

(101)

F.No. 23-27/85.T.5
Government of India,
Ministry of Human Resources & Development,
Department of Education.

New Delhi, 11th Oct., 1985.

To

The Secretary,
Govt. of Punjab,
Technical Education Department,
Civil Secretariat,
Chandigarh.

Subject: Introduction of a diversified degree course in
Production Engg., (Sandwich type) at the Guru Nank
Engg. College, Ludhiana, Punjab - regarding.

Sir,

I am directed to state that on the recommendations of the Northern Regional Committee of the All India Council for Technical Education, the Education Minister in his Capacity as Chairman, All India Council for Technical Education has accorded approval to the proposal of the State Government of Punjab for the introduction of a diversified Degree course in Production Engg. (Sandwich type) with an intake of 15 and duration of 4½ years at Guru Nank Engg. College, Ludhiana. The diversification of 15 seats will be done from the existing intake of 60 in Mechanical Engg. branch.

The Chairman, All India Council for Technical Education has also accepted the recommendations of the Northern Regional Committee and approved the following facilities and estimates of cost for the introduction of the course:-

Non-Recurring

- a) Building
- b) Equipment

Rs.	✓
9,82,800	
6,11,000	

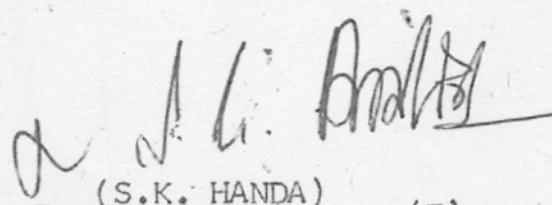
✓.2/-

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Copy forwarded for information and necessary action to:

1. P.S. to Governor of Punjab, Rajniwas, Chandigarh.
2. The Adviser (Education), Planning Commission, Yojana Bhawan, New Delhi.
3. Planning Commission, (Education Division), Yojana Bhawan, New Delhi.
4. The Director of Technical Education, Government of Punjab, Amar Building, Sector 17-A, Chandigarh.
5. The Asstt. Educational Adviser(T), Ministry of Education, Northern Regional Office, 1-A Laxman Bagh, Nawabganj, Kanpur -2.
- ✓ 6. The Principal, Guru Nanak Engineering College, Ludhiana, Panjab.
7. Survey Unit. (T-8).
8. T-1
9. Guard File.


(S.K. HANDA)
Dy. Educational Adviser(T)-

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REGISTERED

ALL-INDIA COUNCIL FOR TECHNICAL EDUCATION

NORTHERN REGIONAL COMMITTEE

C/o Government of India
Ministry of Education
Northern Regional Office
1-A, Laxman Bagh,
KANPUR-208002.

No.F.7-269/84-NRO/ED-

Dated: July, 1985:

From

The Member-Secretary,
Northern Regional Committee:

To

The Secretary,
All-India Council for Technical Education,
C/o Government of India,
Ministry of Education,
Technical Division,
T-5 Section,
Shastri Bhavan,
NEW DELHI:

Attention: Shri S.K. Handa, DEA(T)

SUBJECT:

Report of the Expert Committee appointed to examine the proposal received from the State Government of Punjab for the introduction of diversified degree course in Production Engineering (Sandwich type) at the Guru Nanak Engg. College, Ludhiana - Recommendations of the Regional Committee - Regarding the -

Sir,

I am to state that the State Government of Punjab submitted a proposal for the introduction of a diversified degree course in Production Engineering (sandwich type) at the Guru Nanak Engineering College, Ludhiana by diversification of 15 seats out of the existing degree course in Mechanical Engineering (intake 60), for assessment of additional physical/ instructional facilities required on the introduction of this course at the above institution. The Expert Committee appointed the Chairman, Northern Regional Committee visited the institution on 12th March, 1985 and submitted its report. The report of the Expert Committee was considered by the N.R.C. at 55th meeting held on 7th May, 1985. The Regional Committee approved the report of the Expert Committee and recommended the following financial estimates for the use :-

Recurring:

Rs.

a) Buildings	9,82,800
b) Equipment	6,11,000
c) Furniture	75,000
d) Library & Equipment	1,00,000
e) Mobile Van	1,50,000

Total: Non-Recurring: Rs. 18

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* 2 *

Recurring:

Rs. 259

- a) Salary of Staff 2,41,650
b) Library 10,000
Total: Recurring : Rs. 2,51,650

A copy each of the extracts from the agenda and minutes of the 55th meeting of the Northern Regional Committee (Item 55.38) is enclosed for Ministry's perusal.

The Ministry is requested to kindly convey the approval of the All-India Council for Technical Education at an early date.

