

GOVERNMENT POLYTECHNIC

PANAJI

INSTITUTION CHARTER

Release - 2

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A website is available at <http://www.gpp.nic.in>.

GOVERNMENT POLYTECHNIC, PANAJI

INSTITUTION CHARTER

1. INTRODUCTION:

Technical Education of Goa, prior to 1963, was under the Department of Technical Education , Portugal, in Portuguese medium. The Institution was known as “Scola de Industrial e Commercial” Certificate Courses were conducted in different vocations.

After the liberation of Goa in 1961, Technical Education developed rapidly and trained the following manpower:

- Skilled worker/Craftsmen
- Technicians
- Engineers/Technologists.

1.1 Government Polytechnic, Panaji, was started in August,1963. The ‘**Institute of Escola de Industrial e Commercial**’ was upgraded to the Polytechnic status. The Institute started with three branches namely Civil, Electrical and Mechanical Engineering with 40 seats each. The Institute was shifted to the spacious campus at Altinho in 1968.

2. INFRASTRUCTURE

The Campus contains Boys’ Hostel with a capacity of 300 and Girls’ Hostel with a capacity of 150 was started in 1985. Women’s Wing of Polytechnic was started in 1984 (now known as Extension Wing).

2.1 The Institute has well equipped Gymkhana and an open ground for playing outdoor games.

2.2 There are separate canteens for Main Building as well as Extension Wing

2.3 The Institute has 3 Computer Centers. Each with 10 computers. Under the modernization and removal of obsolescence (MODROBS) scheme of AICTE Rs. 10.00 lakhs grant will be used to upgrade 2 computer centers with the latest hardware on both Windows and Linux operating system.

2.4 The Institute library is one of the best in the State located in a separate spacious building with three floors and a basement totally covering 1034sqm. Reading Room is on the ground floor, stacking cum lending section on the first floor, Reference section on the second floor and Learning Resource Utilisation centre (LRUC) in the basement.

3. DIPLOMA PROGRAMMES OFFERED

Government Polytechnic Panaji offers two types of Diploma Programmes

- ❖ Post S.S.C.
- ❖ Post H.S.S.C.

❖ **Post S.S.C.**

Course	Duration in Terms	Intake at present	Year of starting
Civil Engineering	6	60	1963
Electrical Engineering	6	30	1963
Mechanical Engineering	6	60	1963

Fabrication Technology & Erection Engineering	8	30	1973
Electronic Engineering	6	45	1976
Food Technology	7	15	1976
Instrumentation and Control	6	20	1984
Garment Technology	6	30	1996
❖ Post H.S.S.C.			
Security and Investigation Technology	6	30	2003
Modern Office Practice	6	30	1976

4. THE PRESENT STAFF STRUCTURE IS AS FOLLOWS:

Principal	1
H.O.D.'s	6
Lecturers/Instructors	69
Deputy Registrar	1
Assistant Accounts Officer	1
Assistant Stores Officer	1
Sr. Librarian	1
Supporting Staff	131

5. PRESENT STATUS OF ACTIVITIES:

CIVIL ENGINEERING DEPARTMENT

The Diploma Course in Civil Engineering with an intake of 60 students per year

- Imparts quality education in the following areas:
- Construction Technology
- Building Drawing
- Transportation Engineering
- Surveying & Leveling
- Soil Mechanics
- Civil Structures - Mechanics, Analysis,
- Design and detailing
- Environmental Engineering
- Irrigation Engineering
- Hydraulics
- Quantity Survey and Costing
- Construction Management

The department is in a position to offer consultancy in:

- Planning of Buildings.
- Design of R.C.C. and steel structures
- Analysis of existing structure for fitness
- Valuation of building and industrial structures
- Land surveys such as preparation of layout plans, demarcation of sites, contouring.

- Checking measurement of Civil works executed by different agencies and billing.
- Pollution control techniques for air pollution and industrial waste treatment.
- Soil testing.

