4.2 TECHNICAL EDUCATION

Present Status

Technical Education is one of the most significant components of human resources development spectrum in improving the quality of life of the people. In recognition of the importance of this sector, the planners have accorded priority to this sector. Anna University has emerged as the largest technical university in the country. The University is doing pioneering work in the field of Biotechnology, Crystal Growth, Remote Sensing, Environmental Engineering, Water Resources and Ocean Management, Electronics and Communication Engineering and Energy Resources.

There has been phenomenal growth in the field of technical education during the previous plan periods. At the dawn of independence, there were hardly 4 degree and 8 diploma institutions. There are at present 222 degree and 203 diploma institutions, with intake capacity of 63,515 and 50,479 students respectively. Tamil Nadu has always been ahead of most of the States in the country in the matter of starting Post Graduate courses in the emerging areas. However, there are some areas of weakness such as quality and spread of professional education. With a view to consolidate the capacity and to maintain high and uniform standard in Technical Education, all the Engineering Colleges have been brought under one roof by affiliating them to Anna University. The number of Engineering Colleges and Polytechnics under different categories are given in Table below:

<table>
<thead>
<tr>
<th>No. of Technical Institutions and Sanctioned Intake</th>
<th>Polytechnics</th>
<th>Engineering Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996-97</td>
<td>2001-02</td>
</tr>
<tr>
<td>Government</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Government Aided</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Self-financing</td>
<td>98</td>
<td>146</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>203</td>
</tr>
<tr>
<td>Sanctioned Intake</td>
<td>32,154</td>
<td>50479</td>
</tr>
</tbody>
</table>

* Including R.E.C., Trichy
** Including 5 Deemed to be Universities

Ninth Five Year Plan - Outlay and Expenditure

An amount of Rs. 135.50 crores was earmarked for Technical Education sector for the Ninth Plan period, of which Rs. 114.96 crores was for Technical Education department and Rs. 20.54 crores for plan grant to Anna University for its developmental activities. Against this, the expenditure incurred / expected to be incurred for the Ninth Plan is of the order of Rs. 111.99 crores constituting 83 per cent of the Ninth Five Year Plan outlay. The shortfall is due to non-implementation of the following schemes due to administrative reasons: (a) bifurcation of the Directorate of Technical Education, (b) introduction of Tamil medium- staff cost, and (c) lesser release of plan grant to Anna University during the Ninth Plan period. Against the
allocation of Rs. 20.54 crores, the release of grant to Anna University is expected to be only Rs. 3.47 crores during the Ninth Plan Period.

**Tenth Five Year Plan**

**Strategies to strengthen technical education**

The socio economic development of Tamil Nadu, in particular, and the country at large, and the welfare of the people depend on the quality of the work force, availability of trained personnel, and their competitiveness compared to international groups. To-day’s technology is requiring a new direction and vision in the field of technical education. Teaching and research require special attention to meet the challenges faced. In this connection, action will be taken in the following three major areas during the Tenth Five Year Plan:

**Professional Development**

**Web Based Education**

- a) Credit Banking System
- b) IT enabled Dual Degree Programme
- c) Teaching/Research Associate (TRA)
- d) Faculty Improvement Programme
- e) Fast Track Sequential Summer Programmes

**Research, Development and Consultancy**

- a) Centre for Academic Partnership
- b) Technology Gateway (University Satellite Center)

**Administration**

- a) Networking of Institutions
- b) e-governance
- c) Faculty Performance and Self Assessment

**Thrust Areas for Technical Education**

New courses in the emerging thrust areas like Information Technology, Biotechnology, and Bio-Medical Engineering etc. will be introduced in the Government and Government Aided Technical Institutions. Courses which are not in demand would be withdrawn in a phased manner. Increased intake would be considered in the thrust area branches after enumerating the infrastructure facilities available in the institutions. Curriculum and Syllabi would be revised according to the emerging trends in Technical Education.

**Tenth Five Year Plan Proposals**

**A. Technical Education Department - Polytechnics**

1. **Ladies Hostel – Government Polytechnic for Women, Coimbatore – Construction of First Floor in the existing Hostel for 60 students**

   The Government Polytechnic for Women, Coimbatore was started during the year 1964 and this institution is not having adequate hostel facilities. This Polytechnic has been in existence for more than 35 years without adequate hostel facilities. To benefit the girl students, construction of
first floor in the existing Hostel and provision of other amenities such as reading room, recreation hall, toilets, dining hall including furniture, fans, lighting etc., are proposed with an outlay of Rs. 80 lakhs.