Yours faithfully,

(Narendra Singh)
Member - Secretary
Northern Regional Committee

Encl: As above:

Endt: No.F.7-269/84-NRO/ED- 1996 of date, 23.7.85

Copy, alongwith a copy of enclosures, forwarded for information to :-

1. The Secretary, State Government of Punjab, Technical Education Deptt., Civil Secretariat, Chandigarh.
2. The Director of Technical Education, Punjab, Amar Buildings, Sector 17-A, Chandigarh.
3. The Principal, Guru Nanak Engineering College, Ludhiana.

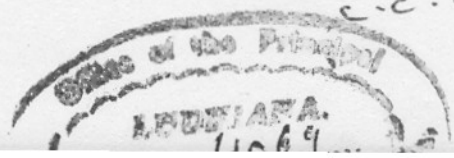
The mere forwarding of the recommendations to the All-India Council for Technical Education should not be treated as any commitment on the part of the Government of India. The approval of the A.I.C.T.E./Government of India will follow shortly.

(Narendra Singh)
Member - Secretary
Northern Regional Committee

Encl: As above:

GUPTA:22.7.1985:

D.T.A.
c.c. to PHE for information



Item 55.38- To consider the Report of the Expert Committee on the Proposal of the State Government of Punjab for the introduction of diversified Degree Course in Production Engineering (Sandwich type) at the Guru Nanak Engineering College Ludhiana -

To meet the growing demand of Industry for Production Engineers the Directorate of Technical Education & Industrial Training, Punjab submitted a proposal for the introduction of the diversified degree course in Production Engineering ^(Sandwich type) at the Guru Nanak Engineering College, Ludhiana. The proposal envisages the diversion of 15 seats from the existing degree course in Mechanical Engineering (out of 60 seats of Ist degree course of Mechanical Engineering for introduction of this course. As this course is intended to cater to the local industries in and around Ludhiana and to develop confidence among graduate engineers to start their own industries after passing out, the Chairman, Northern Regional Committee accepted the proposal and constituted an Expert/Visiting Committee to assess the additional Physical/instructional facilities required for the introduction of this diversification. The Expert Committee visited Guru Nanak Engg. College, Ludhiana on 12th March, 85 and submitted its report. A copy of the report of the Expert Committee is placed at Annexure Item 55.38. The Committee assessed the following additional Physical/Instructional facilities for the conductance of the course :-

NON-RECURRING:

	<u>Rs</u>
a) Building	9,32,800
b) Equipment	6,11,000
c) Furniture	75,000
d) Library & Equipment	1,00,000
e) Mobile Van	1,50,000
Total Non-Recurring:-	<u>19,18,800</u>

The Committee met at the Guru Nanak Engineering College, Ludhiana on 12th March, 1985.

Dr. J.L. Batra could not attend the meeting on account of his pre-occupation. Shri T.S. Basur, Director of Technical Education & Industrial Training, Punjab participated in the deliberations.

The Committee while considering the need for the course examined the working of the similar programme at Punjab Engineering College, Chandigarh. Dr. Bedi apprised the Committee of the employment position of production Engineering graduates. Shri R.P. Sehgal placed the view-point of the Industry before the Committee. After discussing various deficiencies usually observed in Mechanical Engg. Graduates from the view point of the Industry, the Committee came to the conclusion that there is a definite need for the proposed diversification. The Committee there after took up the study of the project submitted by the Institute through the State Government.

BRIEF HISTORY:

Guru Nanak Engineering College, Ludhiana was started in 1956 with an admission of 45 students for Degree Course of Civil Engineering of Punjab University. In 1957, the intake was raised to 120 students (60 students in Civil Engineering, 30 students in Mechanical Engg. and 30 students in Electrical Engineering). During the third five year plan, under the development scheme of Technical Education in the Country, the intake was increased from 120 to 180 (60 students in each discipline - Civil, Mechanical and Electrical) in 1963. All the College Laboratories and Workshops are now fully equipped to provide training facilities to under-graduate students in the subject being taught and other allied technologies.

