National Joint Apprenticeship and Training Committee for the Electrical Industry

Course Title	Version/Date	Subject Area	Semester Hours	Level	Classification
NJATC Apprentice Inside Wireman 1st Year Course	Version 1 Dec 1982-Oct 1997	Basic Electricity	2	LL	BEX Free Elective
		National Electrical Code	1	LL	BEX Free Elective
		Blueprint Reading and Sketching	1	LL	BEX Electronics Elective
		Field Experience in Electrical Construction	2	LL	BEX Free Elective
		Technical Math	1	LL	College Algebra (1) hour
	Version 2 Nov 1997-July 2000	DC Circuits Lab	1	LL	Circuits I Lab
		Electrical Construction Lab I	1	LL	BEX Free Elective
		National Electrical Code Theory	1	LL	BEX Free Elective
		Electrical Construction Field Experience I	1	LL	BEX Free Elective
	Version 3 Aug 200-June 2005	DC Circuits	2	LL	2 hours towards Circuit Theory I
		DC Circuits Laboratory	1	LL	Circuits I Lab
		Blueprint Reading	1	LL	BEX Free Elective
		Electrical Construction Laboratory I	1	LL	BEX Free Elective

		National Electrical Code I	1	LL	BEX Free Elective
		Labor Relations and History I	1	LL	Humanities and Social Sciences
		Industrial Safety I	1	LL	BEX Free Elective
		Electrical Construction Field Experience	1	LL	BEX Free Elective
	Version 4 July 2005-Present	Blueprint Reading	1	LL	BEX Electronics Elective
		National Electrical Code	1	LL	BEX Free Elective
		DC Circuits	3	LL	Circuit Theory I
		DC Circuits Lab	1	LL	Circuits Lab I
		Electrical Construction Lab	1	LL	BEX Free Elective
		Electrical Construction Field Experience	1	LL	BEX Free Elective
NJATC Apprentice Inside Wireman 2nd Year Course	Version 1 Dec 1982-Oct 1997	Basic Electricity	2	LL	2 hours towards Circuit Theory I
		National Electrical Code	1	LL	BEX Free Elective
		Blueprint Reading and Sketching	1	LL	BEX Electronics Elective
		Field Experience II in Electrical Construction	2	LL	BEX Free Elective
		Electrical Construction Materials & Methods	1	LL	BEX Electronics Elective

		Technical Math	2	LL	College Algebra (2hours)
	Version 2 Nov.1997-July 2000	AC-DC Circuits (cumulative of years 1&2)	4	LL	Circuit Theory I and Circuits Lab I
		Engineering Drawing (cumulative of years 1&2)	2	LL	BEX Electronics Elective
		Electrical Construction Lab II	1	LL	BEX Free Elective
		A-C Circuits Lab	1	LL	Circuits Lab I
		Electrical Construction Field Experience II	1	LL	BEX Free Elective
	Version 3 Aug.2000-June 2005	AC Circuits	2	LL	2 hours towards Circuit Theory I
		Blueprint Reading	1	LL	BEX Electronics Elective
		National Electrical Code II	1	LL	BEX Free Elective
		Electrical Construction Laboratory II	1	LL	BEX Free Elective
		AC Circuits Laboratory	1	LL	Circuits Lab II
		Electrical Instrumentation	1	LL	BEX Electronics Elective
		Labor Relations & History II	1	LL	Humanities and Social Sciences
		Industrial Safety II	1	LL	BEX Free Elective

		Electrical Construction Field Experience II	1	LL	BEX Free Elective
	Version 4 July 2005-Present	AC Circuits	3	LL	Circuit Theory II
		AC Circuits Lab	1	LL	Circuits Lab II
		National Electrical Code II	2	LL	BEX Free Elective
		Electrical Instrumentation	1	LL	BEX Electronics Elective
		Blueprint Reading	1	LL	BEX Electronics Elective
		Electrical Construction Field Experience II	1	LL	BEX Free Elective
NJATC Apprentice Inside Wiremen 3rd Year Course	Version 1 Dec. 1982-Oct. 1997	Basic Electricity	2	LL	BEX Free Elective
		Blueprint Reading & Sketching	1	LL	BEX Electronics Elective
		Field Experience in Motor Controls	2	LL	BEX Electronics Elective
		Motor Controls	3	LL	BEX Electronics Elective
		Electrical Machinery	3		BEX Electronics Elective
		Industrial Safety Practices	1	LL	BEX Free Elective
	Version 2 Nov.1997-July2000	Basic Electricity	2	LL	BEX Free Elective

