Chapter 3
Profile of Medical and Engineering Colleges in Goa

3.1 Introduction

Researcher visited to the medical and engineering colleges in Goa, collected library's data and analyzed the data to understand the present status of professional academic colleges especially engineering and medicine in Goa. The main purpose of this review is to analyze the activities of libraries, which functions as backbone in professional education system in the light of e-Resource and ICT era. Data from these colleges is collected and analysis the use of e-Resources and availing services made available to users from libraries. The data collected from these colleges helpful for analyzing, and evaluating libraries and gave an insight to the researcher. This chapter presents brief information of the medical and engineering colleges in Goa. The information presented is collected from the sources like institutional reports, from the library and websites of colleges. Researcher has made an attempt to summaries precisely information on medical and engineering colleges in Goa.

3.2 Status of Engineering Colleges in Goa:

Engineering courses in Goa are conducted similar to other states based on science background and after passing the higher secondary level. The struggle for getting admissions in government and private engineering colleges in Goa is highly competitive and students of Goa gets admission to professional courses only after cracking the entrance examination and then get admitted in engineering colleges based on the rank of merit. Engineering courses in the Goa State are approved by All India Council for Technical Education (AICTE) and the colleges also offer direct admission to the second year of the engineering course for diploma holders (entrance-exam.net/engineering-colleges-in-goa/). Students have choices in selecting branches in engineering courses like information technology, computer engineering, electronics and telecommunication engineering, electrical engineering, mechanical engineering and civil engineering etc. In addition to these general engineering courses, some special engineering courses are initiated like ship building engineering to fulfill local need. Engineering in Goa is a good
carrier orientation option for students in Goa and all over India. At present there are seven engineering colleges in Goa. The details are listed in table 3.1

Table 3.1: Engineering Colleges in Goa

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Engineering Colleges</th>
<th>Present intake</th>
<th>Duration of Courses</th>
<th>Total Strength</th>
<th>Establishment Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Goa College of Engineering Goa</td>
<td>420</td>
<td>4 yrs</td>
<td>1680</td>
<td>1967</td>
</tr>
<tr>
<td>2</td>
<td>National Institute of Technology Goa</td>
<td>150</td>
<td>4 yrs</td>
<td>600</td>
<td>2010</td>
</tr>
<tr>
<td>3</td>
<td>BITS Pilani Goa</td>
<td>500</td>
<td>4 yrs</td>
<td>2000</td>
<td>2004</td>
</tr>
<tr>
<td>4</td>
<td>Angel Institute of technology and design Goa</td>
<td>180</td>
<td>4 yrs</td>
<td>720</td>
<td>2012</td>
</tr>
<tr>
<td>5</td>
<td>Padre Conceicao College of Engineering, Goa</td>
<td>240</td>
<td>4 yrs</td>
<td>960</td>
<td>1997</td>
</tr>
<tr>
<td>6</td>
<td>Don Bosco College of engineering Fatorda Goa</td>
<td>240</td>
<td>4 yrs</td>
<td>960</td>
<td>1986</td>
</tr>
<tr>
<td>7</td>
<td>Rayeshwar Institute of Engineering, Ponda Goa</td>
<td>160</td>
<td>4 yrs</td>
<td>640</td>
<td>2001</td>
</tr>
<tr>
<td></td>
<td><strong>Total Intake</strong></td>
<td><strong>1890</strong></td>
<td></td>
<td><strong>7560</strong></td>
<td></td>
</tr>
</tbody>
</table>
The oldest engineering college in Goa is "Goa Engineering College Goa" established in 1967 and "Angel Institute of Technology and Design" is the recent addition in 2012. The real growth in engineering sciences is more since 2000. Nearly 4 colleges out of 8 are established in-between 2000-2012. It is noticed that out of 8 colleges "National Institute of Technology" is autonomous institute, BITS managed under BITS Pilani and remaining six are affiliated to Goa University. The courses offered are mainly Civil Engineering, Computer Science Engineering, Information Technology, Mechanical Engineering, Aeronautical Engineering, Marine Engineering, Electrical and Electronics, E and TC, Mining, Electronics and Communication Engineering, Chemical Engineering, Electronics and Instrument Engineering etc.

**Highlights:**

- Nearly 11 courses in Engineering are conducted in seven colleges
- E and T C, Mechanical, Civil, Computer, IT, are common courses in all engineering institutes
- Electrical and Electronics, Mining, Marine, Electrical and Electronics, Chemical Engineering are specialized courses
- All engineering institutes are equipped with laboratories, workshops, and library facilities and qualified staff is appointed including librarians.
- Recruitment cell or placement cells are available in every institutes
- Well qualified faculties with BE and ME qualifications.
- Industrial relations are well built up by all institutes and hence placement at all over India is possible.
- All engineering institutes are approved by AICTE
- Goa College of Engineering, NIT, and BITS are the popular institutes in Goa.