MECHANICAL ENGINEERING DEPARTMENT:

- 5.2.1 Mechanical Engineering is one of the basic and the most conventional courses. This course is being offered right from the inception of Polytechnic in Goa.
- 5.2.2 The basic science and engineering subjects are introduced in the first two terms. The general introduction to Electrical, Electronic, Mechanical is done in the next two terms. Students are exposed to design, production, and management and also awareness to Computer studies. The Course provides sufficient practical background. Projects and Seminars provide a good opportunity to apply their knowledge in real situations.
- 5.2.3 The department can offer the following to the industries:
- To find solutions to the problems in the areas of production, inventory, materials handling, line balancing, scheduling, quality, control, inspection.
 - To organise short term courses and consultancy for supervisory level Personnel.
 - To prepare instructional manuals/working drawing.
 - To prepare inspection cards.
 - To organise long term courses such as AMIE for industrial personnel after working hours.
 - To organise short term courses on:
 - Inventory control
 - Metrology.
 - Quality Control.
 - Industrial Management.
 - Human relations.
 - Industrial Hygiene and safety.

5.3 WORKSHOP SECTION:

- 5.3.1 The workshop section of Government Polytechnic, Panaji, has completed thirty three years of its fruitful existence by training technicians in Engineering in various disciplines.
- 5.3.2 The section provides training in the first year of various courses conducted in this Institute. The skills are imparted in carpentry, fitting, smithy and welding. At the second and third year level, the workshop section offers practical training in acquisition of skills in the use of various conventional machines and equipments.
- 5.3.3 The practical training is mainly for the diploma students in Mechanical Engineering. The workshop is well equipped with various tools, equipment' and machinery which include the following:
- | | |
|-----------------------------------|---------|
| • Centre lathes | 25 Nos. |
| • Shapers | 5 Nos. |
| • Milling Machine | 2 Nos. |
| • Power Hacksaws | 2 Nos. |
| • Surface Grinder | 1 No. |
| • Radial Drilling Machine | 1 No. |
| • Upright Pillar Drilling Machine | 1 No. |
| • Turret Lathe | 1 No. |
| • Automatic Spindle Lathe | 1 No. |
| • Slotting Machine | 1 No. |

- Pantograph Milling Machine 1 No.
- Pedestal Grinders 3 No.

5.4 ELECTRICAL ENGINEERING DEPARTMENT:

- 5.4.1 The curriculum of this discipline is oriented to make students learn in the field of power systems (distribution, transmission, switch gear and protection), besides giving wide knowledge with regards to working principle, Testing, Control and Maintenance of AC and DC Machine.
- 5.4.2 To develop hand skills, a course is provided in each year like Electrical workshop at III and project at I & IV terms wherein the students study assembly and trouble shooting of various commonly encountered Electrical/Electronic devices. In the project II at final terms level students design, assemble/fabricate gadgets relating to Electrical/Electronic field which involve Soldering, Winding & Testing, etc.
- 5.4.3 The laboratories of the department are well equipped to impart skill in all relevant areas of Electrical Engineering.

5.5 ELECTRONIC ENGINEERING DEPARTMENT:

- 5.5.1 Diploma course in this branch was started in the year 1976. The present intake is 45 students. The growth of industries due to the economic liberalisation has resulted in several multinational companies. This course caters to substantial technical manpower requirements in the middle level management.
- 5.5.2 The curriculum mostly revolves in the practical domain starting with fundamentals of semiconductor devices, circuit analysis, analog electronics and digital electronics circuits are a specialisation, process control in Instrumentation is also dealt with, the final terms of the course relies on Microprocessors and Applications (8085), Introduction to 8086 along with C Programming. Project is carried out mostly individually, almost for one year, generally from the basics of course content learnt.
- 5.5.3 The infrastructure caters abundantly for the syllabi of the course. The basic equipments include CRO's, Dual Power Supplies, Analog & Digital multimeters, Function Generators, Trainer Kits in Electronics, Microprocessors, Oscilloscopes, Monochrome TV & VCR. Digital IC Testers. LCR meters and Magnetic Amplifiers. CCTV Camera set up are also available in the laboratories.

