

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical facilities

4.1.1 The Institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

The College provides a state of the art infrastructure that gives the students excellent learning opportunity as it is critically related to the vision of our college and hence the facilities provided are beyond the requirements of Dental Council of India and The Tamil Nadu Dr. M.G.R. Medical University. The four **Lecture Halls** are air conditioned and spacious, augmented with Integrated Audio-Visual teaching aids, of which 2 are smart classrooms installed with Samsung TVs & Cybernetics Intellispace smart system to enhance the learning process. The 9 **Seminar Halls** are well-equipped airconditioned halls for each dental specialty, with latest audio-visual aids projectors, white boards, internet connectivity for conducting seminars and workshops thus provide best quality of learning experience. The **Syndicate Room / Pearl Hall** provides the perfect setting for CDE programs for staffs & Students, brain-storming sessions, group discussions, Clinical skill development programs for interns etc which can accommodate 100 people. The State-of-the-art **auditorium** with seating capacity of over 1000 act as a common ground for students, faculty and guest speakers of various fields for regular interfaces, conferences and other events. The **Central Research Lab** is well equipped to conduct advanced research. MoU's with research institutes and regular discussions are conducted regarding updates in various fields. The institution is having a **Central library** with the built-up area at 9000.sq.m and seating capacity at 250. A separate section for international and speciality driven journals with catalogue is present. Library is integrated with browsing room with 25 computers to facilitate E-learning. The college has **satellite centres** at Radhapuram & Vetturimadam where students are posted for emergency treatment and referral. A tie up with Boothapandi Government hospital provides community-based learning for the students. The **Departments** are spacious and are equipped in accordance with the regulations by Dental council of India. There are specially designed **Preclinical labs** tendered to facilitate the best learning experience for the students. They are equipped with patient simulators in Prosthodontic and Conservative dentistry departments help the undergraduate students to have hands-on experience of various dental procedures

prior to their clinical postings. **Advanced Diagnostics** such as Histopathology lab with IHC, Stem cell culture etc helps in accurate diagnosis of lesions and teaches students about differential diagnosis. **Digital dental radiography** with both intraoral and extraoral techniques like *IOPA*, *OPG*, *CBCT* facilitates student learning from single to three dimensions. Postgraduates that lend more possibilities in diagnostics, treatment plan and presentation of the orthodontics case are using Nemoceph, the orthodontic analysis tool. Well-equipped dental operation theatre has widened the expertise of treating oral rehabilitation. **Museum** is present for the students to have knowledge of various subjects that they must cover during the BDS course. The museum is upgraded time to time.

4.1.2 The Institution has adequate facilities for sports, games (indoor, outdoor), gymnasium, yoga centre etc. and cultural activities

Response :

Rajas Dental College has 5 acres of Sports Complex. The Institution emphasizes on physical activities to provide both fitness and mental relaxation. The college has various options to play various sports. The 3 acres of **cricket ground** bring the students together daily for various sports activities. The **basket ball ground and volley ball ground** of 0.5 acre each bring the students together for better coordination, team work improving mental and physical health. The 6000 sq.ft **indoor stadium** is ideal for playing badminton, shuttle, table tennis and indoor games. Provision for **cycling** was provided with campus cycles. The training is given for field events like long jump, high jump, javelin throw, shot put, discus throw by the physical trainer. Intracollege Sports meet is being conducted annually. Annual sports & cultural activities are organized by the Co-Curricular activity committee. The campus has **gymnasium** of 750 sq.ft area equipped with 11-stage multigym, advanced treadmill, weights for strengthening exercises . The fitness centre is free to use for all students and have separate timings for girls & boys. Through its excellent sports facilities, the college offers opportunities to students for regular work-out, lifestyle management and interaction. Yoga classes are conducted in **yoga centre** of 420 sq.ft for students in the morning and evening as per their convenience. The cavernous **auditorium** of 18000 sq.ft is capitalized as multifaceted gallery for various cultural activities during annual college day, Pongal, Onam, Christmas celebrations etc. Every year the students from Rajas dental College participate in Inter-institutional Sports Competitions event (Moksha&Sangamam)

held as mega at the State capital. We are the Overall winners of sports& Cultural events in past 3 years.