For admission to engineering in Goa, one has to pass 12th class with 50% aggregate marks and have physics, chemistry and Mathematics as mandatory subjects. After clearing 12th have to appear for the entrance examination conducted by Directorate of Technical Education Goa known as GECT Goa.
3.3 Intake Capacity for Engineering Courses:

In every engineering college minimum 3-4 courses are available to get the admission. Each courses of engineering, the intake capacity approved is 60 seats but number of seats in "Goa College of Engineering" is 40 seats for civil and mechanical engineering are approved. Some colleges also offer PG course in engineering (ME or M Tech). The number of seats in Goa engineering colleges has gone up by over 35% in the last two years. This clearly indicates that the value to engineering professional courses in Goa is increasing. Among the different courses, demand for electronics communication and mechanical engineering courses is going high while civil engineering is preferred last. The state governments manage "Goa Engineering College (GEC)", which was set up more than 40 years ago, and added the mining course last year with an intake of 30 seats. A progressive mining industry in Goa needs mining engineers and has career opportunities within the state. Previously for mining course students from Goa opt for institutes in states like Bihar, but this problem is solved by Technical Education in Goa by introducing 30 seats in mining engineering course. (Pradip Kusnur, times o India. 2012-06-26).

3.4 Profile of Engineering Colleges in Goa:

3.4.1 Goa Engineering College: (GEC)

Goa College of Engineering (GEC), Farmagudi, North Goa, P.O. Ponda, Goa-403401 is one of the oldest and best engineering college in Goa established in 1967 with Civil, Mechanical and Electrical Engineering courses. Later added Courses in Electronics and Telecommunication, Engineering, Computer Engineering and I.T. Now six engineering professional courses are conducted in these colleges. Annual intake capacity of students is 320 in all the branches. (Civil Engineering (40), Mechanical Engineering (40), Electrical Engineering (60), Electronics and Telecomm. Engineering (60), Computer Engineering (60) and Information Technology (60)). In addition two graduation courses, postgraduate courses in the fields of foundation Engineering and Industrial Engineering have also been introduced and offering full time and part-time courses both. This is the only college in Goa that is funded by government and approved by All India Council for Technical Education (AICTE), NBA and funded by Govt. of Goa, presently affiliated to
Goa University. The Institute spread over in 268 acres and college, department buildings are in the campus as well as, hostels, residential staff quarters, roads, lawns and gardens are available on GEC campus. The different course syllabus are regularly updated and provided laboratory equipments for practical exposure. Care is taken from time to time to keep pace with the changes in technology and in meeting the growing needs of the industry.

The Goa Engineering Colleges campus is one of the biggest campuses in Goa. The college has four boys' hostels and one girls' hostel, guest housing facilities for visiting faculty as well as parents of students, main canteen and multiple mess facilities, the campus has small and medium restaurants, shopping complex, and shops that support to student needs ranging from photocopying to stationery and other all day-to-day needs. The campus has a Post Office and a Computer Center, Gymkhana, Power Gym, which is accessible to students for full day. There is an indoor badminton court, a full-length natural grass soccer ground that can also be used as a cricket field, and a basketball court.

The college has its own library which is one of the largest in the libraries of state, and is treasure of information sources both in print and e-Resources containing books, journals, and magazines, which caters to needs of all the subjects taught in the college. The Library has a multimedia section which houses electronic information. The library has a book bank facility and students can obtain books for the entire year and return after the completion of the year, by paying small fees. The library also managed by the professional qualified librarian. The information is gathered from the website www.gec.ac.in

3.4.2 National Institute of Technology: (NIT)

National Institute of Technology (NIT) Farmagudi, Goa, is newly sanctioned institute of national importance by Govt. of India in 2009 under Ministry of HRD. At present NIT Goa is temporarily accommodated and functioning in the Goa Engineering College (GEC) campus located at Farmagudi, Goa. This institute is accorded with Deemed Institute Status.
The National Institutes of Technology are leading institutions of technology in India. NITs initially started as the Regional Engineering Colleges (RECs), and developed as top technological institutions of the country, offering academic programs at undergraduate, post graduate and doctoral levels. In 2002, NITs managed under Centrally Funded Technical Institutions of Ministry of Human Resource Development (MHRD) and renamed as National Institutes of Technology. To begin with, MHRD permitted annual intake of 90 students to NIT, Goa, comprising of 30 students in each of the following B. Tech. programmes. In addition, 6 seats have been allocated under the Direct Admission for Students Abroad (DASA) scheme. The first batch of students was admitted and academic activities of NIT started from 2010-11 session.

1. Computer Science and Engineering
2. Electronics and Communication Engineering
3. Electrical and Electronics Engineering

NITs Goa offer degree courses at bachelors, masters, and doctorate levels in various branches of engineering and technology. NIT is an autonomous institute and set their own curriculum.