5.6 FOOD TECHNOLOGY DEPARTMENT:

- 5.6.1 The Food Technology course, started in 1976 has a sandwich pattern consisting of two phases of Industrial training as part of the curriculum. It is a seven terms course. Students completing this course are well qualified to work at Supervisory/middle management levels in the production and quality control departments of Food processing industries.
- 5.6.2 The first and second terms include basic course in Chemistry, Physics, Mathematics, Food Microbiology and Food Engineering. The higher terms comprise of the applied courses such as Fruit and Vegetable Technology, Cereal Technology, Technology of soft drinks, Confectionery product Technology. Dairy Technology, Marine products Technology, Animal products Technology. Food standards and quality control. Project work is undertaken by the students in the sixth term.
- 5.6.3 This department is equipped to offer analysis/testing facilities in accordance with PFA/FPO standards and training of personnel for the same, in the following areas:

- Analysis of Fruit & Vegetable Products.
- Analysis of raw material for use in Bakery Industry.
- Chemical & Microbiological testing of water.
- Testing of market milk.

5.6.4 This department can provide technical consultancy in the following fields:

- Fruit & Vegetable Technology.
- Technology of Bakery Products.
- Soft Drinks Technology.

5.7 FABRICATION TECHNOLOGY & ERECTION ENGINEERING DEPTT.:

5.7.1 This sandwich course was started in the year 1973 with an intake of 30 students. It is a 4 year course and the pass out students play a pivotal role in the erection and fabrication of steel structures at various industries.

5.7.2 The curriculum aims at providing technical manpower to the fabrication industries at the middle level management. It is a sandwich pattern course with industrial training in two phases at V and VIII Terms as a part of the curriculum. The first and second terms includes basic engineering courses including compulsory industrial visit. The higher terms consists of Fabrication Engineering curriculum dealing mostly with welding and fabrication process, erection and commissioning of structures.

5.7.3 The Department would be able to help in controlling quality to ISI specifications industries. It can help in erection of machines, trusses, cranes, towers. Welding quality inspection for different structures can be taken up.

5.8 INSTRUMENTATION AND CONTROL DEPARTMENT:

5.8.1 Instrumentation is the application of instruments for monitoring, sensing and measuring. It is a multidiscipline subject. Since all branches of experimental science and technology depends on instrumentation, it can be classified as:

- Medical Instrumentation.
- Industrial Instrumentation.
- Chemical Instrumentation.
- Electronic Instrumentation and so on.

5.8.2 This course was started under Women's Wing. Hence, the scope of this course has been mainly confined to Electronic Instrumentation, which enables the pass out of this course to get jobs mainly in Electronic Industries.

5.9 GARMENT TECHNOLOGY DEPARTMENT:

5.9.1 This is a three year Diploma Course. The course enables them to learn the elements of Garment Technology. The students are taught from the basic of Stitching, Knitting, Embroidery and Yarn manufacture to Weaving, Drafting & Cutting on machines, Computer Application, Size Charts, Specific Charts Markers, Quality Inspection and Designing.

5.9.2 The subject include:

- Art and Design, Fashion Art and Fashion Forecast.
- Apparel standards, specification and Costing.
- Advanced Clothing Construction.
- Garment Machinery and Equipment.

- Business management and Garment exports.
- Hand and Machine Knitting.
- Hand and Machine Embroidery.
- Children's Ladies and Gents wear.
- Textile Science and Garment Drying, Printing and Processing.
- Introduction to Computers, Computer Application in Woven and Printed Fabric and Computer Application in Garment Manufacture.
- Spreading, Cutting and Stitching of apparel product and apparel production control.
- Psychosocial aspects of clothing and survey of apparel designing.