4.1.3 Availability and adequacy of general campus facilities and overall ambience :

The institute provides high class infrastructure that caters to the needs of students, faculty and patients to offer the finest patient care and technological resources. In our Institution, we have a **Medical Ward** with 25-beds with extended timings to attend emergencies. The emergency ward is run by experienced doctors and we have an Oncall woman counsellor and clinical psychologist. The medical ward has 24x7 driver and vehicle, first aid kit and necessary equipment for any emergency purpose. **Pharmacy** is conveniently located in the 1st floor for the patients. The **Dental Store** offers the necessary dental products for the students at an affordable rate. The campus houses well ventilated spacious **hostels** for girls and boys separately. The salient features of hostel include self-contained toilet cum bath with hot water facility, study table with cabinet to store books, wardrobes and cots, purified water for drinking, uninterrupted electricity supply with generator backup and 24 hours high security with **security guards and CCTV surveillance**. Laundry service is available for the convenience of the students. The **hostel mess** provides good quality, hygienic well-balanced food enabling students to experience a sense of “home away from home” while in campus. **Cafeteria** in the campus offers varied menu and comfortable surroundings, thus becoming student’s favourite hangout. The **snack shop** provides snacks, cold beverages to suit the palate. **Axis bank ATM** Centre is available at our campus. Solar panels have been installed in our campus as a source of renewable energy. Water treatment plant is present in the campus where the water is treated by **Reverse Osmosis (RO) plant** before supplied for drinking purpose. **Toilets** are provided in each floor with signage boards to make it easy for the patients. Separate bathrooms are provided in each department separate for students & staffs. Highest standard of maintenance of the toilets is daily carried out by outsourced staff. We have ample **parking** for staffs, students, visitors separately with good road lanes and signage boards all over the campus. Campus has **Wi-Fi** facilities for all staff members to enable all education services and resources. Separate Common rooms are provided for Girls and Boys with attached toilets. Newspapers and magazines are kept in the common room for the students.

4.2 Clinical & Laboratory Learning resources.

4.2.1 Teaching hospitals , Clinical teaching learning and laboratory facilities as stipulated by the respective regulatory bodies

The **infrastructural facilities** available for training undergraduate and postgraduate students are in accordance with the regulations formulated by the **DCI**. The clinical training facilities are continuously updated to ensure that students are provided with the state of art facilities. The **Governing council** is keen to provide an excellent academic environment for around 600 students with 95 highly competent teaching faculties. The infrastructure contains teaching and learning facilities that include **smart classrooms, specialized laboratories, Discussion halls, and a well-stacked library**. Each specialty has an **outpatient dental clinical facility** equipped with electronic dental chairs connected to a centralized suction unit. **170 electronic chairs** are installed in the institution, **3 dental chairs** are installed in the 2 satellite clinics which cater to the needs of the surrounding rural population and 1 dental chair and **2 portable dental chairs** are installed in the mobile dental van for the outreach community services intended to improve accessibility to quality dental healthcare. The dental hospital has a fully equipped **operation theatre complex** to perform major and minor surgeries, furnished with 2 bedded ICU, 2 bedded postoperative care and 2 ventilator support equipment which can be used as necessitated. The 22 bedded general wards with separate male and female wings are available to accommodate the inpatients. The clinical departments are complemented with Radiovisiographs (**RVG's**) as necessitated to minimize the radiation exposure to both the patients and clinicians. The department of oral medicine and radiology is equipped with dental Cone beam Computed Tomography (**CBCT**) to provide advanced diagnostics. To improve the research activities Central research lab (**CRL**), have the most advanced research microscope, stereoscope and Immuno-histochemistry facilities, clinical laboratory services for the patients at nominal costs to carryout hematological investigations as an aid in diagnosis. Department of Prosthodontics have **Acrylic and ceramic Laboratories** with the cutting-edge equipments. The **Geriatric clinic** is exclusive for the old aged people where they are treated with utmost care & concern. **The Microscopic Clinic & Aesthetic clinic** in the Dept of Conservative dentistry is exclusive and specialized as necessitated.