NIT Goa provides on-campus housing to students, research scholars, and faculty members. Students live in hostels, also known as halls. Most have single accommodation but many live in double or triple rooms during their initial years. Hostels have recreation rooms equipped with cable television, magazines and newspapers reading areas, indoor games and in hostel room’s internet connectivity is provided (Wi-Fi). Every hall (Hostel) has its own cafeteria managed by the college or by local private organizations. NIT has also a common cafeteria facility for students and a separate cafeteria for professors. GOA NITs have an athletic ground and facilities for field, indoor and aquatic events.

In the popular extracurricular activities includes National Cadet Corps (NCC), National Service Scheme (NSS), Indian Society for Technical Education (ISTE), and annual college festivities. Students run hobby clubs such as Linux User Groups (LUGs), music clubs, debate clubs, literary clubs, and web design teams. Students also publish campus magazines which is showcase of student creativity and journalism. NITs conduct
annually Inter-NIT Sports Meet, during February and March, and conduct annual sports contests in their Goa NIT campus.

NIT has a Central Library equipped with technical books, literature, fiction, scientific journals, and other electronic material. Most of the NIT libraries are digitized. Some provide an intranet library facility. Every departmental library has high-speed connectivity. Electronic libraries allow students to access online journals and other periodicals through the AICTE-INDEST consortium, an initiative by the Ministry of Human Resource Development. Students also have access to IEEE documents and journals. Library have video conferencing facilities, others are upgrading under the World Bank funded TEQIP scheme. Well professionally qualified staff is appointed in the library for its management and services to the users. The information is gathered from the website www.nitgoa.ac.in.

3.4.3 Padre Conceicao College of Engineering: (PCC)

Padre Conceicao College of Engineering is at Verna, North Goa. The vision is “To Grow into a Center of Excellence in Engineering Education and Research and Promote PCCE Brand of Engineers" well known for competence and integrity. The college was established in the year 1997 to meet the increasing wants of technical man power of Goa as well as in other parts of the country. It is the only private engineering college in the State of Goa, being run on self financing concept. The college imparts technical education that is practical oriented with prominence on self employment

Mission Statement of the institute is:

- To provide excellent infrastructure in terms of faculty, labs, library and other facilities required for curricular and extra-curricular activities.
- To provide the best work culture and academic ambience with avenues for all round personality development of the students.
- To work closely with industry and other organizations involved in nation building and societal development
- To continue to remain in the forefront as an institution of first preference for all its stakeholders
The college is named after Fr. Conceicao Rodrigues, founder of Agnel Ashram, who died in 1984 after making an outstanding involvement in the field of Technical Education at national level and known as “Saint of Technical Education”.

Padre Conceicao College of Engineering campus is fourth largest engineering college campus in Goa. The college has two boys' hostels and one girls' hostel. The campus contains staff quarters, and guest house facilities for visiting faculty as well as parents of students. The main canteen and multiple mess facilities are available.

The Training and Placement Cell at Padre Conceicao College of Engineering handles faculty training requirements, campus interviews, students project requirements, guest lectures and special lectures, industrial visits of students, magazine and six-monthly newsletter. Besides this, an extensive database of companies (around 1000 companies all over India) has been created to facilitate student placement. Corporate Industries Wipro, Mahindra-British Telecom, Zuari Industries etc. are notable and visited to campus for Placement.

The library is the heart of an educational institution and this also true in case of library of PCCE. Well set library includes stacking area, reference section, main reading area and separate reading area for reference section. The main reading section can accommodate about 100 students. The reading area of reference section can accommodate about 20 students. Currently the library holds a collection of around 13,000 books which include textbooks as well as reference books. Library regularly subscribes to 47 periodicals out of which 13 are international journals and 34 national journals. This is an era of electronic libraries. Computerization of the library is already completed. To help users in utilizing the resources information services are provided (like new arrivals, availability of titles of their interests etc.) at their finger tips. The information is gathered from the website www.pccegoa.org/

3.4.4 Shri Rayeshwar Institute of Engineering and Information Technology: (RIT)

Shri Rayeshwar Institute of Engineering and Information Technology is located at Shiroda, Goa with mission “To keep pace with the rapid technological changes around us, to provide quality education and state-of-the-art facilities to students to cultivate and
nurture knowledge for their first successful step towards global citizenship”. The vision
of the institute is “To be the leaders in general, technical and professional education with
global outlook and national spirit by providing realistic and relevant guidance with
positive attitude.” The activities involved in curricular study, research, implementation,
development, and management of all computer-based information systems as applicable
to the software and hardware of the computer. Information technology is used in
engineering college for all functions, processing and recovery of all the kinds of
information using computers.