		Blueprint Reading & Sketching	1	LL	BEX Electronics Elective
		Field Experience in Motor Controls	2	LL	BEX Electronics Elective
		Motor Controls	3	LL	BEX Electronics Elective
		Electrical Machinery	3		BEX Electronics Elective
		Industrial Safety Practices	1	LL	BEX Free Elective
	Version 3 Aug. 2000-June 2005	Industrial Electronics	3	LL	BEX Electronics Elective
		Basic Electronics Laboratory	1	LL	Electronics I Lab
		Construction Blueprint Reading	1	LL	BEX Electronics Elective
		Power System Protection	2	LL	BEX Electronics Elective
		Labor Relations and History III	1	LL	Humanities and Social Sciences
		National Electrical Code III	1	LL	BEX Free Elective
		Industrial Safety III	1	LL	BEX Free Elective
		Electrical Construction Field Experience III	1	LL	BEX Free Elective
	Version 4 July 2005-Present	Labor Relations and History	1	LL	Humanities and Social Sciences
		Industrial Safety III	1	LL	BEX Free Elective

		Industrial Blueprint Reading	1	LL	BEX Electronics Elective
		Electronic Devices	3	LL	Electronics I
		Electronics Laboratory	1	LL	Electronics Lab I
		Power Systems Protection	2	LL	BEX Electronics Elective
		Power System Protection Laboratory	1	LL	BEX Electronics Elective
		National Electrical Code	2	LL	BEX Free Elective
NJATC Apprentice Inside Wiremen 4th Year Course	Version 1 Dec.1982-Oct.1997	Electronics	3	LL	Electronics I
		Industrial Electronics	3	LL	Electronics II
		Motor Controls	2	LL	BEX Electronics Elective
		Field Experience in Electrical Construction	2	LL	BEX Free Elective
		HVAC	1	LL	BEX Electronics Elective
	Version 2 Nov.1997-July 2000	Electronics	3	LL	Electronics I
		Industrial Electronics	3	LL	Electronics II
		Motor Controls	2	LL	BEX Electronics Elective
		Field Experience in Electrical Construction	2	LL	BEX Free Elective
		HVAC	1	LL	BEX Electronics

					Elective
	Version 3 Aug. 2000-June 2005	AC Motors	1	LL	BEX Electronics Elective
		AC Circuits II	2	LL	2 hours for Circuit Theory II
		Motor Controls Laboratory	1	LL	BEX Electronics Elective
		Motor Control Circuits	3	LL	BEX Electronics Elective
		Digital Electronic Fundamentals & Laboratory	1	LL	1 hour towards Digital Electronics
		Electrical Construction Field Experience IV	1	LL	BEX Free Elective
		National Electrical Code IV	1	LL	BEX Free Elective
	Version 4 July 2005-Present	AC Motors	1	LL	BEX Electronics Elective
		AC Circuits II	2	LL	BEX Electronics Electives
		Motor Controls Laboratory	1	LL	BEX Electronics Elective
		Motor Control Circuits	3	LL	BEX Electronics Elective
		Digital Electronic Fundamentals & Laboratory	1	LL	1 hour towards Digital Electronics
		Electrical Construction Field Experience IV	1	LL	BEX Free Elective

