Who we are

Electronics Sector Skills Council of India (ESSCI) is an autonomous industry-led not for profit organization under the Ministry of Skill Development and Entrepreneurship (MSDE), which creates, and maps skill competency frameworks to jobs in the industry. The council is promoted by CEAMA, ELCINA, IESA, IPCA, MAIT & ELCOMA, with initial financial support by NSDC.

Vision

- Facilitate world class ecosystem for Industry oriented skill development in electronics sector.

Mission

- To establish a structured mechanism with NSDC in strengthening the existing vocational education system

- To upgrade industry-oriented training system for achieving global standards

Objective

- ESSCI brings together all the stakeholders – industry, labor & the academia, for the common purpose of workforce development of Electronic sectors

ESSCI Footprint

16,00,000+
Trained

8,53,297
Placed

158
Qualification Packs

119+
Subject Matter Experts

4000+
Training Centers

6651
Certified Trainers

3077
Certified Assessors

5
Transnational QPs

250+
Training Partners

ESSCI ESDM Sub-Sectors

Semiconductor & Components

Industrial Automation

E-mobility

Electronics Manufacturing Services

PCB Design & Manufacturing

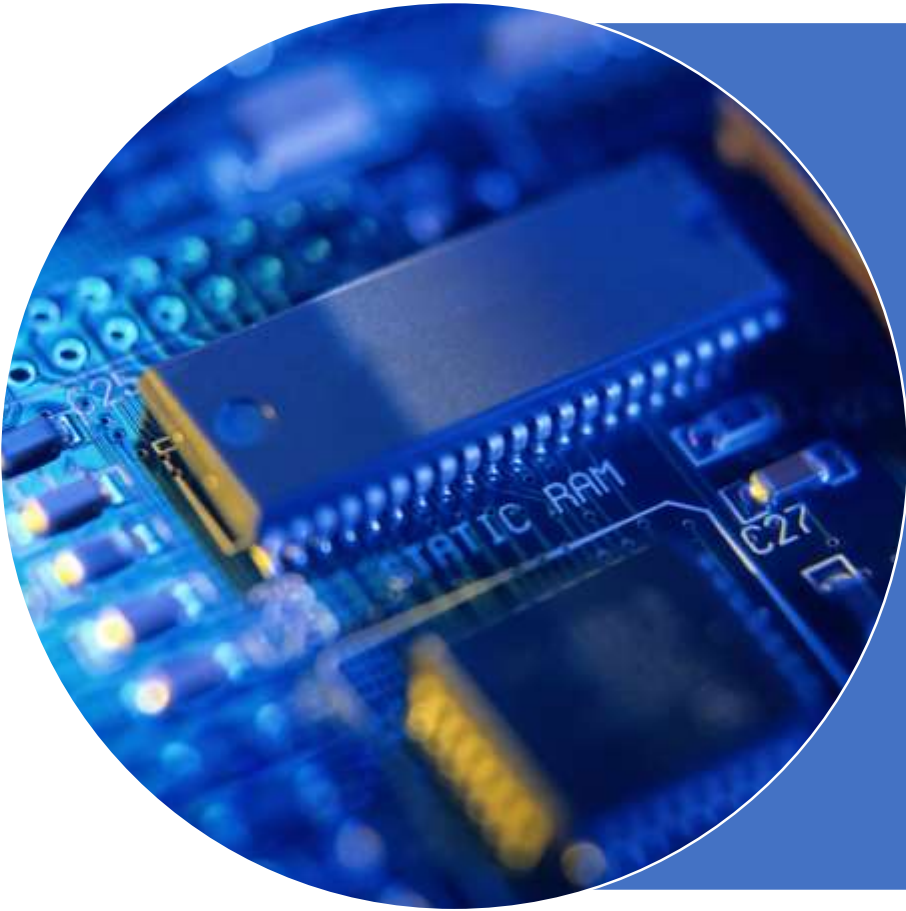Consumer Electronics & IT Hardware

Communication & Broadcasting

Security & Surveillance

Solar & LED

Industry / Placement Partners

Consumer Electronics & IT Hardware	
	Dell
	Whirlpool
	Voltas
	Godrej
	Panasonic
	LG
	HCL
	GE
	Helix
	Acer
	Daikin
	Lenovo