Shree Rayeshwar Institute of Engineering and Information Technology is one of the most
alleged institutes for technological education in Goa. The key objective of institute is to
give best technocrats of the higher quality who would connect in research design and
development to help building the nation towards prosperity. The institute has strived hard
to create innovative and diligent human resources who reproduce potency of character.
They expand themselves through both academics and extra-curricular activities and are
thus well-equipped to meet the challenges of the workplace and society. B.E. or B. Tech.
is a four-year program that comprises eight semesters, while the diploma is of six
semesters. Further education for the master's degree takes two more years after
graduation, with four more semesters. Some of the specialized fields in information
technology courses include Computer Science, Databases and Information Systems,
Networking and Communication, Software Engineering, Embedded systems, Geographic
Information Science (GIS), and IT and Society.

The Training and Placement cell plays essential and crucial role in student’s prospect and
act as pillar of the institute. This cell constantly helps students in pursuing their career
goals by acquiring employment-seeking skills and attaining required employment.
Reputed industrial houses across the country visit to this institute regularly for the
campus recruitment programmes.
The institute has well set library and collection useful for the curricular activities. Library
is equipped with print and e-Resources and provides library services to the users. The
information is gathered from the website www.ritgoa.ac.in
3.4.5 Birla Institute of Technology and Science Pilani: (BITS)

Birla Institute of Technology is situated at Zuarinagar, Goa, established in 2004. Intake capacity is 2636. BITS Pilani is at the front position of scientific research and industrial consultancy apart from imparting high quality engineering education. A large number of students at all levels in the three-tier structure of the Educational Programmes are involved in research. After the first-degree level, a one-semester full-time thesis-seminar course is taken and at higher degree level dissertation course offer excellent opportunities to brilliant students to be involved in research. In the Doctoral Programme, a large number of PhD students positioned on-campus, off-campus or at outside centers, are occupied in research work in the different research areas. The Institute's linkages with industries, R&D Centers and other institutions in the country and abroad have given a further thrust to research activities of the institute.

Birla Institute of Technology and Science, Pilani is actively engaged in the pursuit of knowledge through its various programmes for developing and training highly skilled technical manpower ever since its inception in 1964. Besides contributions from engineering and technological groups, there have been significant contributions from science, management, social sciences and humanistic studies groups as well. Institute has well equipped laboratories and high tech infrastructure which have been sponsored partly by the multinational giants like Motorola, Tata-IBM, CISCO, NOKIA and several others. These activities and infrastructure that has been developed have been of immense help in carrying out good quality research and maintaining strong ties with industries. The student projects serve as useful inputs to various research activities. Students under the banner of a technological festival called ‘APOGEE’ organize a science and technology exhibition and it forms an important part of our research activities. (www.bits-pilani.ac.in/Goa/researchAndConsultancy).

The university campus overlooking the Zuari Estuary is a formal and axial composition with clearly demarcated academic, residential and recreation zones. The academic block forms the focus of the campus, with 250,000 sq ft (23,000 m²) of academic and administrative blocks, 2000-seat auditorium, 50,000 sq ft (4,600 m²) library, 30,000 sq ft (2,800 m²) computer center, 500,000 sq ft (46,000 m²) of hostels and faculty housing,
60,000 sq ft (5,600 m²) of support facilities and 1.3 km covered walkways, this campus is one of the largest university campuses in India.

As an example, the institute has its own faculty and administration. Operating under the umbrella of an established university gives it the advantage of using the infrastructure (such as Practice School, evaluation systems etc.) which have already been developed and tested by BITS Pilani. Admissions to all integrated first degree programs are based on ‘BITS Admission Test’, commonly known as BITSAT.

The Training and Placement Cell functioning in the College is entrusted with the responsibility of: Guiding students for placement is credible in organization. Conducting seminars, group discussions, and mock interviews is part of career guidance and personality development. This Cell is also coordinating the efforts of the students of the various departments in arranging industrial training for them. They take active part as an information center for students in job opportunities and competitive examinations like GATE, GRE, CAT and the like. Bits have a standard of 90%+ achievement in their placements. About 151 large and medium sized companies visit BITS campus repeatedly to recruit students.

The Training and Placement Cell of the college is headed by a Placement Coordinator, who is a senior faculty member of the college. The Cell has student representatives from all classes and a student coordinator. The Student Coordinator interacts with the Placement Coordinator for the daily functioning of the Cell. The Cell has modern infrastructure facilities for inviting various companies in the campus and also for imparting training to the students. Many reputed national and international companies are visiting to the campus every year for selection and placement of students.

