

## Value-Added Services Engineering

1. **Course number and name:** 020ISRES5 Value-Added Services Engineering
2. **Credits and contact hours:** 4 ECTS credits, 2x1:15 course hours
3. **Instructor's or course coordinator's name:** Fouad Goraieb
4. **Text book:**
  - a. **Other supplemental materials:**  
Instructor textbook
5. **Specific course information**
  - a. **Catalog description:**  
Mobile Networks architecture – GSM – E1 – Signaling (SS7) – Mobile Value Added Services – Short Message Service (SMS) – Voice Mail System (VMS) – Intelligent Networks services (IN) – CAMEL – Wireless Application Protocol (WAP) – Multimedia Messaging Service (MMS) – 3G / UMTS – IP Multimedia System (IMS) – SIP Protocol – 4G / LTE
  - b. **Prerequisites or co-requisites:** 020REMES4 Mobile Networks
  - c. **Required:** Elective for CCE students
6. **Specific goals for the course:**
  - a. **Specific outcomes of instruction:**
    - Understand and describe Telecoms Value Added Services
    - Design a Telecoms Value Added Service
    - Dimension a Telecoms Value Added Service
    - Describe constraints and solutions related to Telecoms Value Added Services implementations
    - Recognize Value Added Services evolution, especially given the evolution of IT technologies.
  - b. **KPI addressed by the course:**

KPI	a2	c1	c2	e1	h1	k1	k2
Covered	x	x	x	x	x	x	x
Assessed	x	x	x	x		x	x
Give Feedback							

7. **Topics and approximate lecture hours:**
  - Value Added Services – introduction (1 lecture)
  - Value Added Services Providers – introduction (1 lecture)
  - Telecommunications network architecture (1 lecture)
  - E1 and SS7 Signaling (1 lecture)

GSM Mobile Network and Services (2 lectures)  
VAS Platform: SMS - Short Message Service (2 lectures)  
VAS Platform: VMS: Voice Mail System (2 lectures)  
Intelligent Networks and services (3 lectures)  
GPRS: General Packet Radio System (2 lectures)  
WAP: Wireless Application Protocol (1 lecture)  
MMS: Multimedia Messaging Service (1 lecture)  
3G – UMTS (2 lectures)  
SIP Protocol (2 lectures)  
IMS: IP Multimedia System (3 lectures)  
4G/LTE (1 lecture)