2. Ladies Hostel – Bharathiar Centenary Memorial Women’s Polytechnic, Ettayapuram – Construction of First Floor in the existing Hostel for 60 students

The Bharathiar Centenary Memorial Women’s Polytechnic, Ettayapuram was started during the year 1982 and this institution is not having adequate hostel facilities. As the institution is located in a rural area, adequate facilities are absolutely essential for girl students. To benefit the girl students, construction of first floor in the existing Hostel and provision of other amenities such as reading room, recreation hall, toilets, dining hall including furniture, fans, lighting etc., are proposed with an outlay of Rs. 80 lakhs.

3. Staff Quarters – Bharathiar Centenary Memorial Women’s Polytechnic, Ettayapuram – Construction of non-teaching staff quarters of two blocks, each six flats

The Bharathiar Centenary Memorial Women’s Polytechnic, Ettayapuram was started during the year 1982 and this institution is not having adequate non-teaching staff quarters. This Polytechnic is situated in a rural area away from Ettayapuram. Staff members find it very difficult to reach the Polytechnic through public transport. At times, the staff are unable to reach the institution even through public conveyance in time. Therefore, construction of staff quarters for the non-teaching staff of two blocks, each six flats, each flat of about 500 sq.ft. is absolutely essential. For this, the outlay will be Rs. 60 lakhs.

4. Government Polytechnic for Women, Madurai – Construction of five classrooms and one drawing hall

The Government Polytechnic for Women, Madurai was started during the year 1963 and this institution is not having adequate class rooms, drawing hall and furniture facilities. To benefit the students, construction of five class rooms and one drawing hall including furniture etc., at a cost of Rs. 100 lakhs are proposed.

5. Government Polytechnic, Nagercoil – Construction of Boys’ Hostel – Two floors for 200 students (100+100) rooms

The Government Polytechnic, Nagercoil was started during the year 1959 and this institution is not having adequate hostel facilities etc. This Polytechnic is in existence for more than 42 years without adequate Boys’ Hostel facilities. To benefit the students studying in this Polytechnic, two floors for 200 students (100+100) rooms, toilets, kitchen, steam cooking, dining hall with RCC benches marble top finish, reading room, T.V. room, recreation hall including furniture, fans, lights etc., are proposed at a cost of Rs. 150 lakhs.
6. **Ladies Hostel – Government Polytechnic, Udhagamandalam – Construction of First Floor in the existing Hostel building for 45 students**

The Government Polytechnic, Udhagamandalam was started during the year 1982 and this institution is not having adequate hostel facilities etc. To benefit the students, construction of first floor in the existing Ladies Hostel building for 45 students and to provide other amenities such as reading room, recreation hall, toilets, dining hall including furniture, fans, lighting etc., are proposed at a cost of Rs. 60 lakhs.

7. **Ladies Hostel – Dr. Dharmambal Government Polytechnic for Women, Chennai – Construction of Ladies Hostel for 100 students in the existing two hostels to construct First Floors (50+50) rooms**

The Dr. Dharmambal Government Polytechnic for Women, Chennai was started during the year 1962 and this institution is not having adequate hostel facilities for ladies. This Polytechnic is in existence for more than 38 years without adequate hostel facilities. To benefit the girl students, construction of Ladies Hostel for 100 students in the existing two hostels, toilets, dining hall including furniture, fans, lighting etc., are proposed for a sum of Rs. 120 lakhs.

8. **Class Rooms – Dr. Dharmambal Government Polytechnic for Women, Chennai – Construction of first floor and second floor of existing building**

The institution is not having adequate building facilities. To provide classroom facilities, construction of first floor and second floor in the existing building including furniture, fans, lighting, toilets etc., are proposed for a sum of Rs. 100 lakhs.


The Government Polytechnics are not having adequate computer facilities for coaching the students admitted in Information Technology and Computer Technology courses. In the present scenario, when Information Technology is accorded a very high priority and almost all the private educational institutions have provided adequate computer facilities for their students, those studying in the Government Polytechnics find it difficult to access the computers and are, therefore, unable to have the required practical knowledge in the computer area. For purchase of computers and for introduction of Information Technology and Computer Technology courses (for 22 Government Polytechnics), the allocation is Rs. 250 lakhs.