The BITS Pilani has a well developed library system supporting to the vision and mission of the organization. The library has rich collection includes print and e-publications in the area severed by BITS. The information is gathered from the website www.bits-goa.ac.in

3.4.6 Don Bosco College of Engineering:

Don Bosco College of Engineering situated at Fatorda Goa, established in 1973 approved by AICTE, with branches: Civil Engineering (60), Computer Engineering (60), E and T C
The vision of the institute is “The Fatorda Salesian Society focuses on Innovative Education, Training and Career development for tomorrow’s workforce” and mission statement is “The Fatorda Salesian Society of Don Bosco, Fatorda, aims at becoming a point of reference for all youth of the neighborhood, for quality education, where youth seeks and receive assistance with regard to their integral development (more than a centre for recreation). A place also for spiritual animation, vocational guidance, counseling, recruitment services, technical training and leadership skills”.

The Fatorda Salesian Society is a registered Society in the State of Goa and part of the world wide society of DON BOSCO with branches over 100 countries in the world. The head office is situated at Rome. In India over five hundred institutes are engaged in the education for the Young. Our Regional office is set up at Odxel, near Goa University campus. Focus is in the Education to the Young. Don Bosco College of Engineering labs are on par with the finest in the world. The uniqueness is in the collaborative research infrastructure being built through strategic tie-ups with leading global corporations. Such activities culminate into active Centers of Excellence (CoEs) and labs for advanced studies going forward.

Don Bosco College of Engineering Placement and Training Cell have moved from strength to strength and have emerged as a favored destination for many national and international organizations to recruit fresh talent nurtured of the college. The excellent infrastructure of the college facilitates different activities of placement like pre-placement talks, written tests, group discussions, and interviews as per the requirements of the organizations. The consistent placement record illustrates the commitment to the success of the college. Don Bosco College of Engineering has a 80% job placement record at their credit.

The Library is well placed and contain print and e-Resources in sufficient to manage education support. Qualified Library staff is appointed for providing services and managing the collection. The information is gathered from the website www.dbcegoa.ac.in
3.4.7 Fr. Agnel Engineering College:

Fr Agnels Engineering College located at Assagaon, Goa and place is place to get an extra engineering college in the new academic year at Assagao as the proposal for Fr Agnel's Engineering College is awaiting sanction of the All India Council for Technical Education. On getting the sanction the number of engineering seats in Goa goes up by another 180. The Directorate of Technical Education has received a proposal from Fr Agnel Institute to set up an engineering college at Assagao. The college offered mechanical, electronic and computer engineering streams with an intake of 60 seats each. (http://articles.timesofindia.indiatimes.com/2012-05-15/goa/31711301_1_engineering-seats-assagao-engineering-college)

The institute also has plans of starting more courses in the in future, and Agnel Charities has provided 51,000 square meters of land for setting up this new institute. Government of India has sanctioned 9 crores and the State Government has sanctioned 6.8 crores. The college provides for 60 seats in mechanical engineering and it is envisaged that the admissions began in June 2012 which carried out as per the Directorate of Technical Education’s norms. The institute, which is expected to be completed by March 2012, has a mini tool room and training centre. Authorities had announced establishment of technology-based incubator at Agnel Charities Padre Conceicao College of engineering which is a joint venture of Ministry of Science and Technology, Government of India; Department of Science, Technology and Environment, Government of Goa and Agnel Charities. College is just recently started for the academic year 2012-2013.

Fr Agnel Engineering College has an 80% job placement record. Students have no problems in finding positions in reputed corporate and business houses. Many companies visited the campus every year, and offering an excellent salary package on par with international standards.

Well maintained library facility with qualified staff is available. The information is gathered from the website www.aitdgoa.edu.in
Summary:
All the seven engineering colleges in Goa are well established and have standard in the field of engineering. All the times admissions are full and best faculty is appointed for the teaching. The faculty is of permanent and guest faculty from external sources like industries. Most of the colleges are collaborated with R and D institutes and industries. The colleges are well maintained by the libraries and qualified library staff is looking after the facility. Apart from this well maintained placement centers, sports activities, are also supplements in addition to curricular activities.
3.5 Profile of Medical Colleges in Goa:

Goa is a state where medical education is also popular like engineering. Total intake of all the colleges is up to 240 per annum and total 5 years population is 1100 in the state. Goa has one medical, one dental, one nursing, one homeopathy and one Ayurveda medical institutes. “Escola Medico Cirurgica da Goa” was established by Portuguese government in the year 1842 as a pioneer medical institution in Asia continent and today it called GMC (Goa Medical College & Hospital) a oldest Asian pioneer medical institution serving patients from full Goa and close by states namely Maharashtra and Karnataka. Approximately every day about 1000 to 1200 patients treated in GMC casualty at "free of cost". Thus Goa has pioneer medical facilities since 1800 onwards. The table 3.2 indicated the growth and developemnt of medical education system in Goa.