Security Survelliance	
	aquilaindia
	HCL Services
	sparsh securitech
	securico electronics
	Zicom
	PMCS
	Minda Stonebridge
	PMCS
	BEL
	Tata Applied Systems

Communication & Broadcasting	
	Videocon
	Samsung
	TVSE
	tseries
	Oracle
	BECIL
	Analogicgroup
	Tata Power SED
	Siti Cable

Semiconductor & Components	
	Texas Instruments
	ARM
	ELYMER
	NXP
	Regnant Energy
	Microchip
	Cambium Networks
	Infineon

PCB Design & Manufacturing	
	VVDN
	AT&S
	Dixon
	Flextronics
	SFO Technologies
	SGS Teckniks(S)
	QMAX
	Deki Electronics
	Fineline Circuit

Solar & LED	
	Moser Baer
	Surya Infopower
	Helonix
	Osram
	Su-Kam
	Tata
	Mahindra
	Minda

Industrial Automation	
	Bosch(L)
	Auto Electronics
	Festo
	SMC
	Omron
	KUKA
	GE Fanuc
	Rockwell
	Mitsubishi

Electronics Manufacturing System (EMS)	
	Dell
	Godrej
	Panasonic
	LG
	HCL
	Hella
	Lenovo
	Havells
	Dixon
	Samsung

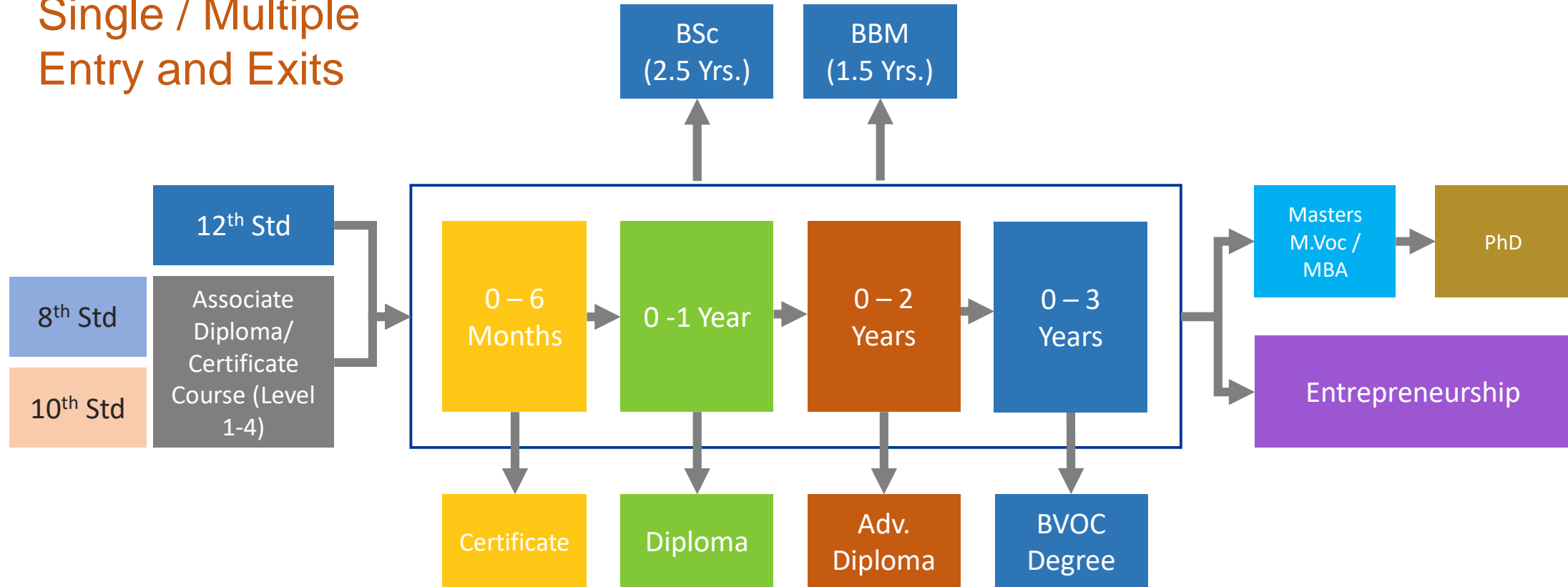| E Mobility & Battery	
	Tata
	Minda
	Mercedez
	Volkswagon
	Hella
	Mahindra
	Bajaj Auto
	Fiat
	Lohia Auto
	Union Batteries
	Exide
	Amron

B.Voc Programs Offered

Objective

- To facilitate and create a pool of qualified job ready resources.