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ALL-INDIA COUNCIL FOR TECHNICAL EDUCATION
NORTHERN REGIONAL COMMITTEE

Report of the Expert Committee on the
proposal of State Government of Punjab
for the introduction of diversified
degree course in Production Engg. at
Guru Nanak Engg. College, Ludhiana -

To meet the growing demand of Industry for Production Engineers, the Directorate of Technical Education & Industrial Training, Punjab submitted a proposal for diversification of 15 seats out of 60 seats the existing Mechanical Engineering degree course for the introduction of Production Engineering (Sandwich type) Degree course at Guru Nanak Engineering College, Ludhiana. As this course is intended to cater to the local industries in and around Ludhiana and to develop confidence among graduate engineers to start their own industries after passing out, the Chairman, Northern Regional Committee accepted the proposal and constituted an Expert/Visiting Committee to assess the additional physical/instructional facilities required for introduction of this diversification consisting of the following experts:-

1. Dr. S.P. Luthra,
Chairman,
Northern Regional Committee,
H-2, Maharani Bagh,
New Delhi.
2. Shri R.P. Sehgal,
Manager (Manufacturing)
Punjab Tractors Ltd., Sahibzada Ajit Singh Nagar,
Near Chandigarh.
3. Dr. J.L. Batra,
Prof. of Industrial Engg.,
I.I.T. Kanpur.
4. Dr. D.S. Bedi,
Prof. & Head of Production Engg.,
Punjab Engineering College,
Chandigarh.
5. *Member-Secretary,
Northern Regional Committee

* Shri Y. Singh, Education Officer (T) acted as
the Member-Secretary of this Committee

At present, the Institution is offering degree course of B.Sc. Engg. of Punjab University in following disciplines:-

- | | | |
|----|---|----------------|
| 1. | Civil Engineering | - 60 students. |
| 2. | Mechanical Engineering | - 60 students. |
| 3. | Electrical Engineering | - 45 students. |
| 4. | Electronics & Electrical Communication. | - 15 students. |

The Government of India, under their scheme of Direct Central Assistance, have granted assistance for consultancy services, for interaction with Industry and for development labs. as under :-

For establishment of Lab. for Consultancy Cell	- 5.50 lakhs.
Equipment for Metrology lab.	- 3.50 lakhs.
Equipment for Heat Transfer Lab.	- 1.00 lakh.
Maintenance Engineering Lab.	-10.00 lakhs.

AIMS AND OBJECTIVES:

It is intended to diversify part of the present intake of Mechanical Engineering to Production Engineering (Sandwich type course with an intake of 15 to 20 students. This shall be of nine semesters (4-1/2 years) duration as prescribed by the Punjab University at present. The purpose of the diversification is to produce Graduate Engineers who shall have sound background of modern production, manufacturing and maintenance system. The changing pattern of Technical Education also requires development of entrepreneurship among engineering students leading to self employment.

The Institution will arrange for practical training in Industries around Ludhiana. The training will be supervised by the Institution faculty in collaboration with Industries. The seats thus utilized will be earmarked for sandwich course students and the stipend paid by the Board of Apprenticeship Training (Northern Region) as

they are doing in other such cases.

The changing pattern of industry in the Region of Punjab, Haryana, Himachal Pradesh and J. & K. shows that the manufacturing activities are growing interaction with the problems of the industry and Society in that Region. Ludhiana, with a big industrial complex has facilities like Tool Room, MER DO, SISI etc. but the immediate need is to produce Engineering having sound background of manufacturing activities. Thus the proposed course of production Engineering (Sandwich type) has economic and technical importance in this Region. This is also necessary to build self confidence and initiative in Engineers to develop a spirit of entrepreneurship. This will also strengthen base for M.E. in Production Engineering Course, already established at the Institution in 1983.

ESTIMATED EXPENDITURE FOR PHYSICAL & INSTRUCTIONAL FACILITIES-

The Committee while considering the additional facilities required for introduction of this diversification went through the list of equipment and the existing accommodation available with the Institution. The facilities provided under State Plan, P.G. Scheme and Direct Central Assistance scheme were taken into account while drawing up of the estimates. Similarly while recommending additional staff, the present teaching load and the additional teaching load proposed was discussed in depth. Since there is no increase in the number of students no additional maintenance grant is recommended for this diversification. The following additional facilities have been recommended by the Committee for the proposed diversification.

NON-RECURRING
1. BUILDING
a) Class Room
b) Laboratory
a)
b)

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NON-RECURRING EXPENDITURE:

1.	<u>BUILDINGS:</u>		<u>Sq.m.</u>
a)	Class Room	4	150
b)	<u>Laboratories</u>	5	330
	a) Metal forming lab.)	
	b) Metal cutting lab.)	
	c) Work Study lab.)	
	d) Metrology Lab.)	
	e) Jigs, Tool & Die lab.)		
	f) Machine Tool lab.)		
c)	Project Room	1	
d)	Staff Room	6	60
			<u>540</u>

Add: 40% for conversion
into Plinth area

Total Plinth Area :- 756 sq.m.

Cost of construction @ 1300 per
sq.m. (1300 x 756 sq.m.)

Rs.
9,82,800

Equipment (as per list at Annexure)
for different labs.