Table 3.2 Medical Colleges in Goa

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Medical colleges</th>
<th>Present intake</th>
<th>Duration</th>
<th>Population on campus</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Goa Medical College Goa</td>
<td>150</td>
<td>5 ½ yrs</td>
<td>750</td>
<td>1842</td>
</tr>
<tr>
<td>2</td>
<td>Goa Dental College and Hospital</td>
<td>50</td>
<td>5 yrs</td>
<td>250</td>
<td>1980</td>
</tr>
<tr>
<td>3</td>
<td>Kamaxi Devi Homeopathic Medical College</td>
<td>30</td>
<td>5 ½ yrs</td>
<td>150</td>
<td>1998</td>
</tr>
<tr>
<td>4</td>
<td>Institute of Nursing Goa</td>
<td>50</td>
<td>4 yrs</td>
<td>200</td>
<td>1961</td>
</tr>
<tr>
<td>5</td>
<td>BSP Gomantak Ayurveda Mahavidyalaya</td>
<td>60</td>
<td>4 yrs</td>
<td>240</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>340</strong></td>
<td></td>
<td><strong>1590</strong></td>
<td></td>
</tr>
</tbody>
</table>
Highlights:

- All the medical and medical related colleges have its speciality in Goa. Allopathy (medical), Nursing, Homeopathy, Ayurveda, Dental are the main colleges for the specialties in medicine.
- Bachelors and PG courses are managed in Allopathy, In Nursing courses are conducted for graduation viz. B Sc Nursing,
- All the colleges are affiliated to Goa University and approved by the medical councils
- All Medical Institutes are having well equipped laboratories and library facilities and qualified faculties and librarians
- Well qualified faculties having with PG and Diploma degrees
- About 240 intake capacity for all the 5 colleges in Goa and overall population is 1120
- Goa Medical College and Nursing College are first in Asia
- Goa Medical College is the oldest college.
- The admission procedure for medical admission is standard. Student to seek admission to medical profession has to pass 12th with 50% aggregate marks having physics, chemistry and biology as the mandatory subjects. After this, student has to appear for the entrance exam conducted by Directorate of Technical Education Goa known as GECT Goa GCET. Then admissions are as per the merit list by marks.

3.5.1 Goa Medical College and Hospital: (GMC)

“Escola Medico Cirurgica da Goa was established by Portuguese government in the year 1842 as a pioneer medical institution in Asia and now it called GMC (Goa Medical College & Hospital) since 1963. The Assignment of GMC is to pass on Quality Medical Services to the All Sections of the Society and further perk up the Health Situation of the State. GMC is the oldest Medical College in Asia. The college is under the Goa University since 1986 before it was under the Bombay University from 1963. Goa
Medical College Hospital which now has its nerve centre in Bambolim has a long
custom of providing quality services to all sections of the civilized society.

The Institute of Psychiatry and Human Behaviour (Bambolim) the TB and Chest Disease Hospital (St. Inez), The Rural Health and Training Centre (Mandur) and the Urban Health Centre (St. Cruz) form additional part of the establishment of Goa Medical College. The Medical College moreover aimed at achieving excellence in patient mind has been influential in training number of medical professionals who are providing outstanding services to the people in Goa and abroad.

GMC is one of the prominent institution of the country, recognized by the Medical Council of India, admits 150 students for undergraduate M.B.B.S. Course, while 75 Post - Graduate are admitted every year. The Goa Medical College Hospital was originally operating from Panaji and Ribandar, shifted to Bambolim in the year 1991, and presently have 1000 beds; whereas 80 bedded TB and Chest Disease Hospital functions from St. Inez, Panajim. Likewise, a 20 bedded Rural Health and Training Centre is situated in Mandur. The intact complex at Goa Medical College, Bambolim is spread in an area of 11, 34,798 Sq Mts.

GMC faculty strives to provide the uppermost standard of medical education and focuses on and in general development of GMC students and prepares them to make significant contributions and recover the quality of life of the people they serve. The college maintains high standards of medical education meeting the requirements to the guidelines laid down by the Medical Council of India to guarantee that we conduit the treatment gap for medical care in the society. GMC is also a teaching hospital. The college is occupied in undergraduate and postgraduate medical education and also provides training to students pursuing their education in the field of dentistry, nursing and other affiliated fields.

The medical college has regular Graduation and PG courses. Total intake capacity for MBBS is 150 and for PG courses 86 students. The MBBS courses have duration of 4 1/2 years followed by 1 year of compulsory rotational internship. The PG courses MD and MS are also conducted in GMC. The major branches available for MD are Anesthesia,
Biochemistry, Dermatology, Forensic medicine, General medicine, O and G, Pediatrics, pathology, pharmacology, psychiatric, PSM, etc. The courses for MS are Anatomy, General Surgery, Ortho, Ophthalmology, Otolaryngology, etc. In addition to this P. G. Diploma Courses are also managed in this college. The information about GMC collected from website www.gmc.gov.in.