- To provide flexibility to students by means of pre-defined single/multiple entry and multiple exit points

- To ensure adequate knowledge and skills for making students work ready at each exit point of the program.

- To address the issues of unemployment and Industry requirement in the state through a meaningful industry academia partnership by adopting Dual System of training.

- To integrate NSQF and international specifications within the undergraduate level of higher education in order to enhance employability of the graduates in meeting global workforce requirements.

Program Model

Single / Multiple Entry and Exits

- 8th Std
- 10th Std
- 12th Std
- Associate Diploma/ Certificate Course (Level 1-4)
- 0 – 6 Months → Certificate
- 0 -1 Year → Diploma
- 0 – 2 Years → Adv. Diploma
- 0 – 3 Years → BVOC Degree
- BSc (2.5 Yrs.)
- BBM (1.5 Yrs.)
- Masters M.Voc / MBA → PhD
- Entrepreneurship

B.Voc Industry Validated

Programs Offered

- Digital Electronics
- Electronic Manufacturing Services
- IT Infra Management Services
- Solar Technology
- Electronic Hardware Design
- Industrial Refrigeration and Air Conditioning

Program Highlights

- Each Semester 30 Credits, 18 or 21 Credits for Core Subjects and 12 or 9 Credits for general education

- Single / Multiple entry and exit

- All courses are Industry validated and job ready

- OJT in last semester in relevant industry

- Optional support like Lab Infra, Industry lectures, SMEs, Virtual Labs are provided

- Optional support of LMS and Remote Assessment available

B.Voc Industry Assisted

Programs Offered

IoT Engineer

Mechatronics Engineer

Program Highlights

- Each Semester 30 Credits, 18 or 21 Credits for Core Subjects and 12 or 9 Credits for general education

- Single / Multiple entry and exit

- Classroom studies in odd semesters (1, 3 & 5) and OJT in even semester (2 , 4 & 6) in relevant industry

- All courses are Industry assisted and will be supervised by the Industry directly for Quality output. Support for setting up Lab Infra including sourcing will be provided.

- Optional support like Remote Industry lectures, FDP, SMEs, Virtual Labs are provided

- Optional support of LMS and Remote Assessment available
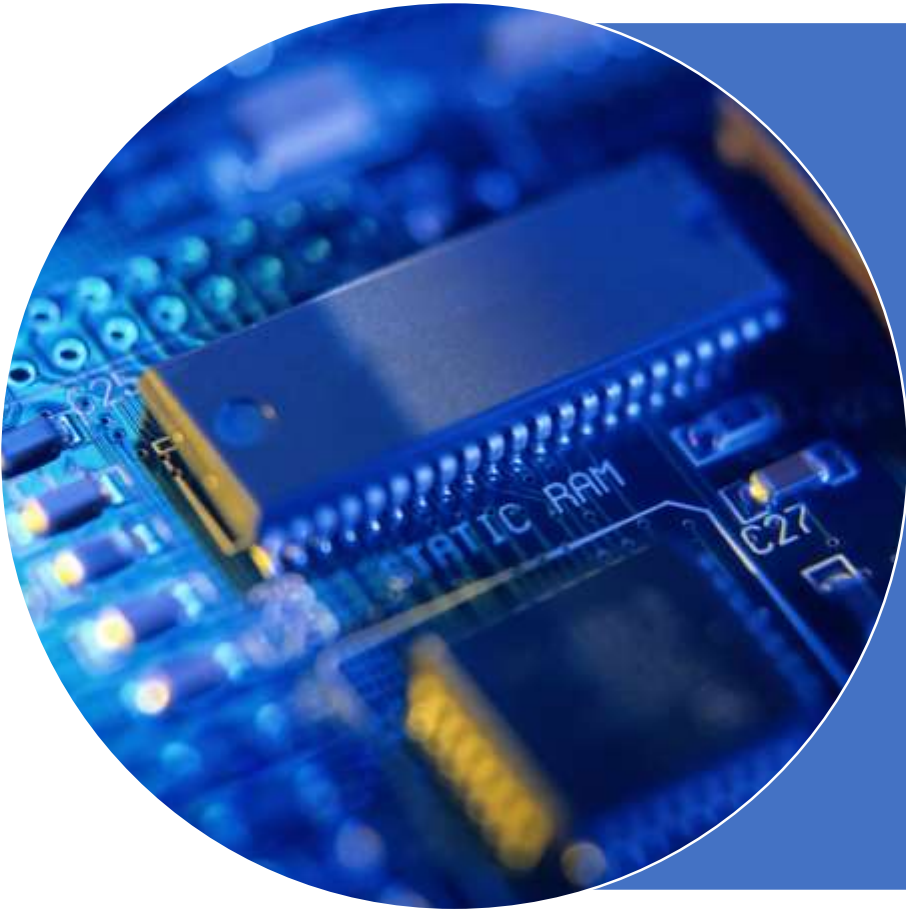
Curriculum Template