Laboratories (Dental Subjects)	Adequate.
Pre-clinical Prosthodontics and dental material lab	3785. sq. ft.
Pre-clinical conservative lab	3235. sq. ft.
Oral biology and oral pathology lab	3160. sq. ft.
Laboratory for orthodontics and Pedodontics	3620. sq. ft.
Laboratories (Medical Subjects)	Adequate.
(only for independent dental colleges)	6900. sq. ft.
Anatomy dissection hall with storage for cadavers, osteology, demonstration room etc.	
One laboratory for physiology and pathology and microbiology with stores and preparation rooms for individual subjects attached to it.	4000. sq. ft.
Laboratory for biochemistry and pharmacology with store and preparation rooms separately for both subjects	3500. sq. ft.
Prosthodontics	3400. sq. ft.
Conservative Dentistry	2200. sq. ft.
Oral pathology for histopathology	1000. sq. ft.
Haematology and clinical biochemistry	500. sq. ft.

Key Indicator – 4.3 Library as a learning Resource

4.3.1 Library is automated using Integrated Library Management System (ILMS)

Response:

Rajas Dental College Central Library is a fully automated library with an efficient Integrated Library Management Software, AutoLib 5.0. AutoLib 5.0 is a popular and advanced integrated library automation management software, designed and developed by a team of Library & Information Science specialists, database designers, software developers and network specialists.

AutoLib software is fully integrated, versatile, user-friendly, cost-effective and multi-user Library automation software. It is WEB enabled for Intranet and Internet environments, incorporating latest IT/WEB tools and techniques and adheres to many international standards. It is designed to automate various activities of Libraries in universities, colleges, schools, R&D institutions, public libraries and corporate, management and special institutions, etc. regardless of types of collection or size and also provide WEB based services on the campus Intranet/Internet.

The available books and journals are barcoded and the same datas are created and updated in AutoLib ILMS software. ILMS is linked with our e-governance portal of our college website. The ILMS has several main features, which include.

1.Data availability: Addition of details of books, journals, e-books, e-journals, etc. with subject(s), author(s), edition, volume, publishers in AutoLib software.

2. Administrator: The software is administrated by Librarian.

3.Uses: This ILMS is useful to borrowers in many ways.

- i). This is useful to book borrowers (students and staff) to check the availability of books and journals at the time of requirement.
- ii). Book borrowers can reserve the book from their available place itself by using ILMS.
- iii). In addition, student or staff can easily search the books based on title, author, book number etc. by using this automated integrated library management system.

- Name and features of the ILMS software: “AutoLib 5.0”
- Nature and extent of automation (full or partial): Fully automated

- Year of commencement and completion of automation: 2018

Weblink: <http://rajasdentalcollege.com/assets/images/naac/rajas10.pdf>

http://rajasdentalcollege.com/assets/images/naac/4_3_1_Library.pdf

4.3.2 Total number of textbooks, reference volumes, journals, collection of rare books, manuscripts, digitalized traditional manuscripts, Discipline-specific learning resources from ancient Indian languages, special reports or any other knowledge resource for library enrichment

Response:

Text Books: 76503 national and international books are available in our central library for all basic medical science and dental departments.

Reference Books: 1185 recently edited textbooks and international books are available as reference books. The library regularly adding recently revised, edited and newly arrived books for all specializations from National and International publishers like Elsevier, springer, Jaypee, CBS, etc. At present, enough quantity of books are available with different titles for all specializations.

Rare Books: Apart from dental sciences, medical sciences, basic sciences and research methodology books, more than 100 rare books are available in the library. The library allotted separate place for readers to update their knowledge in other fields and provided the following books which are related to: Indian Politics, National unity, Biography by leaders and legends, Civil service exam books, state and national level competitive exam books, general laws, etc.