3.5.2 Goa Dental College and Hospital:

The Goa Dental College and Hospital and Research Center is a only specialized college established by the Government of Goa, Daman and Diu on 1st June, 1980. GDC is affiliated to the Goa University and recognized by the Dental Council of India. It acts as a referral/transferee centre in the state for dental services and has been rendering fanatical services through more than ten departments in various specialties which provide the students clinical experience in imparting dental care of the patients. Every year around 90,000 patients are being treated in this institution out of which about 750 to 800 patients are indoor patients.

The Goa Dental College and Hospital was envisioned to generate technical and professional manpower in dentistry in state and to provide dental care delivery system to the public at large. With an annual intake capacity of 40 seats, the BDS Course is a 5 year course including one year of compulsory paid rotating internship. It acts as a medical appointment centre in the state for dental services and since 1980 has been offering particular services through various departments in various specialties which provide the students clinical disclosure and experience in imparting dental care to the society.

Dental Medical College has departments, Department of Orthodontics and Dentofacial Orthopedics, Periodontics, Oral Medicine and Radiology, Pedodontics and Preventive Dentistry, Public Health Dentistry, Oral and Maxillofacial Surgery etc. BDS and MDS courses are managed in this dental college. The information about Goa Dental College and Hospital collected from website www.gdch.goa.gov.in

3.5.3 Institute of Nursing Education: (Nursing)

Nursing education recommenced in Goa by the Portuguese government during the 15th century, this college is being a first Nursing College in Asia. After emancipation of Goa in 1961, the elderly nursing education courses were step by step phased out and in their
place the Union Government started new nursing courses according to the Indian Nursing Council Regulations. The Auxiliary Nurse Midwifery Course was started in September 1964 and the General Nursing Midwifery Course was started in September 1965 with technical assistance from W.H.O. and other help from U.N.I.C.E.F. The Post Basic B.Sc. Nursing Course was conducted from 1993-2006. In August 2005 the B.Sc. Nursing Course (Basic) was started.

Presently the Institute of Nursing Education conducts two courses (a) The Auxiliary Nurse Midwife Course (b) B.Sc. Nursing Course (Basic). The Institute of Nursing Education functions as an independent unit under the Directorate of Health Services of Goa. Students gain practical experience from different medical institutes in the Goa, like Medical College Hospital, Institute of Psychiatry and Human Behavior, Asilo Hospital, Hospicio Hospital, Urban Health Centers and Primary Health Centers of the Directorate of Health Services etc.

“The Bachelor in Science Nursing Course (With 40 seats) is a full time course extending over and continues period of 4 academic years. Hostel Accommodation to all students is compulsory

The information about Institute of Nursing Education Goa collected from website http://www.dhsgoa.gov.in/ine.htm

3.5.4 Gomantak Ayurveda Mahavidyalaya and Research Center:

Gomantak Ayurveda Mahavidyalaya and Research Centre, Goa was established in 1993 with the aim of providing quality education in Ayurveda and treatment facilities synergistic with nature at nominal rates to the Goan masses. The College is committed to providing its students an unparallel educational experience in Ayurveda through excellent teaching and clinical experience or training in the wards or clinics. It is one of the best medical institute and changing as an established and proven leader in the field of medical education by maintaining high standard and values. Gomantaka Ayurveda Mahavidyalaya and Research Centre provide the best opportunity to choose Ayurveda as a career to serve the society and the nation for a fascinating future ahead. Ayurveda
gaining popularity all over the world, education of Ayurveda offers a vast scope in India and abroad.

Bharteeya Sanskriti Prabodhini is a registered society (Reg. no. 13/Goa/92) established with the aim of rejuvenating Ancient Indian Learning and Culture. It played a major role in establishing Gomantak Ayurved Mahavidyalaya and Research Centre, the only institute in Goa to impart education in Ayurveda

Hostel accommodation and residential facilities to out-station students from all over the world is available in the premises. The college has its own hostel building which can accommodate more than 200 students. The hostel is located within the campus and is well maintained and monitored. Hostel has in-house kitchen facilities along with dining hall for the benefit of students. At GAMC hostels efficient wardens ensure that students have a comfortable and safe accommodation. Special care and attention is rendered to make sure students live in comfort and hygiene. The hostel rooms are well maintained, furnished and spacious.

The management actively encourages students to engage in sports and games, cultural activities and festival celebrations. Moreover college has a tradition to celebrate most of the regional festivals in college thereby introducing students to various cultures and traditions of region. Tournaments, events, competitions and celebrations are conducted on campus periodically.