Courses Offered: Industry Validated

Name of BVoc Course	Brief Job Description	Industries for employment	NSQF Level	QP Code	Name of QP	Semester	Award			
							6 months	1 year	2 years	3 years
Digital Electronics	Domestic appliance service engineers install and repair household appliances, including cookers, washing machines, fridges and freezers. They might also deal with items like televisions and hi-fi equipment.	Godrej, Whirlpool, Panasonic, Samsung etc.	4	ELE/Q3104	FTOHA/Multi skill	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q3111	Service Technician – Home Appliances	II				
			5	ELE/Q3105	Field Engg-RACW	III				
			6	ELE/Q7902	Quality Analyst-Consumer Electronics	IV				
			7	ELE/Q9801	Project Management-Consumer Electronics	V				
			On the Job Training			VI				
Electronic Manufacturing Services	An EMS Engineer plans production targets and ensures that all the resources to perform the tasks are in good working condition. S/he is also responsible for maintaining the SMT Production Process and relevant equipment.	SGST, Sahasra, MEL system, VVDN, Minda etc.	4	ELE/Q5315	EMS Technician	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q6305	Assembly Supervisor	II				
			5	ELE/Q5501	In process and final quality Engineer	III				
			6	ELE/Q5312	EMS OnM manager	IV				
			7	ELE/Q9801	Project Management-EMS	V				
			On the Job Training			VI				

Courses Offered: Industry Validated

Name of BVoc Course	Brief Job Description	Industries for employment	NSQF Level	QP Code	Name of QP	Semester	Award 6 months	1 year	2 years	3 years
IT Infrastructure Management Services	The individual at work is responsible for attending to problems in IT hardware and related software system problems, round the clock, as a dedicated engineer at the customer's premises(Facilities Management) or remotely (Managed Services).	D-Link, Cisco, Cambium networks, TCS, HCL, HP, Lenovo, Dell etc.	4	ELE/Q4606	Field Technician - Networking and Storage	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q4607	Service Engineer -IT Hardware	II				
			5	ELE/Q7104	Building Management System – Service Engineer	III				
			6	ELE/Q7902	Quality Analyst-IT Hardware	IV				
			7	ELE/Q9801	Project Management-IT Hardware	V				
					On the Job Training	VI				
Solar Technology	The individual at work evaluates the installation site, designs the installation, plans and arranges for materials, and ensures smooth installation process. The individual also supervises the installation technicians' work.	Nessa, Tata, Adani, Maharshi solar power, Jackson Solar etc.	4	ELE/Q5901	Solar Panel Installation Technician	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q5902	Solar PV System Installation Engineer	II				
			5	ELE/Q5602	Pre Sales Solar Technical Support Engineer	III				
			6	ELE/Q7902	Quality Analyst-Solar systems	IV				
			7	ELE/Q9801	Project Management-Solar systems	V				
					On the Job Training	VI				

