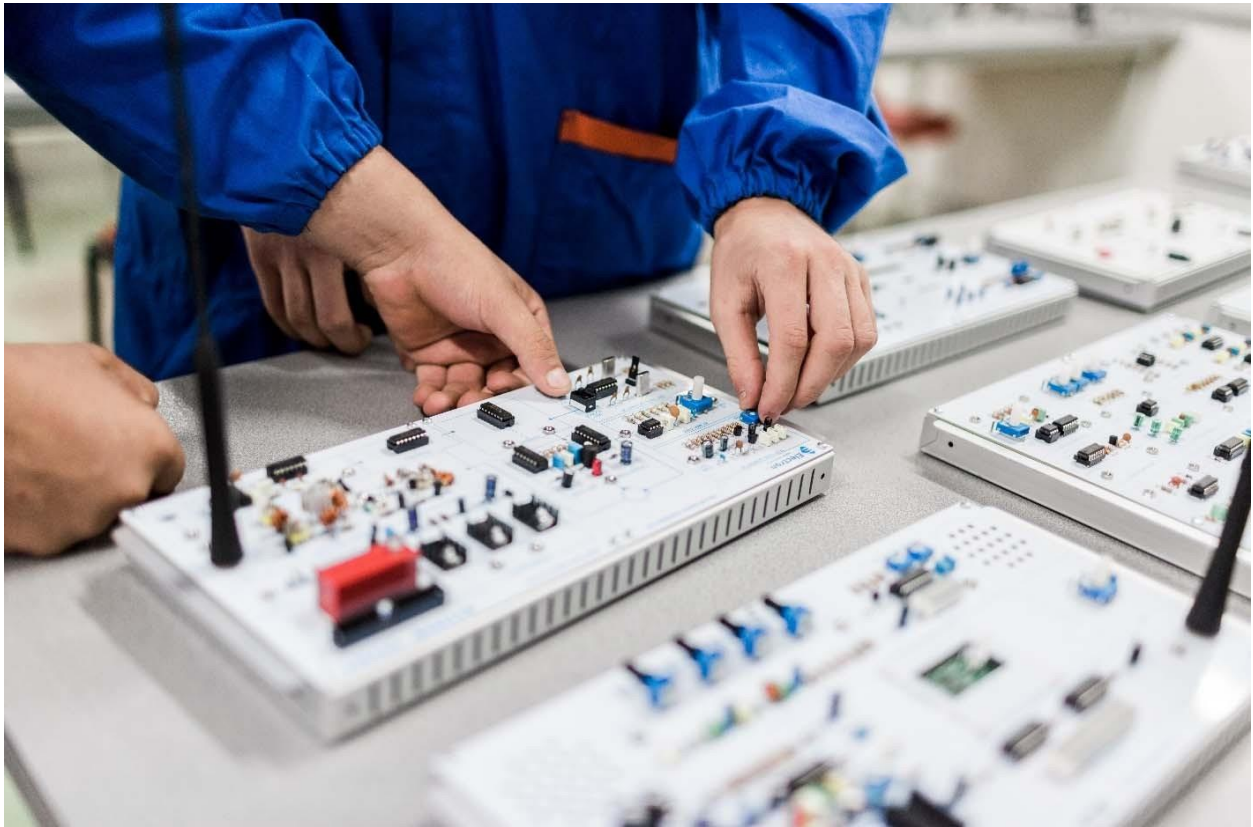




Lab 10 - TELECOMMUNICATIONS



The laboratory includes various modules to show and experiment circuits and principles commonly recurrent in the field of telecommunications. As such, this laboratory is recommended for students attending any subsequent communications speciality. The modules generally consist of PCB cards with components in view, especially suitable for individual student work or work in a small group.

Other modules are constructed in a sturdy portable case, suitable for desktop and demonstration use, with a clear synoptic diagram displaying the functional blocks and component identities.

Special care is provided for measurements reliability by using low-cost meters that are normally available in all laboratories. No sophisticated (high cost) instruments are therefore required.

TRAINING STATIONS LIST

10.1	FUNDAMENTALS OF COMMUNICATIONS
10.2	ANALOGUE COMMUNICATIONS
10.3	DIGITAL COMMUNICATIONS
10.4	OPTICAL COMMUNICATION
10.5	TRANSMISSION LINES
10.6	ANTENNAS
10.7	MICROWAVES