### B. Plan Grant to Anna University

1. **Ongoing Schemes of Ninth Plan**

   An amount of Rs. 200 lakhs is estimated for the following ongoing Programmes:

   (i) Crystal Growth Centre- (UGC-AU Faculty Programme) (ii) COSIST Chemical Engineering (iii) B.E. Computer Science (iv) DSA – Electrical, Electronics and Communication Engineering (v) MBA Programme (vi) M.E. Instrumentation Engineering (vii) M.Tech. Remote Sensing (viii) Ocean Data
Centre (ix) Post B.Sc. Diploma Course in Computer Science and Application  
(x) B.E. Degree Course in Printing Technology (xi) Development of Faculty of 
Science and Humanities - VI Plan (xii) INFLIBNET Programme (xiii) P.G. 
Material Science Fellowship (xiv) DSA Civil

2. Establishment of New Centres

An outlay of Rs. 600 lakhs is proposed for the establishment of new centres in emerging areas during the Tenth five Year Plan. The details are as follows:

(i) Centre for Web based Education (ii) Centre for Catalysis (iii) Centre for 
Information and Communication Technology (iv) Centre for Nanotechnology 
(v) Centre for Medical Electronics (vi) Centre for Convergent Technology 
(Manpower Development in the area of Convergent Tech.)

3. Improvement of Campus (Main and M.I.T.) Infrastructural Facilities

An amount of Rs. 600 lakhs is proposed for improvement of Campus 
(Main and M.I.T.) infrastructural facilities, viz., (i) Improving facilities in Lecture 
Halls, (ii) Improving Roads, (iii) Strengthening Electricity Supply, (iv) 
Strengthening Local (Telephone) Communication facilities, (v) Campus 
Networking, (vi) Improving Sewerage & Water Supply Systems, (vii)(a) 
Construction of Staff Quarters (Teaching), (vii)(b) Construction of Staff 
Quarters (Non-Teaching), (viii) Construction of Student Service Centre, (ix) 
Introducing Office Automation, (x) Improving Sports Facility and (xi) 
Construction of Hostel Blocks.

4. Improving / Strengthening the Infrastructure facilities in Six Government 
Engineering Colleges brought under the Anna University

The Government through the Anna University (Amendment) Act 2001, 
has brought the following Government Engineering Colleges under the control 
of Anna University as constituent institutions from January 2002 onwards. (i) 
Thanthai Periyar Government Institute of Technology, Vellore (ii) Alagappa 
College of Engineering and Technology, Karaikudi (iii) Government College of 
Technology, Coimbatore (iv) Government College of Engineering, Tirunelveli 
(v) Government College of Engineering, Salem (vi) Government College of 
Engineering, Bargur.

Since these Colleges are expected to function as Regional Centres in 
providing Academic and Research inputs for the colleges in the regions, it is 
proposed to provide / strengthen infrastructure facilities in all the six 
institutions. To achieve this objective, the allocation will be Rs. 25 crores.
**Tenth Five Year Plan Outlay**

The outlay for Technical Education will be Rs. 49 crores. The details are given in the Table below:

<table>
<thead>
<tr>
<th>Technical Education - Tenth Five Year Plan Outlay</th>
<th>(Rs. in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of the Institutions</strong></td>
<td><strong>Tenth Five Year Plan Outlay</strong></td>
</tr>
<tr>
<td>A. Technical Education Department</td>
<td></td>
</tr>
<tr>
<td>1. Polytechnic Education</td>
<td>10.00</td>
</tr>
<tr>
<td><strong>Total - Technical Education Department</strong></td>
<td><strong>10.00</strong></td>
</tr>
<tr>
<td>B. Plan Grant to Anna University</td>
<td></td>
</tr>
<tr>
<td>1. On going schemes</td>
<td>2.00</td>
</tr>
<tr>
<td>2. Establishment of Six New Centres of Excellence in emerging areas</td>
<td>6.00</td>
</tr>
<tr>
<td>3. Improvement of main and MIT campus-Infrastructure facilities</td>
<td>6.00</td>
</tr>
<tr>
<td>4. Improvement/ Strengthening the infrastructure facilities in SIX Government Engineering Colleges brought under the Anna University.</td>
<td>25.00</td>
</tr>
<tr>
<td><strong>Total - Anna University</strong></td>
<td><strong>39.00</strong></td>
</tr>
<tr>
<td>Grand Total – Technical Education</td>
<td><strong>49.00</strong></td>
</tr>
</tbody>
</table>