Courses Offered: Industry Validated

Name of BVoc Course	Brief Job Description	Industries for employment	NSQF Level	QP Code	Name of QP	Semester	Award			
							6 months	1 year	2 years	3 years
Electronic Hardware Design	is responsible for assisting R&D engineers in undertaking research on new products and working with systems designer to create initial drawings.	AT&S, Si2chip, Alpha Imager, Centum etc.	4	ELE/Q7804	PCB assembly operator	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q8703	PCB Design Engineer	II				
			5	ELE/Q8705/8702	PCB CAM Engineer/System Design Engineer	II				
			6	ELE/Q7902	Quality Analyst-PCB Design	III				
			7	ELE/Q9801	Project Management-PCB Design	IV				
				On the Job Training		VI				
Industrial Refrigerator and Air Conditioning	The individual maintains and repairs heating, air conditioning and ventilation systems in commercial and industrial areas	Bluestar, Voltas, Amber, Whirlpool, Daiken, Tata Strive, Johnson & Johnson etc.	4	ELE/Q3112	HVAC Technician	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			5	ELE/Q3105	Field Engineer RACW	II				
			5	ELE/Q4201	Product Engineer	III				
			6	ELE/Q7902	Quality Analyst-Consumer Electronics	IV				
			7	ELE/Q9801	Project Management-Consumer Electronics	V				
				On the Job Training		VI				

Curriculum Template – Industry Validated

Semester	Skill Component		Recommended General Education
I (60% Skill +40 % Gen component)	QP #1	Basics of Electronics and Electrical	English Communication, Introduction to Computer
	(16 credits)	(2 credit)	(12 credits)
II (60% Skill +40 % Gen component)	QP #2	Industry Lectures	Introduction to Sales & Marketing, Interpersonal Skills
	(16 credits)	(2 credit)	(12 credits)
III (70% Skill +30 % Gen component)	QP # 3	Online Content/ Virtual Labs through ESSCI LMS platform	Programming/Scripting, Personnel management
	(14 Credits)	(7 Credits)	(9 credits)
IV (70% Skill +30 % Gen component)	QP # 4	Minor Project	Socio-economic development, Public relations
	(14 Credits)	(7 Credits)	(9 credits)
V (70% Skill +30 % Gen component)	QP # 5	CAPSTONE Project (with SME Support)	Professional communication skills, Personality development
	(14 Credits)	(7 Credits)	(9 credits)
VI (70% Skill +30 % Gen component)	Industrial Work (OJT) (21 Credits)		Organizational behaviour, Quantitative and Qualitative Aptitude (9 Credits)

Courses Offered: Industry Assisted

Name of BVoc Course	Brief Job Description	Industries for employment	NSQF Level	QP Code	Name of QP	Semester	Award			
							6 Months	1 year	2 years	3 years
Mechatronics Technology	Includes mechanics, pneumatics, electronically controlled systems, programming, and robotics and systems development.	ABB, Siemens, Toyota, Festo, Maruti, Tata, SMC, Rockwell etc	5	ELE/Q7105	Mechatronics Maintenance Specialist	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			6	ELE/Q7107	Mechatronics Designer and System Integrator	III				
			7	ELE/Q7106	Robotics Automation Lead	V				
				On the Job Training		II, IV, VI				
IoT	IoT Hardware Analyst prepares complete blueprint of the hardware including schematics and layout. The individual prepares quality and verification requirements and perform PCB testing in compliance with regulatory standards. Thy are responsible for efficient functioning of the system	ARM, Synopsys, TI, ST micro, Intel, VVDN, Cadence, Siemens etc.	5	ELE/Q1405	IOT hardware analyst	I	Certificate	Diploma	Advanced Diploma	BVOC Degree
			6	ELE/Q1403	Embedded Product Design Engineer-Technical Lead	III				
			7	ELE/Q9801	Project Management	V				
				On the Job Training		II, IV, VI				

Curriculum Template – Industry Assisted - Mechatronics

Semester	Skill Component		Recommended General Education
I	QP #1	Mechatronics Maintenance Specialist	English Communication, Introduction to Computer
(70% Skill +30 % Gen component)	(30 credits)	(21credit)	(9 credits)
II	Industry Internship	OJT	Soft Skills , Organization Behaviour
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
III	QP # 2	Mechatronics Designer and System Integrator	Minor Project
70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
IV	Industry Internship	OJT	Personality Development ,Socio- Economic Development
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
V	QP # 3	Robotics Automation Lead	Capstone Project
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
VI	Industry Internship	OJT	Qualitative & Quantitative Aptitude
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)

