



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

UNIVERSITY DEPARTMENT OF PROSTHETICS AND ORTHOTICS

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Information Brochure

Bachelors of Prosthetics and Orthotics

2018 - 19

"IMPOSSIBLE" itself states I am Possible.....





Introduction:

MGM Department of Prosthetics and Orthotics started rendering services since 2011, under the MGM Medical College and Hospital, Navi Mumbai. We are empanelled under the MAHATMA JYOTIBA PHULE JAN AROGYA YOJNA (MJPJAY) for Raigad District and have been playing pivotal role in providing aids and appliances to “DIVYANGJAN”.

With the aim to provide the best of Prosthetic –Orthotic Education, the MGM Institute’s University Department of Prosthetics and Orthotics, Constituent unit of MGM Institute of Health Sciences (Deemed to be University u/s 3 of UGC Act, 1956) Navi Mumbai, was started in 2014. Prosthetics and Orthotics is a specialized health care profession, which combines a unique blend of clinical and technological skills. The Prosthetic and Orthotic Professionals assess and evaluate patients, prescribe, fabricate, and fit Orthoses and Prostheses. Rehabilitation of persons with locomotor disabilities or neuromuscular disorder is a team work, where Centre of attention are the persons with disabilities. This work requires substantial clinical and technical judgment. Prosthetic and Orthotic Professional does not only provide service to persons with neuro-musculoskeletal disorder and persons with disability, but also it provides service to general health and work related disorder such as foot disorders, fractures, sports injuries, disorders due to aging, tendinitis, muscular pain, aesthetic restoration etc.. Prosthetics and Orthotics Professionals play an important role in the comprehensive pre and post-surgical management of amputee and other neuro-musculoskeletal disorders. Prosthetics and Orthotics Professionals make the patient independent, confident and useful member of the society through comprehensive prosthetic and orthotic management.

Vision:

MGM Institute's University Department of Prosthetics and Orthotics aims to be the top ranking center of excellence in Prosthetics and Orthotics Education & Research, among Deemed Universities across India. Students graduating from the Institute will have the required skills to deliver quality Prosthetic and Orthotic services at an affordable cost to all Divyangjan, without prejudice or discrimination.

Mission:

To improve the quality of life, both at individual & community levels by impairing quality Rehabilitation Education to tomorrow's professionals by advancing knowledge in all fields of the Prosthetic and Orthotic sciences through meaningful and ethical research.

Objectives:

1. To extend the benefits of knowledge and skills for development of Divyangjan and the society.
2. To build up financial self-sufficiency by undertaking academic and Prosthetic Orthotic programs and resource generative services, in a cost effective manner.
3. To generate and promote a sense of self respect and dignity amongst the Divyangjan of the society.
4. To publish journal, seminar books and such other literatures as may be useful for furthering the cause of education.
5. To start, maintain & run Prosthetic and Orthotic clinics, Prosthetic and Orthotic consulting Programme.
6. To acquire basic management & administrative skills in the areas of materials, financial and human resources related to prosthetics and orthotics
7. To organize all types of Prosthetic and Orthotic camps for checkup and to give treatment to the Divyangjan.
8. To practice prosthetics & orthotics ethics in patient care, service delivery, and research.
9. To develop attitude for self-learning and acquire necessary skills, including the use of appropriate technologies.

10. To assess, prescribe and provide comprehensive Prosthetic and Orthotic management to the individual and the community, appropriate to his/her position as a member of the health care team.
11. Be competent to take preventive, supportive, corrective and rehabilitative steps in respect to the commonly encountered problems related to Prosthetics and Orthotics.
12. To carry out Evidence Based Practice in Prosthetics and Orthotics
13. To appreciate the psycho-social, cultural, economic, and environmental factors affecting health, and develop humane attitude towards the patients/relatives, in discharging one's professional responsibilities

ABOUT THE PROGRAMME:

MGM Institute of Health Sciences, Navi Mumbai is the First Deemed to be University, approved by Rehabilitation Council of India (RCI), to run the Bachelors Degree Programme in Prosthetics and Orthotics (BPO) in India. This programme is awarded with Degree of B.P.O. (BACHELOR IN PROSTHETICS & ORTHOTICS).

We strive to train the students to excel in providing their services to the “DIVANGJAN” in camps and rural setups, besides their regular training in academics and hospital setups.

With the dedicated and devoted team of staff members, we are looking forward to benchmark MGM Institute of Health Sciences (Deemed to be University u/s 3 of UGC Act, 1956) the Centre of Excellence in P&O Education and Services.