Equipment List

LAB N°	Item N°	TITLE	CODE	Tot al Qty	Stud WS 1	Stud WS 2	Stud WS 3	Stud WS 4	Stud WS 5	Stud WS 6	Stud WS 7	Stud WS 8	Teach WS	LAB
10		TELECOMMUNICATIONS LABORATORY												
		For 16 to 32 students working at the same time. See complete catalogue to see product description and other details.												
		FUNDAMENTALS OF COMMUNICATIONS												
9	1	BASIC COMMUNICATIONS TRAINER	B41B											
10	1	BASIC TELECOMMUNICATIONS CIRCUITS	B4110B	4	<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>				
10	1	NETWORKS and FILTERS CIRCUITS	B4120B	4			<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>		
10	1	AM BASIC EXPERIMENTS	B4130B	4	<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>				
10	1	FM/PM BASIC EXPERIMENTS	B4141B	4			<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>		
10	1	AC DC POWER SUPPLY	C12 PS	8	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
10	2	ANALOGUE COMMUNICATIONS TRAINER SET	B42B											
10	2	AM/DSB RADIO TRANSMITTER	C4200A	2	<i>1</i>				<i>1</i>					
10	2	AM/DSB RADIO RECEIVER	B4210AB	2	<i>1</i>				<i>1</i>					
10	2	FM/PM RADIO TRANSMITTER	C4220A	2		<i>1</i>				<i>1</i>				
10	2	FM RADIO RECEIVER	C4220B	2		<i>1</i>				<i>1</i>				
10	3	DIGITAL COMMUNICATIONS TRAINER SET	B43B											
10	3	DIGITAL TRANSMISSION OF ANALOG SIGNALS	C4351	4			<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>		
10	3	DIGITAL SIGNALS MODULATION	C4352	4			<i>1</i>	<i>1</i>			<i>1</i>	<i>1</i>		
FM	2	AC DC POWER SUPPLY	C12 PS	8	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
7	2	FAULT PROGRAMMER	FS1E	1										<i>1</i>
10	5	FIBER OPTICS AND ELECTRO OPTICS	B4530											
10	5	FIBRE OPTIC TRAINER	C4530	2				<i>1</i>				<i>1</i>		
10	5	ELECTRO OPTICS TRAINER	B4532	2				<i>1</i>				<i>1</i>		
10														
10	COMMUNICATIONS TRAINERS (EXPANSION)		B41U											
10	6	DSB/SSB BASIC EXPERIMENTS	B4150B	2	<i>1</i>				<i>1</i>					
10	6	PLL (Phase Locked Loop) CIRCUITS	B4160B	2	<i>1</i>				<i>1</i>					
10	6	AM/SSB RADIO TRANSMITTER	B4200BB	2	<i>1</i>				<i>1</i>					
10	6	AM/SSB RADIO RECEIVER	B4210BB	2		<i>1</i>				<i>1</i>				
10	6	FM STEREO CODING-DECODING EXPERIMENTS	B4220CB	2		<i>1</i>				<i>1</i>				
10	6	FDM (Frequency Division Multiplex) EXPERIMENTS	B4260B	2		<i>1</i>				<i>1</i>				
FM	2	STUDENT WORKSTATION	B1180 WS	2									<i>1</i>	<i>1</i>
FM	2	VIRTUAL INSTRUMENTATION FOR STUDENT WORKSTATION	B1180 VI	2									<i>1</i>	<i>1</i>
10	ADVANCED COMMUNICATIONS													
10	7	TRANSMISSION LINE	B4500											
10	7	TRANSMISSION LINE DEMONSTRATOR	B4500	2	<i>1</i>				<i>1</i>					
10	7	COAX TRANSMISSION LINE TRAINER	B4510	2	<i>1</i>				<i>1</i>					
10	7	CABLE PAIR TRANSMISSION LINE TRAINER	B4511	2	<i>1</i>				<i>1</i>					
10	4	ANTENNA	B4520											
10	4	ANTENNA TRAINER	C4520B	2		<i>1</i>				<i>1</i>				
10	4	KIT OF ADDITIONAL ANTENNAS AND ACCESSORIES	B4520K	1										<i>1</i>
10	4	PARABOLIC ANTENNA	B4520 O1	2		<i>1</i>				<i>1</i>				
10	4	ROTATING ANTENNA PLATFORM	B4521	2		<i>1</i>				<i>1</i>				
10	8	MICROWAVES	B4540-50											
10	8	MICROWAVES TRAINER	C4550B	2			<i>1</i>				<i>1</i>			
10	8	MICROWAVES EXPANSION COMPONENTS KIT	B4540 E	2			<i>1</i>				<i>1</i>			
10	8	MICROWAVES OPTIONAL COMPONENTS KIT	B4540 O	1										<i>1</i>
		FURNITURE, METERS, POWER SUPPLIES & ACCESSORIES												
FM	FURNITURE													
FM	1	WORK TABLE	F1110A	8	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
FM	1	MOBILE LOWER CABINET	F11 4146	8	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
FM	1	STUDENT STOOL	F11 1718	24	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	
FM	1	TEACHER'S DESK	F11 2126	1										<i>1</i>
FM	1	TEACHER'S CHAIR	F11 5000	1										<i>1</i>
FM	1	CABINET FOR TOOLS & INSTRUMENTS	F11 3310	4										<i>4</i>
FM	1	TROLLEY	F1151 R1	4										<i>4</i>
FM	MEASURING INSTRUMENTS & POWER SUPPLIES													
FM	2	ANALOGUE MULTIMETER	AM 7080	4										<i>4</i>
FM	2	DIGITAL MULTIMETER	DM Y68	4										<i>4</i>
FM	2	DUAL TRACE OSCILLOSCOPE	AO HZ4318	2										<i>2</i>