Curriculum Template – Industry Assisted - IoT

Semester	Skill Component		Recommended General Education
I	QP #1	IOT hardware analyst	English Communication, Introduction to Computer
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
II	Industry Internship	OJT	Soft Skills , Organization Behaviour
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
III	QP # 2	Embedded Product Design Engineer-Technical Lead	Minor Project
70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
IV	Industry Internship	OJT	Personality Development ,Socio- Economic Development
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
V	QP # 3	IOT hardware analyst, Embedded Full Stack IoT Analyst	Capstone Project
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(9 credits)
VI	Industry Internship	OJT	Qualitative & Quantitative Aptitude
(70% Skill +30 % Gen component)	(30 credits)	(21 credit)	(6 credits)
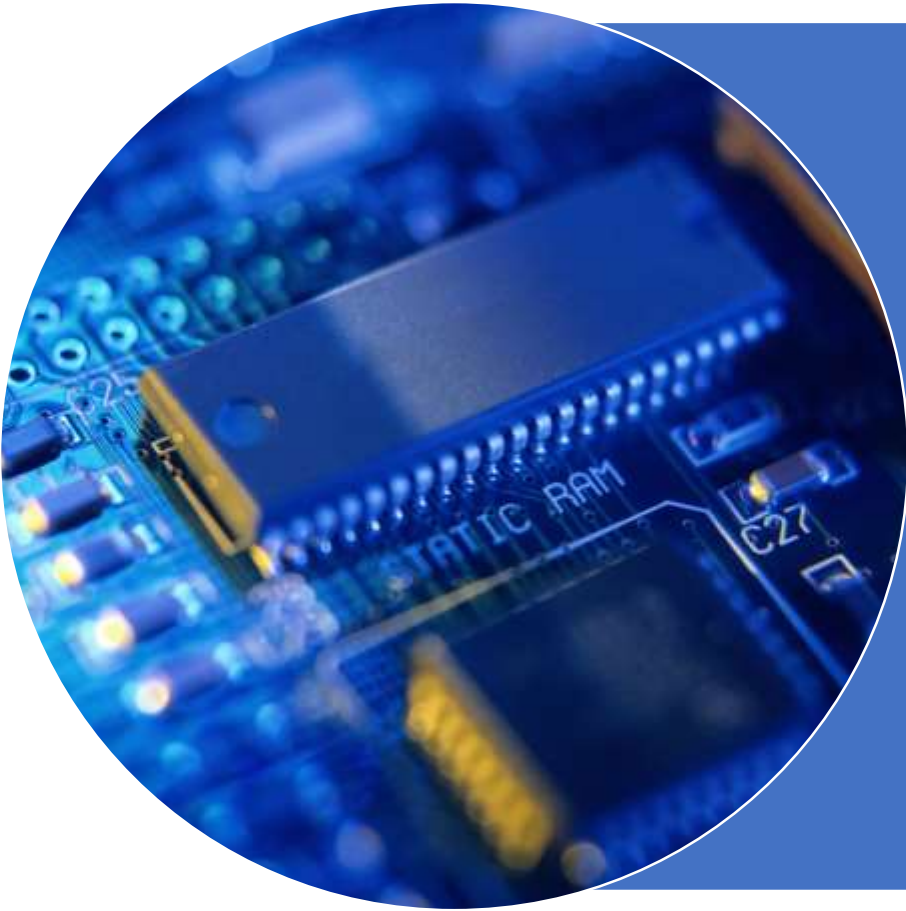
B.Voc
Program Benefits
& Support

Roles & Responsibilities

Institution

- Curriculum and Content preparation – General Education
- Classroom and Lab Infrastructure
- Training Delivery
- Compliance to University and UGC Guidelines
- Student Progress and Performance management

ESSCI

- Curriculum Alignment of QPs
- Faculty Training and Certification
- SME Support for Skill Courses
- Assessment & Certification for Skill based Courses
- Career Guidance
- Industry Interface: Guest Lectures, OJT and Placement Support.
- College Affiliations
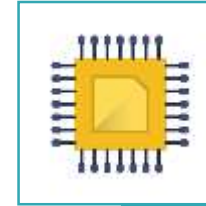
Industry