5.9.3 The faculty includes fashion designer's Textile majors, Garment Industry personnel and Experts. The aim of the course is to train students to become technical experts in the Garment Industries as well as to start their own small scale Industry and boutiques. The course can help manufacturers in getting the right personnel for their factories. Also, during the course the Institute could help the Industry getting good designs, projects and overcome their quality related problems.

5.10.4 Two annual events are conducted by the department, namely

- ❖ Exhibition cum sale (PRERNA) of garments and articles done by the students of all the years
- ❖ Fashion show (AVANT GARDE) presented by the final year students as part of the curriculum.

5.10 DEPARTMENT OF MODERN OFFICE PRACTICE:

5.10.1 This department offers unique programme to the extent that it combines conventional practices of a Secretarial job coupled with the Computer-aided management techniques and tools relevant to the Modern Office Practices and envisages competencies and skills oriented office personnel at the entry level in any sector of the Industry. The programme involves 8 weeks in-plant training in the final year and the course is of 3 year duration.

5.10.2 Logistics & Human Resources available in the following areas of expertise:

- Capacity to teach and train in Modern Office Management Practices and Procedures.
- Capacity to teach and train in Computer Aided Office Management Practices including Word Processing & DTP.
- Capacity to train in English Stenography skills at varying levels of speed.
- Capacity to train in English Typewriting Skills at varying Levels of speed.

5.11 SECURITY AND INVESTIGATION TECHNOLOGY DEPARTMENT

With the increase in violence and lawlessness in society the traditional task of police has become complex and demanding. Consequently the industry, corporate and law abiding community is more and more depending on private security/ detective agencies to handle the security functions. These personnel more often than not are untrained and unskilled. In the backdrop of this scenario the Government Polytechnic Panaji ventured to start a diploma programme in Security and Investigation Technology. It is the first of its kind ever to be started in any Polytechnic in the country. It endeavors to provide knowledgeable and skilled personnel to meet the needs of state police, central police organizations as well as private security agencies.

5.12 DEPARTMENT OF COMPUTER APPLICATION

The department is capable of conducting continuing education programmes

- ❖ Windows Operating System

- ❖ Microsoft Office: Word, Excel and Access
- ❖ Programming in 'C'
- ❖ OOPS & C++
- ❖ Programming in Visual Basic
- ❖ Internet and Web Design
- ❖ Data Structures in C
- ❖ Database Management Systems etc.

5.13 LEARNING RESOURCE UTILISATION CENTRE (LRUC)

Teaching-learning is more an interactive process rather than once-through process. Its effectiveness can be enhanced by using various teaching aids apart from traditional chalk-board system. With the developing trends of electronics media and its application it is felt necessary to provide such facilities effectively and economically. LRUC is a section which co-ordinates with teaching facilities to all departments by assisting them in all their learning resource requirements. In addition, it organises various staff development training and workshop to update their knowledge and improve teaching abilities.

Equipments & Machines

- O.H.P.
- Photocopying Machine
- Cyclostyling Machine
- Cutting Machine
- Camera
- Slide Projector
- 16 mm Film Projector, films
- TV/V.C.R.
- Audio Recording System
- Learning Resources:
 - Transparencies
 - Magnetic cutouts
 - Learning Packages
 - Models
 - Charts

5.14 TRAINING & PLACEMENT SECTION.

Following are the function of this section:

1. Liaisons with industries both in Goa and in the State of Maharashtra, Karnataka, Gujarat and Madhya Pradesh(Western Region) for the purpose of training and placement.
2. Placement of students of sandwiched Diploma Courses in Fabrication Technology and Food Technology Under BOAT (Board of Apprenticeship Training, Western Region) Mumbai.
3. Monitors & Supervises the inplant training programmes (six months Duration) at periodic intervals and gets the inplant training evaluated with the help of Industry Personnel.
4. Arrange visits to industries for students during the academic term.
5. Arrange experts for talks on related Technical/General topics for staff/students.
6. Co-ordinates training programmes for teaching and non teaching staff of the Institute.
7. Conducts campus interviews for passed out students and also maintain database of passed students, to be submitted at the request of the industries, for interviews at the Industry.

