



ENGINEERING COLLEGE

Introduction

Engineering combines the fields of science and maths to resolve real world problems. What extremely distinguishes an engineer is their ability to get onto an idea and translate it into reality. Science, technology, engineering, and mathematics (STEM) education in primary and secondary faculties typically is the foundation for engineering education at the university level. Computer engineering (CoE or CpE) could be a branch of engineering that integrates many fields of applied science and electronic engineering needed to develop hardware and software. Computer engineers typically have coaching in electronic engineering (or electrical engineering), software design, and hardware-software integration rather than solely software engineering or electronic engineering. Computer engineers are involved in many hardware and software aspects of computing, from the design of individual microcontrollers, microprocessors, personal computers, and supercomputers, to circuit design. This field of engineering not only focuses on how computer systems themselves work but also how they integrate into the larger picture.

Market Potential

India's engineering sector has witnessed an interesting growth over the previous couple of years driven by enlarged investment in infrastructure and industrial production. The engineering sector, being closely related to the producing and infrastructure sectors, is of strategic importance to India's economy. India, on its quest to become a worldwide body politic, has created vital stride towards developing its engineering sector.

Growth within the field of web and cloud computing is another major issue driving the computer engineering market. Increase in usage of electronic merchandise in automotive, industrial, medical, and consumers industries has created a connected landscape for sensible devices.

Computer Engineering Market size was valued at around USD 1800 billion in 2016 and can grow at a CAGR of around 5% from 2017 to 2024.

Cost of Project

Particulars	Amount (Rs. in Lakhs)
Land (own)	-
Land development cost	10.00
Civil works and Buildings (@1500/sqft)	1500.00
Furniture	126.99
Computer	360.90
Software	20.00
Books	5.00
Misc Fixed Assets	52.88
D G Set 50 KV	4.40
Escalation & Contingencies	103.51
Preliminery & Preoperative Expenses	67.55
SUB TOTAL (A)	2251.23
Working Capital Margin	141.36
Total Project Cost	2460.14
Total Working Capital Required (B)	353.40
MEANS OF FINANCE	
Total funds required (A+B)	2604.63
Loan component	
Term loan (60% of A)	1350.74
Working capital (60% of B)	212.04
TOTAL	1562.78
Equity	1041.85
TOTAL	2604.63

Note: We have assumed the land as owned land, Further land development cost will be incurred.

Detailed Cost Element

Sl. no.	Particulars	Qty.	Rate	Amount (Rs. In Lakhs)
1	Tables	42	4500	1.89
2	Big Tables	120	8000	9.60
3	Chairs	2,196	2500	54.90
4	Benches	500	3600	18.00
5	Cupboards	230	12000	27.60
6	Air Conditioner	133	30000	39.90
7	Water Filters	10	15000	1.50
8	Computers	600	60000	360.00

9	CCTV	60	2800	1.68
10	Access Restriction lock	1	25000	0.25
11	Server	1	90000	0.90
12	Condenser	1	55000	0.55
13	Electric Appliances(Fan, Tubelight etc)	-	-	4.00
14	Furniture for classroom, staffroom,teacher's room,office)	-	-	5.00
15	Furniture for computer lab	-	-	5.00
16	Washroom Fittings	-	-	5.00
17	Books for library	-	-	5.00
18	Softwares	-	-	20.00
19	Other Fixed Asset	-	-	5.00
	Total			565.77

Contingencies and Escalations

It has been assumed at approximately 5% at cost.

Preliminary Expenses

Particulars	Amount (Rs. in Lakhs)
Incorporation Expenses	0.15
Project Report Preparation and Consultation	0.35
Feasibility and Engineer's/Architect's Report and Plans	37.5
Legal Charges - Drafting for agreements, contracts, stamp paper, notary	0.05
Rent payments upto the start of commercial production	0
Other recurring expenses of revenue nature upto start of commercial	0.5
Interest Cost for period before commercial operations	29
Installation /erection charges	0
Total	67.55