Language Books: Tamil, English, Malayalam and other regional language books are also available to understand the languages other than mother tongue and to update their knowledge in different languages.

Required descriptions are available in ILMS software with names of the books/journals /manuscripts, names of the publishers, names of the authors, number of copy and year of publication.

Thesis and Proceedings: 23 PG research thesis copies and 24 research proceedings are available in the library.

News Paper: Tamil, english, malayalam daily news papers are available in the library to know the day-to-day update.

Upload:

File Description	Documents
Book Details	http://rajasdentalcollege.com/assets/images/naac/rajas11.pdf
Journal Details	http://rajasdentalcollege.com/assets/images/naac/rajas11.pdf

4.3.3 Does the Institution have an e-Library with membership / registration for the following:

Response:

1. e – journals / e-books consortia ✓
2. E-Shodh Sindhu
3. Shodhganga
4. SWAYAM
5. Discipline-specific Databases ✓

e-journal and e-books are assessed through The Tamilnadu Dr.MGR Medical University's e-consortium web portal it can be assessed from our library to update the knowledge of faculty members and students (both UG and PG). Our college has subscribed DELNET to assess the national journals.

1a. e-journals:

Ten journals are available in CD for different dental departments to update the knowledge of students and teachers. At present, we have subscribed to more than 20 journals as e-access journals. This can be downloaded from out of library also for immediate reference.

List of few journals with e-access:

1. Journal of orthodontics, 2. Angle of Orthodontics, 3. International Journal of Oral Maxillofacial Implant, 4. International Journal of Prosthodontics, 5. Journal of Orofacial Pain, 6. International Journal of Periodontics and restorative Dentistry, 7. Dento maxillofacial Radiology, 8. Cleft palate Craniofacial Journal, 9. Journal of Periodontology and 10. Paediatric Dentistry

1b. List of few e-books with e-access:

Grossman's Endodontic Practice, Text book of oral maxillofacial Surgery Edition -3 DVD-1, Grossman's Endodontic Practice Ed-13, Text book of oral maxillofacial Surgery Edition -3 DVD-1, Text book of oral maxillofacial Surgery Edition -3 DVD-2, Human Embryology Ed-9, BD,Chaurasia's Human Anatomy for dental students Ed-2, BD,Chaurasia's Human Anatomy for dental students vol – 3, Text book of endodontics.

1c) Databases:

More than **50 journals** are accessed from different databases by using e-consortium web portal of The Tamilnadu Dr.MGR Medical University.

List of few journals (Dental and Medical) from different databases which is assessed through e-consortium:

1. Dentomaxillofacial Radiology (BMJ), European Archives of Pediatric Dentistry (Springer), Evidence-Based Dentistry (Springer), Journal of Prosthetic Dentistry (Elsevier), Nicotine and Tobacco Research (OUP), Oral and Maxillofacial Surgery Clinics of North America (Elsevier), Orthodontics and Craniofacial Research (Wiley), Cancer Chemotherapy and Pharmacology (Springer), Current treatment options in infectious disease (Springer), Endocrine Pathology (Springer), etc.
2. **Discipline-specific Databases:** Rajas Dental College and Hospital Subscribed Developing Library Network (DELNET) Journals. More than 60 dental journals are available in this network.

S. No	Year	Name of service with membership/ registration	Full text access		Validity period	Whether remote access provided		Web link of remote access
			Yes	No		Yes	No	
1	2020	DELNET	✓		2020 (January-December)	✓		http://delnet.in/ejour.html#

Data Requirement for the last five years: (As per Data Template): Data template uploaded

Upload:

File Description	Documents
Details of subscriptions	View Document
E-copy of subscription letter	View Document

4.3.4 Average annual expenditure for the purchase of books and journals including e-journals during the last five years**Response:**

Annual expenditure for the purchase of books and journals including e-journals year-wise during last five years (INR in Lakhs)