The Ayurveda college library consists of huge collection of books on varied and latest subjects and old volumes of textbooks, reference books, magazines, journals, a monograph etc, as per the necessities and requirement specified by the Goa University and cater to the needs of the users, the staff and the research workers. The information about Gomantak Ayurveda Mahavidhyalaya and Research Center collected from website www.gamrc.org/GAMRC
3.5.5 Shri Kamaxidevi Homoeopathic Medical College and Hospital:

Shri Kamaxidevi Homoeopathic Medical College and Hospital, Goa was established in the year 1998 affiliated to the civil liberties of University of Goa and recognized by the Central Council of Homoeopathy and Govt. of Goa. The college is a considerable project of extending the noble knowledge of Homoeopathy, a venture and the vision of the hon’ble chairman, Shri Subhash Shirodkar a former education minister for Goa.

Campus of Shri Kamaxidevi Homoeopathic Medical College and Hospital has a well built complex in a area admeasuring 2, 50,000 sq.fts. It is located on a hill top overlooking the Zuari River, the then Aghanashini and the valley. "Facilities at Shri Kamaxidevi Homoeopathic Medical College and Hospital has Library, Classrooms, Laboratories, Scholarships, Seminar Room, Canteen, Audio-Visual Room

“Departments at Shri Kamaxidevi Homoeopathic Medical College and Hospital has Department of Anatomy, Department of Physiology, Department of Pathology and Microbiology, Department of Forensic Medicine, Department of Medicine, Department of Surgery, Department of Community Medicine, Department of Obstetrics and gynecology, Department of Homoeopathic Pharmacy, Department of Materia Medica and Therapeutics, Department of Organon of Medicine, Department of Case Taking & Repertory etc.

College developed facilities for recreation on campus. Football, Basketball, Cricket, Lawn Tennis, Volleyball, Shuttle Badminton, Indoor Games and Sports facilities have been provided to students. Plans are underway to conduct coaching at the Cricket practice nets and build a jogging track. For the music enthusiasts KHMECh has its own Music club and practice room with Western and Indian classical instruments.

Shri Kamaxidevi Homoeopathic Medical College and Hospital has its own hostel building which can accommodate more than 200 students. The hostel is located within the campus and is well maintained and monitored. Both vegetarian and non-vegetarian food is available to the students. As the College Campus has residential quarters for staff, the students have several opportunities to come into contact with the teaching and other staff of the college. The atmosphere in the hostel is conducive to the development of the cosmopolitan outlook. Owing to the national character of the college and its hostel, the
students develop integrated personalities over a period of harmonious living in the hostels. A certain measure of self-governing, decision making and problem solving is involved in the hostel administration.

Summary:

In brief medical education in Goa is competitive and all the branches of medical sciences are available in Goa State viz. Allopathic, Ayurvedic, Homeopathic, and Dental and supported by nursing education systems. Goa has rich medical education system. All the colleges have provided different facilities along with teaching and learning. The information about Shri Kamaxidevi Homoeopathic Medical College and Hospital Goa collected from website http://www.minglebox.com/college/Shri-Kamaxidevi-Homoeopathic-Medical-College-and-Hospital-Shirod-Shiroda.

Chapter Summary:

This chapter elaborates the brief account of medical and engineering education facilities in Goa. Seven Engineering and five medical colleges are in Goa State and have rich culture in the professional courses. The review of colleges surveyed by the researcher gave an insight of the status of these professional activities. Since the state is comparatively small the educational facilities are very good. Every engineering and medical college has libraries and management has considered the libraries to be modified and provide advanced study resources both in print and electronic / digital. ICT applications in libraries are preferred.
References:

1. College of Engineering Goa. (Govt. of Goa) (Accessed at www.gec.ac.in on 22\textsuperscript{nd} April, 2015.)

2. Padre Conceicao College of Engineering (Retrieved on September, 15, 2015, from www.pccegoa.org)

3. Shree Rayehawar Institute of Engineering and Information Technology. (Accessed on 4\textsuperscript{th} May 2015 at www.ritgoa.ac.in)

4. BITS Pillani Goa (Accessed on 2\textsuperscript{nd} March 2015 at www.bits-goa.ac.in)

5. National Institute of Technology Goa. (Accessed at www.nitgoa.ac.in on 4\textsuperscript{th} July, 2016.)

6. Don Bosco College of Engineering, Fatorda Goa (Accessed on 23\textsuperscript{rd} May, 2016, at www.dbcegoa.ac.in)

7. Angel Institute of Technology and Design: Engineering Institute. (Accessed on 24\textsuperscript{th} July, 2015, at www.aitdgoa.edu.in)

8. Goa Medical College (Accessed on 24\textsuperscript{th} July 2016 at www.gmc.goa.gov.in/)


10. Institute of Nursing Education Goa (Accessed on 23\textsuperscript{rd} July, 2016, at www.dhsgoa.gov.in)

11. Gomantak Ayurved Mahavidyalaya and Research Center. (Accessed on 2\textsuperscript{nd} May, 2016, at www.gamrc.org/GAMRC)