Salary

Designation	Manpower	Amount (Rs. In lakhs)
Professors	40	336.00
Assistant professors	30	180.00
Manager/Dean	4	24.00
Lab Assistant	16	57.60
Office Staff/ Administrator etc	10	36.00
Sweeper	20	28.80
Security Guard	6	8.64

Profitability Statement

Particulars	Amount in Rs. Lakhs				
	Year- 1	Year- 2	Year- 3	Year- 4	Year- 5
<u>A. INCOME</u>					
Maximum Capacity - students	1,200	1,200	1,200	1,200	1,200
Capacity utilisation	65%	70%	75%	80%	85%
Capacity utilised- students	780	840	900	960	1,020
<u>Revenue from students</u>					
Fees (yearly)	1,404.00	1,512.00	1,620.00	1,728.00	1,836.00
Other revenue (canteen, sale of books,accessories,etc)	9.60	10.08	10.58	11.11	11.67
Total income during the year	1,413.60	1,522.08	1,630.58	1,739.11	1,847.67
<u>B. OPERATING EXPENSES</u>					
Salary	671.04	738.14	811.96	893.15	982.47
Expenses on various programmes, seminars, placements etc	2.00	2.10	2.21	2.32	2.43
Research abd Development	2.00	2.00	2.00	2.00	2.00
Repair & Maintenance	11.40	11.86	12.33	12.83	13.34
Lease Rent	-	-	-	-	-
Power & utilities	9.37	10.10	10.82	11.54	12.26
Depreciation and Amortisation	366.17	366.17	366.17	366.17	366.17
Total Operating Expenses	1,061.99	1,130.37	1,205.49	1,288.01	1,378.67
Operating Profit (A-B)	351.61	391.71	425.10	451.10	468.99
<u>C.FINANCIAL EXPENSES</u>					
Interest on loan	138.07	122.48	99.90	77.32	52.85

D. Other Expenses	-	-	-	-	-
Administrative and General Expenses	28.27	30.44	32.61	34.78	36.95
Total Expenses	166.34	152.93	132.51	112.10	89.81
	-	-	-	-	-
Profit Before Tax	185.26	238.78	292.58	339.00	379.19
Provision for Tax	46.32	59.70	73.15	84.75	94.80
Profit After Tax	138.95	179.09	219.44	254.25	284.39
Dividend	-	-	-	-	-
Retained Profit	138.95	179.09	219.44	254.25	284.39
Profit Margin	13%	16%	18%	19%	21%

Note: Since the land is owned, there is no lease rent expense

Breakeven Point

		Break Even Point (BEP)			Amount in Rs. Lakhs	
SL	Particulars	Year - 1	Year - 2	Year – 3	Year - 4	Year – 5
A.	Net Sales	1,413.60	1,522.08	1,630.58	1,739.11	1,847.67
B.	Variable Cost					
	Power and Utility	9.37	10.10	10.82	11.54	12.26
	Other Misc Expenses	28.27	30.44	32.61	34.78	36.95
	Total Variable Cost	37.65	40.54	43.43	46.32	49.21
C.	Contribution (A-B)	1,375.95	1,481.54	1,587.16	1,692.79	1,798.46
D.	Fixed					
	Expenses on Programmes/Events	2.00	2.10	2.21	2.32	2.43
	Research and Development	2.00	2.00	2.00	2.00	2.00
	Salary	671.04	738.14	811.96	893.15	982.47
	Interest	138.07	122.48	99.90	77.32	52.85
	Repair & Maintenance	11.40	11.86	12.33	12.83	13.34
	Lease Rental	-	-	-	-	-
	Depreciation	366.17	366.17	366.17	366.17	366.17
	Total Fixed Cost	1,190.69	1,242.76	1,294.57	1,353.79	1,419.27
E.	Breakeven Point	87%	84%	82%	80%	79%
G.	Cash BEP	60%	59%	58%	58%	59%