Year	2014-15	2015-16	2016-17	2017-18	2018-19
Amount (INR in Lakhs)	32.92	39.89	40.0	20.58	44.75

Data Requirement for the last five years: Template attached

- Expenditure on the purchase of books: 19.77 L
- Expenditure on the purchase of journals including e-journals in the i^{th} year: 31.6 L
- Year of Expenditure: 5 financial years (2014-15, 2015-16, 2016-17, 2017-18, 2018-19)

Formula:

$$\frac{1}{5} \times \sum_{i=1}^5 \text{Exp}d_i$$

Where: **Expd_i**= Expenditure in rupees on the purchase of books **including e-journals** in the **ith Year**

$$\begin{aligned} & 1 \\ \text{Average expenditure} &= \frac{\text{---} \times [32.92+39.89+40.0+20.58+44.75]}{5} \\ &= 31.6 \text{ Lakhs} \end{aligned}$$

Upload:

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Audited statement	View Document

4.3.5 In-person and remote access usage of library and the learner sessions/library usage programmes organized for the teachers and students (data for the preceding academic year)

Response:

Central library for Rajas dental college and Hospital is the main resource for learning. The library situated in the vast building providing accommodation to hundreds of students at once. In recognition of dedicated service of Prof.Dr.K.Ponnuchamy, former Professor and Head the central library building is named after him as “Dr.K.Ponuchamy Central Library Building”. We, at Rajas Dental College and Hospital insist the students to inculcate the habit of pending quality and productive hours in the library to upgrade themselves to newer trends in dentistry and a calm and peaceful study environment is present for the students to go on over the exam preparation. A dedicated team is employed to work throughout the day for the benefit of the Describe in-person and remote access usage of library and the learner sessions.

There is a separate study area for students and staff to read library books and their own book. In addition, separate air conditioned Journal section is available in first floor of the library. Usually, PG students and staff are permitted to journal section after registering their names in respective register. UG students are allowed to refer journals after getting permission from convener of the library committee or librarian based on the requirement.

Remote access is also available in both college campus and hostel campus to refer e-journals from different data bases like DELNET, The Tamilnadu Dr.MGR Medical University, SAGE, etc.

Weblink to: <http://rajasdentalcollege.com/index.php/RDadmin/academicfacilities>

4.3.6 E-content resources used by teachers:

1. NMEICT/NPTEL
2. other MOOCs platforms
3. SWAYAM
4. Institutional LMS ✓
5. e-PG-Pathshala

Institutional LMS:

e-books and e-journals are referred by students and staff to update their knowledge by using institutional LMS as e-Resource. Various e-books and e-journals are accessed from e-library after logging in ILMS. Students and staff members are benefitted by using e-library to get e-content.

e-PG-Pathshala:

e-PG Pathshala is an initiative of the MHRD under its National Mission on education through ICT (NME-ICT) being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects across all disciplines including biomedical subjects like biochemistry, food and nutrition.

Weblink (mobile version): 103.211.80.99:8080/AutoLib

Upload:

File Description	Documents
Institutional LMS	View Document

Key Indicator- 4.4 IT Infrastructure

4.4.1 Percentage of classrooms, seminar halls and demonstration rooms linked with internet /Wi-Fi-enabled ICT facilities (data for the preceding academic year)

Formula

$$\begin{aligned} & \frac{\text{Number of classrooms, seminar halls and demonstration rooms} \\ & \text{linked with internet, Wi-Fi enabled ICT facilities}}{\text{Total number of classrooms, seminar halls} \\ & \text{and demonstration rooms in the Institution}} \times 100 \\ & = \frac{13}{13} \times 100 \\ & = 100\% \end{aligned}$$

Upload:

File Description	Documents
Geo-tagged photos	View Document
Smart Class	View Document

4.4.2 Institution frequently updates its IT facilities and computer availability for students including Wi-Fi

Rajas Dental College and Hospital is equipped with computers and IT facilities to enhance the learning process of students. The institution provides round the clock Internet facility throughout the campus including hostels by providing high-speed Optical fibre and Wi-Fi in hostel and college campus. UPS and generator supports all the Computers and audio-visual systems in small classrooms, lecture halls and seminar halls.