8. Provides inplant training for students of non-sandwiched Diploma Courses during vacations to acquaint the students with industrial environment and the technical skills required to keep in touch with changing industrial scenario (student chapter for value based training in industries).
9. Also looks after a scheme to impart one year on-the-job training under the Apprentices (Amendment) Act 1973 which pays a stipend of Rs.1400/- per month for passed out unemployed students.
10. Maintains database and record of passed out students in the field of Training & Placement.

6 COMMUNITY POLYTECHNIC: Beneficiaries

- 6.1 All India Council for Technical Education endorsed the recommendation of the working group in technical education constituted in 1978 and resolved that a few selected Polytechnics, which have shown initiative in promoting interaction with the rural community and have the necessary capacity to undertake rural development work, be selected to act as focal points to promote transfer of technology to the rural villages and make contributions to rural development. This Polytechnics, were designated as “Community Polytechnics”. 36 Institution all over the country were selected as Community Polytechnics in 1978-79. The Government Polytechnic, Panaji was selected for implementation of the scheme of Community Polytechnic in 1992-93 Under manpower development training has been imparted to a large number of villagers in short-term training courses viz. Word-processing, typing, T.V. repair, radio repair, Cutting & Tailoring, Fitting and Carpentry. A six-month course in Fashion Designing and three month course in Soft Toys are presently in progress.
- 6.2 In transfer of technology, promotion of smokeless and portable chullas was done in collaboration with Goa Energy Development Agency in villages of Odxel, Alto, Betim and Chimbel. Solar cooler demonstrations were done at Betim and Aivao villages.
- 6.3 Under Community Service, Career Guidance Camps for S.S.C. students have been conducted at Pomburpa, Pednem and Asonora, Nutrition Camps conducted at Carambolim and Betim and Medical Camps conducted at Carambolim and Mayem. Also two Blood Donation Camps were done.
- 6.4 The Polytechnic students are also involved in the Community Polytechnics activities for Community Services and in doing projects related to transfer of technology in rural villages.

7 INTEGRATING PERSONS WITH DISABILITY IN THE MAIN STREAM OF TECHNICAL AND VOCATIONAL EDUCATION: Beneficiaries

- 7.1 Government of India has introduced in the Government Polytechnic, Panaji a scheme for the upliftment of persons with disability in our society through appropriate technical/vocational education subsidized under the scheme.
Under this scheme, persons having at least 40% disability may be admitted to one of the following programmes.

- 1) Technical Diploma programmes of the Government Polytechnic, Panaji for those who have passed 10th/12th standard with at least 40% marks

25 seats are reserved for this category, in different branches.

- 2) Vocational/Skill development short-term training.

These are in areas relevant to this State leading to self-employment or as per the expressed needs of the potential job requirement/trade.

Both the above are subsidised to the extent of fees, accommodation, travel allowance, books, uniform, boarding. Scholarship etc.

8 FACILITIES/SERVICES RENDERED TO THE PUBLIC:

The Government of Goa has approved the Internal Resource Generation Scheme to Government Polytechnic, Panaji, wherein the various services are being rendered to Public/Institution/Factories/Organisation etc. on the payment basis from the part of the profit service charges will go to Government for the utilisation of infra-structure facilities. So also a part of profit generated is being paid as honorarium to the persons involved in the implementation of scheme. The five principal activities through which the resources can be generated are Testing, Consultancy, Research and Development Project Continuing Educational Programme and Production Activities.

9 ADMISSION PROCEDURE:

9.1 ADMISSION PROCEDURE AND CRITERIA FOR ADMISSION:

Since, the year 1997-98 the Government has introduced a Centralised Admission System for the various Diploma Courses in all the Government Polytechnics in Goa. The Directorate of Technical Education is publishing a Common Information Bulletin and Application form for Admission to these courses, immediately after the declaration of S.S.C. results. The admission schedule to various Diploma Programme in all Polytechnics is published in the leading newspapers. The Criteria and the procedure for admission is amply clarified in the advertisement published by the Directorate of Technical Education.