6,11,000

Furniture:

75,000

Library and Equipment :

1,00,000

Mobile Van:

1,50,000

Total Non-Recurring:-

19,13,800

RECURRING EXPENDITURE:1. Staff

Sl.No.	Name of the Post	No.of post	Pay scale	Average annual expenditure(Rs.)
1.	Professor	1	1500 - 2500	24,000
2.	Asstt. Professor	2	1200 - 1900	37,200
3.	Training & Placement Officer	1	1200 - 1900	18,600
4.	Lecturers	2	700 - 1600	27,600
			Total:-	<u>1,07,400</u>
	Add: 50% for DA, HRA: etc.			53,700
				<u>1,61,100</u>
	Add 50% of the salary of teaching staff for Technical Supporting staff and Non-teaching staff			80,550
			Total Salary :-	<u>2,41,650</u>
2.	<u>Library recurring :</u>			<u>10,000</u>
	Total Recurring :-			<u>2,51,650</u>

SUMMARY OF ESTIMATESNON-RECURRING:

	<u>Rs.</u>
a) Building	9,32,800
b) Equipment	6,11,000
c) Furniture	75,000
d) Library & Equipment	1,00,000
f) Mobile Van	1,50,000
Total Non-Recurring:-	<u>19,18,800</u>

RECURRING:-

a) Staff Salary	2,41,650
b) Library	<u>10,000</u>
Total Recurring :-	<u>2,51,650</u>

A C K N O W L E D G E M E N T

The Committee is grateful for the hospitality and the co-operation extended by the Institute authorities and the Director, Technical Education & Industrial Training, Punjab for arranging this visit and making it a success.

Sd/-
(DR. S.P. LUTHRA)
CHAIRMAN

Sd/-
(SH. R.P. SEHGAL)
MEMBER

Sd/-
(DR. D.S. BEDI)
MEMBER

Sd/-
(Y. SINGH)
MEMBER-SECRETARY

Skw/-(s)

LIST OF EQUIPMENT REQUIRED FOR DEGREE COURSE
IN PRODUCTION ENGINEERING (SANDWICH TYPE) AT
GURU NANAK ENGINEERING COLLEGE, LUDHIANA -

I. <u>Metal Forming Lab.</u>		Rs.
1. Draw bench.		30,000
2. Wire Drawing Machine.		30,000
3. Forging press 50 tons.		50,000
4. Sheet metal tester.		1,000 (Tobe fabricated)
Sub Total:-		<u>1,11,000</u>
II. <u>Metal Cutting Lab.</u>		
1. Mechanical Drill dynameter		1,000 (tobe fabricated)
2. Chip tool temperature measuring instrument.		1,000 (tobe fabricated)
3. Universal Vice.		10,000
4. Drill Point grinder		6,000
5. Attachments to Precision Lathe.		32,000
6. Centreless grinder		1,00,000
Sub Total:-		<u>1,50,000</u>
III. <u>Work Study Lab.</u>		
1. Movie Camra		25,000
2. Micro Chronometer		5,000
3. Projecting with Zooming Machanism		10,000
4. Stop Watches.		2,000
5. Misc. instruments		10,000
Sub Total:-		<u>52,000</u>
IV. <u>Sand Testing & Foundry lab.</u>		
1. Universal sand testing machine.		20,000
2. Permeability meter		5,000
3. Sieve shaker with sieves.		5,000
4. Rapid Moisture teller		3,000
5. Sensitive balance		2,000
6. Pit furnance		1,000 (tobe fabricated)
7. Plastic injection moulding machine.		20,000
8. Misc. Equipment		10,000
Sub Total:-		<u>66,000</u>

V. Metrology Lab.

- | | |
|-------------------------|---------------------------|
| 1. Pneumatic compouater | 2,000 (can be fabricated) |
| 2. Slip gauge set | 25,000 |
| Sub total | <u>27,000</u> |

VI. Jigs Tools & Die Lab.

- | | |
|---|----------------------------|
| 1. Demonstration models of jigs & fixtures | 10,000 (can be fabricated) |
| a) Drilling Jigs. | |
| b) Milling fixtures. | |
| c) Grinding fixtures. | |
| d) Assemble & welding fixtures. | |
| e) Fixture for die casting. | |
| 2. Hydraulic, Pneumatic clamping | 5,000 |
| 3. Drawing dies, bending dies, compound dies combination dies progressive dies etc. | 5,000 |
| 4. Misc. Equipment | 5,000 |
| Total:- | <u>25,000</u> |

Misc. Machines.	<u>1,80,000</u>
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Grand Total:-	<u>6,11,000</u>
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Skm/-(s)