

Vehicular Communications (Part II) M – A.Y. 2018/19 – Prof. Roberto Verdone – 3 CFU

Item	Date	Title	Hours
<i>IRN</i>		<i>Introduction to Radio Networks</i>	<i>4 ½ / 4 ½</i>
IRN.0	OCT 16	Vehicular Communications Needs. Pierluigi Zampieri, Ducati.	1
IRN.1	OCT 16	Radio Networks	1
IRN.2	OCT 16	Radio Communication Standards	½
IRN.3	OCT 16	Trends	½
IRN.4	OCT 16	Syllabus	½
IRN.5	OCT 17	Network Architectures for Vehicular Communications	1
<i>TTN</i>		<i>Transmission Techniques for Noise Limited Systems</i>	<i>6 / 10 ½</i>
TTN.1	OCT 17	Fundamentals of Digital Communications	1
TTN.2	OCT 17	Communication Link: System Model	½
TTN.3	OCT 17	Signal Based Power Control	½
TTN.4	OCT 17	Link Adaptation	½
TTN.5	OCT 23	FEC, ARQ, HARQ	1 ½
TTN.6	OCT 23	Exercises	2
<i>RCC</i>		<i>Radio Channel Characterisation</i>	<i>3 ½ / 14</i>
RCC.1	OCT 24	Fundamentals of Radio Propagation	½
RCC.2	OCT 24	Large Scale Phenomena	½
RCC.3	OCT 24	Small Scale Phenomena	½
RCC.4	OCT 24	Narrowband Mobile Radio Channel	1
RCC.5	OCT 24	Exercises	1
<i>TTF</i>		<i>Transmission Techniques for Fading Channels</i>	<i>3 ½ / 17 ½</i>
TTF.1	OCT 30	Interleaving	½
TTF.2	OCT 30	Diversity	1
TTF.3	OCT 30	MultiCarrier Modulation	½
TTF.4	OCT 30	Exercises	1 ½
<i>IMN</i>		<i>Interference Management in Networks</i>	<i>3 ½ / 21</i>
IMN.1	OCT 31	Interference	½
IMN.2	OCT 31	Communication Link with Interference: System Model	½
IMN.3	OCT 31	Link Performance with Interference	½
IMN.4	OCT 31	Capture Effect	½
IMN.5	OCT 31	Exercises	1 ½
<i>RRA</i>		<i>Radio Resource Assignment</i>	<i>3 ½ / 24 ½</i>
RRA.1	NOV 6	Radio Resources	1
RRA.2	NOV 6	Assignment of Radio Resources	1 ½
RRA.3	NOV 6	RRM techniques	1
<i>RNV</i>		<i>Radio Networks for Vehicular Communications</i>	<i>7 / 31 ½</i>
RNV.1	NOV 7	Network Architectures: Evolution From GSM towards 5G	1 ½
RNV.2	NOV 7	Mobility Management	1
RNV.3	NOV 7	2G (GSM): Numerology	1
RNV.4	NOV 13	2.5G (GPRS)	½
RNV.5	NOV 13	3G (UMTS): Numerology	1
RNV.6	NOV 13	LTE: Numerology	1
RNV.7	NOV 13	Application to Vehicular Communications	1
		<i>Consolidation</i>	<i>3 ½ / 35</i>
	NOV 14	Seminars	
	NOV 14	Exercises	
	NOV 14	Discussion	