9.2 DIRECT ADMISSION FOR VOCATIONAL STUDENTS

Under the multi-point entry system students having higher qualification than S.S.C. can seek admission directly. A separate prospectus giving details of this admission channel is available with the office of the Directorate of technical Education.

10 EXAMINATION PROCEDURES:

- a) The Board of Technical Examinations conducts all examination at the end of each term.
- b) All students admitted from the academic year 1998-99 are covered under "MPEECS" i.e. Multi Point Entry Exit and Credit System.
- c) The rules and regulations framed by Secretary Board of Technical Education from time to time are available with the Head of Department (Examination) who is the liason officer of this Institute in all matters concerning the examinations.
- d) All the Diploma Programmes offer flexibility and students can opt courses of their choice within the framework of the programme to achieve specialisation in their field of choice.
- e) Counselling is offered at the beginning of each term for students to guide them to select the courses as per their choice and as per availability of infrastructure.
- f) Every student is allotted to one particular counsellor throughout his study in Polytechnic. The counsellor is invariably teaching staff member of his/her discipline. The Head of Department (Examination) is the Chief Counsellor.
- g) Examination fees are charged as per the rules in force as decided by the Board of Technical Education and the students are required to pay the fees on dates as notified from time to time on the Notice Board. Each Diploma Programme has about 36 to 40 courses. Each Course has between 4 to 8 fixed credits depending upon the number of hours as per week given in the teaching scheme. When a student passes a course he earns these credits and only after securing minimum of 180 credits he is awarded the Diploma certificate.
- h) A student who enters after doing higher education than S.S.C. is eligible for credits for such courses which are given equivalence by the Board of Technical Examination.
- i) It is possible for high achievers and students entering with initial credits due to higher education as mentioned in 'g' above to complete the programme in less than 3 years.(6 terms).

11 LIBRARY PROCEDURE:

The Institute has well equipped library. The Library timings are 9.00a.m. to 5.30p.m. The entry to library premises is restricted to hall ticket holders only. The bonafide hall tickets holders can use the section for reading reference Books/Periodical/Magazine etc. The Books/Periodicals/Magazine. In the Reading and Reference Section are issued against hall tickets. The users shall collect library tickets while leaving the library by returning Books/Periodical/Magazine used for reference. In addition to above, each student is allowed to take two textbooks for home reading. The student can return the books within the period of one week and he/she is supposed to return the books within one week in the stacking section situated on the 1st floor of the library. The library is also having the sets of books under the Book Bank Scheme. These sets are issued to the bonafide poor and deserving students. The student has to apply for the set of books in the prescribed proforma.

12 DISCIPLINE

Students have to maintain discipline in the college premises as well as in the Hostel.

13 COMPLAINTS AND GRIEVANCES

Students and their parents may contact Principal for complaints and grievances
Public may drop their complaints in Complaint Box located outside the office. A Grievance Officer and a Vigilance officer is also available for the Institute.

14 SCHOLARSHIP AND FREESHIPS:

In Common Information Bulletin for admission to various Diploma Course the information about Scholarship/Freeship available in the Government Polytechnic, Panaji have been incorporated in the part II of the Bulletin.

15 PRIZES:

The Institute awards various prizes to meritorious and deserving students from the donations instituted by individual donors/organisations.

16 REFUND OF FEES

The information regarding the refund of fees and deposit are also incorporated in the Common Information Bulletin for admission to various diploma courses published by the Directorate of Technical Education.

17 CONTACT PERSON

In case of difficulties/ help, contact Principal of the college. Wardens of the hostels should be contacted in case of hostel matters.

Government Polytechnic Panaji is open on all working days from Monday to Friday between 9.00 a.m. to 1.15p.m. and 2.00p.m. to 5.45p.m.

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