

COURSE SHEET

<i>Course name</i>	Information Streams Control
<i>Acronym</i>	ISC

Level:

1. (BSc)	2. (MSc)
	X

Field of study:

<i>Electronics and Telecommunications</i>	<i>Control Engineering and Robotics</i>	<i>Informatics</i>
X		

Person responsible for the course:

<i>Name:</i>	Marcin
<i>Surname:</i>	Narloch
<i>E-mail:</i>	Marcin.Narloch@eti.pg.gda.pl

List of Topics - Lecture

No	Topic	Level of					No of hours
		knowledge			skills		
		A	B	C	D	E	
1.	Control of call, connection, congestion and traffic	X					0,33
2.	Relation among signalization, routing protocols and algorithms	X					0,33
3.	Evolution of path selection methods (routing) algorithms		X				0,33
4.	Routing with alternative paths: hierarchical and dynamic routing		X				0,67
5.	Path selection methods in dynamic routing		X				0,33
6.	Notion of cost in STM network routing			X			0,67
7.	Application of Markov decision process in path selection methods		X				0,33
8.	Learning automata in routing algorithms		X				0,67
9.	Examples of routing algorithms implementation in STM networks			X			1
10.	Routing in ATM networks and characteristics of PNNI		X				0,67
11.	Multilevel hierarchy of PNNI topology			X			1
12.	Routing metrics and algorithms in traditional IP networks		X				0,67
13.	IGP and EGP protocols in IP networks			X			1
14.	Routing in IP networks regarding quality of service - QoS routing		X				1
15.	Metrics in IP QoS routing			X			0,67
16.	QOSPF protocol			X			1
17.	Constraint Based Routing as a generalization of QoS routing		X				0,33
18.	Control and label distribution protocols in MPLS networks		X				1
19.	Application of MPLS in network resource management and traffic control			X			1
20.	Stream control in optical network – GMPLS/ASON		X				1
21.	Concept of Softswitch as an element of call and connection control in IP QoS network		X				1
Total							<u>15</u>

List of Topics - Lab

No	Topic	Level of					No of hours
		knowledge			skills		
		A	B	C	D	E	
1.	Configuration of node and examination of network with static routing				X		1
2.	Configuration of node and examination of network with distance vector IGP routing protocol					X	2

3.	Configuration of node and examination of network with link state IGP routing protocol				X	2
4.	Configuration of node and examination of network with EGP routing protocol				X	2
5.	Examination of path selection algorithm in PNNI in ATM network			X		2
6.	MPLS network node configuration			X		2
7.	Examination of label distribution protocols in MPLS network				X	2
8.	Examination of resource management and traffic control in MPLS network				X	2

Total **15**