Debt-Service Coverage Ratio

		Amount in Rs. Lakhs				
SL	Particulars	Year - 1	Year - 2	Year – 3	Year - 4	Year – 5
i	Profit	138.95	179.09	219.44	254.25	284.39
ii	Depreciation	366.17	366.17	366.17	366.17	366.17
iii	Interest	138.07	122.48	99.90	77.32	52.85
A	Total (i + ii + iii)	643.19	667.74	685.51	697.74	703.42
i	Interest	138.07	122.48	99.90	77.32	52.85
ii	Principal repayment	22.14	265.69	265.69	265.69	265.69
B	Total (i + ii)	160.21	388.17	365.59	343.00	318.54
	DSCR (A / B)	4.01	1.72	1.88	2.03	2.21

Interest on Term Loan and Principal Repayment

Refer Annexure I.

have assumed the repayment tenure of term loan for a period of 7 years, Rate of interest being 8.5% p.a. with the moratorium period of 9 months

Address of Vendors

Name of vendors	Address and Contact Number
Woodspeak Solution	104/N, Narayan Roy Road, ED 105, Rajdanga Main Road, kasba Kolkata 700107, Kolkata - 700008, Dist. Kolkata, West Bengal Ph. 08048791227
Infotoolz	Chandni Chowk Street, 38, Ganesh Chandra Ave, Chandani Chowk, Bowbazar, Kolkata, West Bengal 700013 Ph. 033 2215 2079
Godrej Interio	31 Jawahar Lal Nehru Road, Park Street Kolkata 700016 Ph 07947408600

ANNEXURE- I

Principal													
Opening	1,351	1,360	1,370										
Repaid													-
Closing	1,360	1,370	1,380										
Interest	10	10	10										29
I													
Principal													
Opening	1,592	1,603	1,614	1,626	1,637	1,649	1,661	1,650	1,640	1,629	1,607	1,585	
Repaid	-	-	-	-	-	-	22	22	22	22	22	22	22
Closing	1,603	1,614	1,626	1,637	1,649	1,661	1,650	1,640	1,629	1,607	1,585	1,563	
Interest	11	11	11	12	12	12	12	12	12	12	11	11	138
II													
Principal													
Opening	1,563	1,541	1,518	1,496	1,474	1,452	1,430	1,408	1,386	1,363	1,341	1,319	
Repaid	22	22	22	22	22	22	22	22	22	22	22	22	266
Closing	1,541	1,518	1,496	1,474	1,452	1,430	1,408	1,386	1,363	1,341	1,319	1,297	
Interest	11	11	11	11	10	10	10	10	10	10	10	9	122
III													
Principal													
Opening	1,297	1,275	1,253	1,231	1,209	1,186	1,164	1,142	1,120	1,098	1,076	1,054	
Repaid	22	22	22	22	22	22	22	22	22	22	22	22	266
Closing	1,275	1,253	1,231	1,209	1,186	1,164	1,142	1,120	1,098	1,076	1,054	1,031	
Interest	9	9	9	9	9	8	8	8	8	8	8	7	100
IV													
Principal													
Opening	1,031	1,009	987	965	943	921	899	876	854	832	810	788	
Repaid	22	22	22	22	22	22	22	22	22	22	22	22	266
Closing	1,009	987	965	943	921	899	876	854	832	810	788	766	
Interest	7	7	7	7	7	7	6	6	6	6	6	6	77
V													
Principal													
Opening	766	744	721	699	677	655	633	611	589	566	544	522	
Repaid	22	22	22	22	22	22	22	22	22	22	22	22	266
Closing	744	721	699	677	655	633	611	589	566	544	522	500	
Interest	5	5	5	5	5	4	4	4	4	4	4	4	53
VI													
Principal													
Opening	500	478	456	434	411	389	367	345	323	301	279	256	
Repaid	22	22	22	22	22	22	22	22	22	22	22	22	266
Closing	478	456	434	411	389	367	345	323	301	279	256	234	
Interest	4	3	3	3	3	3	3	2	2	2	2	2	32
VII													
Principal													
Opening	234	212	190	168	146	124	101	79	57	35	13	-	
Repaid	22	22	22	22	22	22	22	22	22	22	13	-	
Closing	212	190	168	146	124	101	79	57	35	13	-	-	
Interest	2	2	1	1	1	1	1	1	0	0	0	-	10