		National Electrical Code IV	1	LL	BEX Free Elective
NJATC Apprentice Inside Wiremen 5th Year Course	Version 1 Dec.1982-Oct.1997	National Electrical Code	1	LL	BEX Free Elective
		Instrumentation & Testing	3	LL	BEX Electronics Elective
		Industrial Electronics	3	LL	BEX Electronics Elective
		Field Experience in Electrical Construction	2	LL	BEX Free Elective
	Version 2 Nov. 1997-July 2000	National Electrical Code	1	LL	BEX Free Elective
		Instrumentation & Testing	3	LL	BEX Electronics Elective
		Industrial Electronics	3	LL	BEX Electronics Elective
		Field Experience in Electrical Construction	2	LL	BEX Free Elective
		Industrial Electronics II	3	LL	BEX Electronics Elective
		Electronic Instrumentation Lab	1	LL	BEX Electronics Elective
		Electromechanical Troubleshooting	1	LL	BEX Electronics Elective
		Basic Physics (cumulative of years 1-5)	4	LL	College Physics

	Version 3 Aug. 2000-June 2005	Instrumentation & Testing	3	LL	BEX Electronics Elective
		Industrial Electronics II	3	LL	BEX Electronics Elective
		Programmable Logic Controllers	2	LL	2 hours in BEX Systems Core
		Electromechanical Troubleshooting	1	LL	1 hour in BEX Systems Core
		Physics of Electricity and Magnetism (cumulative of years 1-5)	4	LL	College Physics
		National Electrical Code V	1	LL	BEX Free Elective
		Electrical Construction Field Experience V	1	LL	BEX Free Elective
	Version 4 July 2005-Present	Fundamentals of Fire Alarm System Installation & Inspection	1	LL	BEX Free Elective
		Security Systems Installation & Telephone Monitoring Systems	1	LL	BEX Free Elective
		Fundamentals of Instrumentation Process & Controls	2	LL	2 Hours towards BEX Systems Core
		Fundamentals of	3	LL	BEX Free Elective

		Network Cabling Systems			
		Fundamentals of Distributed Power Generation	2	LL	BEX Electronics Elective
		National Electrical Code & Practices	3	LL	BEX Free Elective
		Electrical Construction Field Experience V	1	LL	BEX Free Elective
NJATC Apprentice Installer/Technician 1st Year Course	Feb 1998-Present	Basic Electricity	3	LL	BEX Free Elective
		Construction Blueprint Reading	3	LL	BEX Electronics Elective
		Electronic Assembly Techniques	2	LL	BEX Electronics Elective
		Industrial Safety	1	LL	BEX Free Elective
		Labor Relations & History	1	LL	Humanities and Social Sciences
NJATC Apprentice Installer/Technician 2nd Year Course	Feb 1998-Present	Industry Safety	1	LL	BEX Free Elective
		Labor Relations & History	1	LL	Humanities and Social Sciences
		Electronic Assembly Techniques	2	LL	BEX Electronics Elective
		Automatic Control &	4	LL	4 hours towards

		Feedback Systems			BEX Systems Core
		AC Circuit Analysis	2	LL	Circuit Theory and Lab I
		DC Circuit Analysis	2	LL	Circuit Theory and Lab I
		Residential or Light Commercial Wiring	2	LL	BEX Free Elective
NJATC Apprentice Installer/Technician 3rd Year Course	Feb. 1998-Present	Industrial Safety	1	LL	BEX Free Elective
		Residential/Light Commercial Wiring	2	LL	BEX Free Elective
		Low Voltage Systems	3	LL	BEX Electronics Elective
		Telecommunications Networking	3	LL	3 hours for BEX Systems Core
		Solid State Circuits	3	LL	Electronics I
		Labor Relations & History	1	LL	Humanities and Social Sciences
NJATC Apprentice Lineman 1st Year Course	Version 1 Nov. 1984-July 2000	Technical Math	3	LL	College Algebra
		Industrial Safety & First Aid	2	LL	BEX Free Elective
		Basic (AC/DC) Electricity	3	LL	BEX Free Elective
		Electrical Construction	2	LL	BEX Free Elective