The faculty prepare the teaching material using computers provided in their respective department and uses them for delivering their lectures. In addition, smart class rooms are connected with TV, desktop, multimedia projector, smart board with sensors, etc.

Faculty and students can also access e-journals, e-books and resources from different database and through the internet facilities available on the campus. The quality of the teaching-learning process is enhanced through the utilization of online resources by faculty and students. Access to various online resources is being made available to all students and faculty of the institution. The access is through IP Range of the campus which offers open access to online resources within the campus. The Institution upgrades the IT infrastructure and associated facilities whenever required.

Weblink: <http://rajasdentalcollege.com/index.php/RDadmin/admincommittee>

File Description	Documents
Geo-tagged photos	View Document
Updation of Wi-Fi	View Document

4.4.3 Available bandwidth of internet connection in the Institution (Leased line)

Opt any one:

- A. ≥ 1 GBPS
- B. 500 MBPS - 1 GBPS
- C. 250 MBPS - 500 MBPS
- D. 50 MBPS - 250 MBPS ✓
- E. <50 MBPS

Upload:

File Description	Documents
Agreement	View Document
Recent Bill	View Document

Key Indicator – 4.5 Maintenance of Campus Infrastructure

4.5.1 Average expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component as a percentage during the last five years

Year	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Amount INR in Lakhs	22.1	16	13.5	18.7	10.4

Details of non-salary expenditure incurred on the maintenance of physical facilities and academic support facilities for the last 5 years in INR lakhs

Formula:

Percentage per year =

$$\frac{\text{Expenditure on the maintenance of physical and academic support facilities excluding salary component for a year}}{\text{Total expenditure on maintenance excluding salary for that year}} \times 100$$

$$\begin{aligned} \text{Average percentage} &= \frac{\sum \text{Percentage per year}}{5} \\ &= \frac{[2.13 + 1.59 + 1.17 + 1.27 + 0.66]}{5} = \frac{6.82}{5} = 1.364\% \end{aligned}$$

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File Description	Documents
Audited Statement	View Document

4.5.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports facilities, computers, classrooms etc.

The college has a dedicated maintenance department responsible for carrying out the duties of maintenance of buildings, clinics, classrooms, laboratories, library, sports facilities, hostels, utilities, etc. A maintenance committee is constituted in the college for the maintenance of aforementioned purpose. The college has qualified and skilled manpower for civil work, electric work, plumbing, carpentry work, biomedical engineering work, etc.

The College has electricity connection from Tamilnadu Electricity Board. In addition, the college has solar plants to meet more than 25% of our electricity requirement. High power generator and invertors help us to maintain uninterrupted power supply to clinics and academic buildings, etc. The electrical equipments are maintained as per the instrument's manufacturer instructions.

Our college for the maintenance of instruments and other infrastructure facilities follows systematic procedures. If there is any repair / damage of instruments, building, or another basic facilities, one of the staff from that particular department has to submit the filled in MRL form to our management through the proper channel (HOD, Floor Manager / equipment in-charge). MRL forms are placed in administrative meeting for discussion and the applications are forwarded to maintenance department. Maintenance department will consider the MRL form and depute the concerned engineers for necessary action. Allotments of maintenance department work are as follows:

Biomedical Engineers : Instruments in Clinics, preclinical lab or practical lab

Civil Engineers : Renovation / repair of building

Electrical Engineers : Electricity supply and plumbing works

Enough number of manpower is given to all engineering department to complete the work with perfection and to complete on stipulated time.

In case of simple repair the maintenance of equipments like our biomedical engineers, properly maintain dental chairs, compressors, refrigerators, etc. as per the manufacturer's instruction.

Weblink to: <http://rajasdentalcollege.com/index.php/RDadmin/admincommittee>

Upload:

File Description	Documents
Minutes of the meeting	View Document
Maintenance Logbook	View Document