- OJT / Apprenticeship
- Placements

ESSCI Advantage

Curriculum	Program Delivery	Industry Interface	Career Guidance	Faculty Development
⓾All courses are Industry validated and job ready ⓾Curriculum support for Skill based Courses	⓾SME Support required from ESSCI / Knowledge Partners* ⓾LMS / Virtual Lab(2D & AR VR based) Support*	⓾Guest Lectures from Industry Experts ⓾OJT / Internships	⓾Expert Career Guidance ⓾Entrepreneurship Training	⓾Faculty development Programs and Certification from ESSCI*

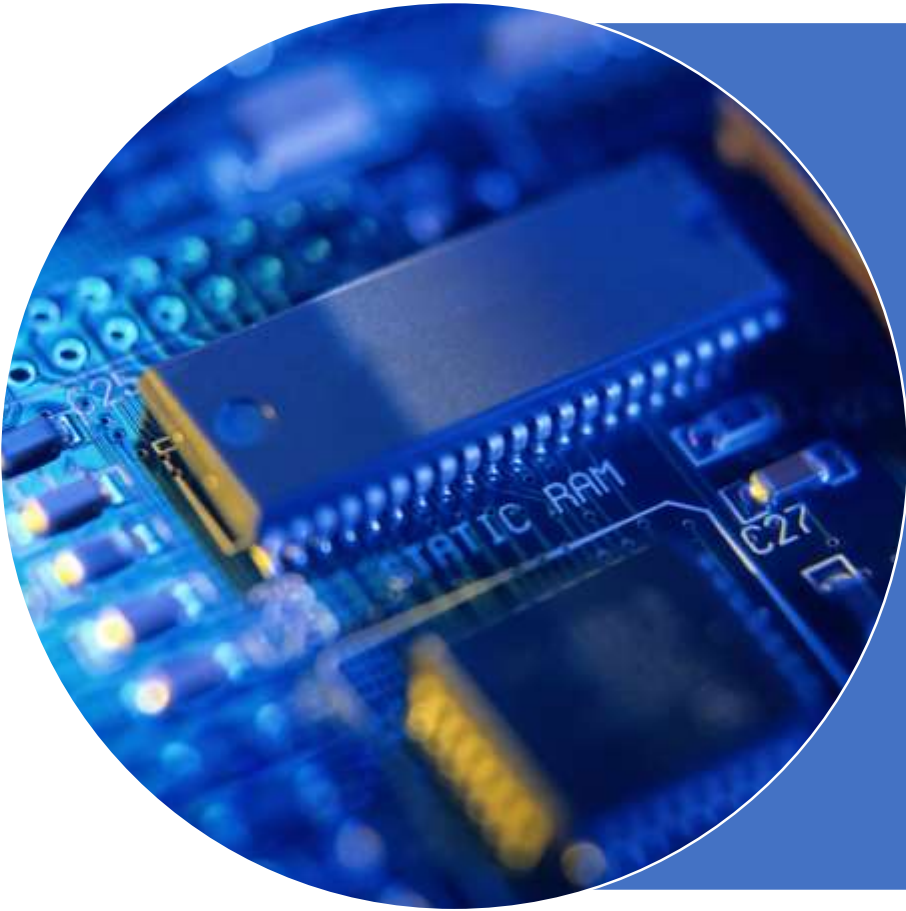| Assessments & Certification	Placement Support	Certified Labs	Centre of Excellence
⓾Assessments from ESSCI ⓾QP Completion Certifications from ESSCI and NSDC (GOI)	⓾Placement lifecycle management for successful students on ESSCI Job Portal* ⓾Placement Support	⓾Recommendation and Sourcing support for Lab equipment procurement	⓾Industry Assisted Programs which are segmented as premium B.Voc. offerings

*Some of the services are offered at cost as per the standard guidelines of ESSCI

Other Skill Courses

Other Skill Courses

Embedded Software Design (ELE/Q1501)	Field Technician – Computing and Peripherals (ELE/Q4601)	Field Technician – Networking and Storage (ELE/Q4606)	Remote Helpdesk Technician (ELE/Q4604)
PCB Design Engineer (ELE/Q8703)	LED Light Design Engineer (ELE/Q9101)	IT Coordinator in School (ELE/Q4701)	Smartphone Assembly Inspector (ELE/Q4001)
Installation and Service Engineer (Medical Devices) (ELE/Q800)	Assembly Supervisor (ELE/Q6305)	Security System Service Engineer (ELE/Q4610)	Pick and Place Assembly Operator (ELE/Q5102)