		Laboratory			
	Version 2 August 2000-Present	Industrial Safety I	1	LL	BEX Free Elective
		Basic (AC/DC) Electricity	3	LL	BEX Free Elective
		Labor Relations & History I	1	LL	Humanities and Social Sciences
		Electrical Construction Laboratory I	2	LL	BEX Free Elective
NJATC Apprentice Lineman 2nd Year Course	Version 1 Nov 1984-July 2000	AC Circuits	3	LL	Circuit Theory I
		High Voltage Circuits Laboratory	2	LL	Circuit Labs I and II
		Industrial High Voltage Safety	2	LL	BEX Free Elective
		Construction/Electrical Reading	2	LL	BEX Free Elective
		Technical Math	2	LL	College Algebra
	Version 2 Aug. 2000-Present	Industrial Safety II	1	LL	BEX Free Elective
		Basic (AC/DC) Electricity	3	LL	Circuit Theory I
		Electrical Construction Laboratory II	2	LL	BEX Free Elective
		Labor Relations & History II	1	LL	Humanities and Social Sciences
NJATC Apprentice Lineman 3rd Year	Version 1 Nov. 1984-July 2000	Power Electrical Measurements	2	LL	Circuit Theory II

Course		Methods			
		Electrical Troubleshooting (Power) Theory	3	LL	Circuit Theory I
		Electrical Troubleshooting (Power) Laboratory	2	LL	BEX Electronics Elective
		AC Circuits (Power) Laboratory	2	LL	BEX Electronics Elective
	Version 2 Aug. 2000- Present	Power Electrical Measurements Methods	2	LL	Circuit Theory I
		Electrical Troubleshooting (Power) Theory	3	LL	Circuit Theory I
		Electrical Troubleshooting (Power) Laboratory	2	LL	BEX Electronics Elective
		AC Circuits (Power) Laboratory	2	LL	Circuits I and Circuits II Labs
		Labor Studies/History III	1	LL	Humanities and Social Sciences
NJATC Apprentice Residential Wireman 1st Year Course	April 1998-Present	DC Circuits & Laboratory	2	LL	2 hours towards Circuit TheoryI

		National Electrical Code I	1	LL	BEX Free Elective
		Blueprint Reading I	1	LL	BEX Electronics Elective
		Labor Relations & History I	1	LL	Humanities and Social Sciences
		Industrial Safety I	1	LL	BEX Free Elective
		Electrical Construction Field Experience I	1	LL	BEX Free Elective
NJATC Apprentice Residential Wireman 2nd Year Course	April 1998-Present	National Electrical Code II	1	LL	BEX Free Elective
		AC Circuits & Laboratory	2	LL	2 hours towards Circuit Theory I and Circuits I Lab
		Labor Relations & History II	1	LL	Humanities and Social Sciences
		Industrial Safety II	1	LL	BEX Free Elective
		Electrical Construction Field Experience II	1	LL	BEX Free Elective
		Labor Relations & History III	1	LL	Humanities and Social Sciences
		Industrial Safety III	1	LL	BEX Free Elective
		Electrical Construction Field Experience III	1	LL	BEX Free Elective
NJATC Code and Practices-3	Aug.2005-Present	Electrical Circuit Fault Analysis	2	LL	BEX Electronics Elective

NJATC Digital Electronics	Aug. 2005-Present	Combinational & Sequential Digital Electronics	2	LL	Digital Electronics I
		Digital Electronics Laboratory	1	LL	Digital Electronics I
NJATC Distributed Generation	Aug. 2005-Present	Industrial Electronics I	1	LL	1 hour towards Electronics I
NJATC Fire Alarm	Aug. 2005-Present	Fire Alarm System Installation & Inspection	1	LL	BEX Free Elective
NJATC Instrumentation	Aug. 2005-Present	Instrumentation Fundamentals	3	LL	BEX Electronics Elective
		Process Control Concepts	1	LL	1 hour towards BEX Systems Core
NJATC Motors	Aug. 2005-Present	DC and AC Motors	3	LL	BEX Electronics Elective
NJATC Structured Cabling	Aug. 2005-Present	Network Cabling Systems	2	LL	BEX Electronics Elective
NJATC Tech Math Course	Aug. 1996-Present	Technical Mathematics or Industrial Mathematics	3	LL	College Algebra
NJATC Telephone & Security Bas	Aug. 2005-Present	Security System Install. & Telephone Monitoring Systems	1	LL	BEX Free Elective