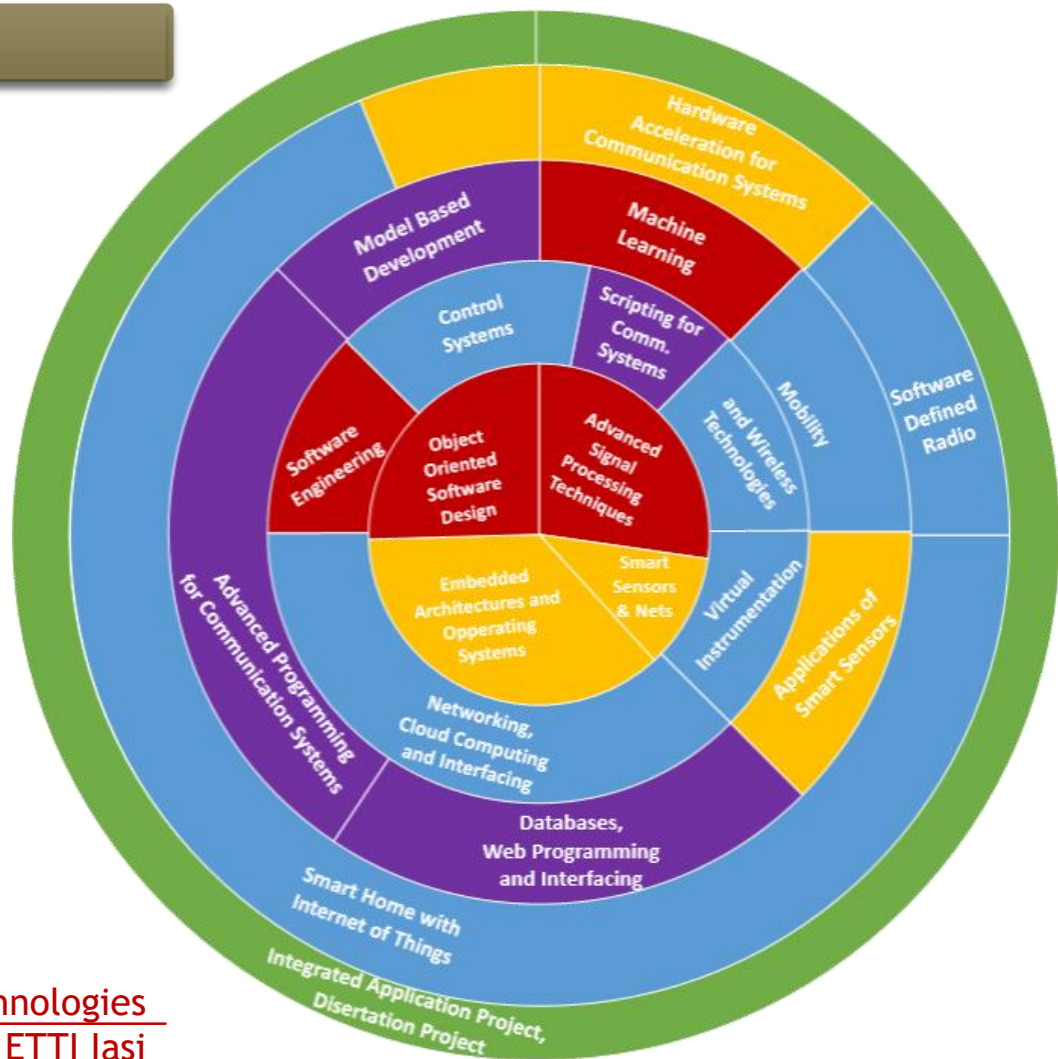
One project example - Smart TV with Raspberry Pi



Disciplines interactions



Disciplines interactions



Employment Opportunities



IT4T Master: Information Technologies
for Telecommunications @ ETTI Iași



Masterat

- Admiterea în ciclul de studii de masterat **2019**: [procedura și informații admitere masterat TUIASI](#)
- Procedurile de admitere pentru cetățenii din Republica Moldova, cetățeni ai statelor Uniunii Europene și cetățenii ai unor state non-UE sunt disponibile pe pagina [Admitere masterat TUIASI](#) | [procedura admitere candidați români de pretutindeni](#)
- **Numărul locurilor scoase la concurs pentru sesiunea IULIE 2019: 141 (buget) | 70 (taxă)**

Centre de înscriere a candidaților:

Secretariatul Facultății de Electronică, Telecomunicații și Tehnologia Informației (sala III.34), B-dul Carol I nr. 11A, corp A, între **orele 9:00-14:00 (luni-vineri)**



FACULTATEA DE ELECTRONICĂ, TELECOMUNICAȚII ȘI TEHNOLOGIA INFORMAȚIEI

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