ESSCI Advantage

Curriculum	Program Delivery	Industry Interface	Career Guidance	Faculty Development
⑩All courses are Industry validated and job ready	⑩Programs Delivered by ESSCI Training Partners ⑩Autonomous Institutions can align the QPs / NOS to curriculum or can be offered as Value added course	⑩Guest Lectures from Industry Experts ⑩OJT / Internships	⑩Expert Career Guidance ⑩Entrepreneurship Training	⑩Faculty development Programs and Certification from ESSCI*

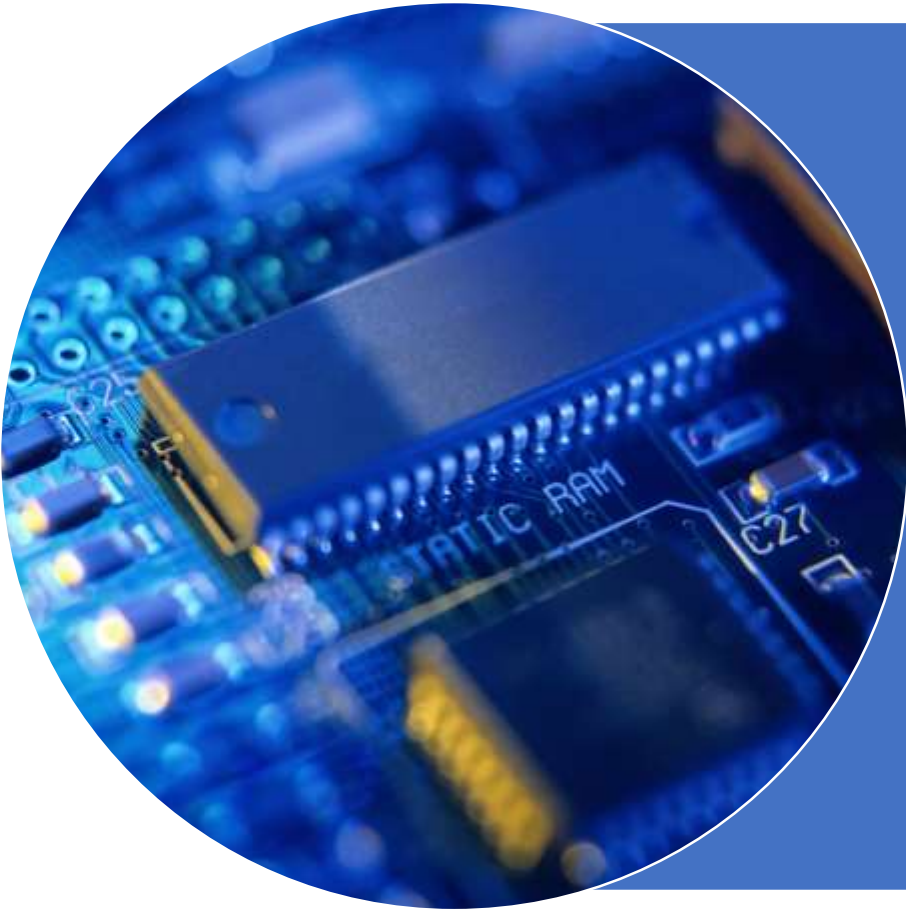| Assessments & Certification	Placement Support	Certified Labs	Centre of Excellence
⑩Assessments from ESSCI ⑩QP Completion Certifications from ESSCI and NSDC (GOI)	⑩Placement lifecycle management for successful students on ESSCI Job Portal ⑩Placement Support	⑩Recommendation and Sourcing support from Industry for Lab equipment procurement	⑩Industry affiliated/assisted CoE upon evaluation and business case possibility

Next Steps

Next Steps

Decide on B.Voc Program → Letter of Intent (LOI) to ESSCI → Course Details to be shared by ESSCI → Apply for B.Voc Program → MOU/Affiliation* → Program Launch

*Affiliation charges apply

Thank You!

Electronics Sector Skills Council of India

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Website: http://essc-india.org/