DURATION OF THE PROGRAMME

The duration of the programme is of **Four and half academic years (inclusive of 6 months of internship)**, which can be completed in **a maximum of 6 years from the date of admission to the programme** as per RCI guidelines.

PROGRAMME STRUCTURE

FIRST YEAR

Subjects	Theory Hrs	Practical Hrs	Total Hrs	Marks Theory	Marks Practical	Total Marks
Anatomy	120	40	160	100	--	100
Physiology	120	-	120	100	--	100
Workshop Technology & Material Science	80	20	100	100	--	100
Applied Mechanics & Strength of Material	100	-	100	100	---	100
Biomechanics I	60	-	60	100	--	100
Basic Electronics	60	-	60	100		100
*Prosthetic Science – I	80	230	310	100	100	200
*Orthotic Science - I	80	230	310	100	100	200
Total	650	570	1220	800	200	1000

SECOND YEAR

Subjects	Theory Hrs	Practical Hrs	Total Hrs	Marks Theory	Marks Practical	Total Marks
Pathology	80	-	80	100	--	100
Orthopaedics, Amputation Surgery & Imaging Science	100	-	100	100	--	100
Community Rehabilitation & Disability Prevention	60	-	60	100	-	100
Biomechanics II	100	-	100	100	-	100
Psychology & Sociology	60	-	60	100	-	100
*Prosthetic Science-II	80	300	380	100	100	200
*Orthotic Science-II	80	300	380	100	100	200
Pharmacology	60	-	60	100	-	100
Total	570	650	1220	800	200	1000

THIRD YEAR

Subjects	Theory Hrs	Practical Hrs	Total Hrs	Marks Theory	Marks Practical	Total Marks
Computer Science & Graphical communication	80	120	200	100	100	200
Bio-Mechanics- III	80	-	80	100	--	100
Assistive Technology	80	-	80	100	-	100
Research Methodology & Bio Statistics	60	---	60	100	---	100
*Prosthetic Science-III	80	320	400	100	100	200
*Orthotic Science-III	80	320	400	100	100	200
Total	460	760	1220	600	300	900

FOURTH YEAR

Subjects	Theory Hrs	Practical Hrs	Total Hrs	Marks Theory	Marks Practical	Total Marks
*Prosthetic Science-IV	60	160	220	100	100	200
*Orthotic Science-IV	80	160	240	100	100	200
Management & Administration	80	--	80	100	--	100
*Prosthetics Clinical Practice	--	250	250	-	200	200
*Orthotics Clinical Practice	---	250	250	-	200	200
Project Work**	--	180	180	---	100	100
Total	220	1000	1220	300	700	1000

**Joint projects may also be undertaken.

Note:- *All theory & Practical examinations in the discipline of Prosthetics and Orthotics shall be conducted only by the regular appointed Prosthetic and Orthotic Faculty / Teachers from a teaching institution.

INTERNSHIP

1. Internship is compulsory and rotatory.
2. Duration: 6 months
3. Eligibility: Internship will start immediately after the declaration of result of final year, if candidate is declared pass in all four years.
4. Structure of the postings: The place of postings of the students for internship will be decided by the norms of MGM Institute's University Department of Prosthetics & Orthotics.
5. Mode of supervision during internship: Supervision will be provided by the faculties of MGM Institute's University Department of Prosthetics & Orthotics.
6. Maintenance of records by students: Every student should maintain records of the number of hours of clinical work in different areas and institutions. This should be certified by the Head of the MGM Institute's University Department of Prosthetics & Orthotics.
7. Extension of internship: Internship shall be extended by the number of days the student remains absent.
8. Grading and evaluation of student: Grading and evaluation will be done by the institute, where the candidate is doing internship. The student will be required to repeat those postings in which his/her performance is found unsatisfactory.
9. Internship completion certificate would be awarded by MGM Institute of Health Sciences after the successful completion of the internship.
10. MGM Institute of Health Sciences shall award the Degree certificate only after the successful completion of the internship.

WORKING DAYS & ATTENDANCE

Date of Commencement: 01st August, Every Year

The programme will be conducted for **at least 200 working** days each year, exclusive of the period of examination and admission. The institution shall work for a minimum of thirty six hours in a week (five or six days), during which physical presence in the institution of all the teachers and student / clinician is necessary to ensure their availability for advice, guidance, dialogue and consultation as and when needed.

No student will be allowed to appear in the examination unless she/he has attended at least 75% of total number of classes in theory and 80% in practical. 100% attendance in internship is compulsory.

ELIGIBILITY FOR ADMISSION

- A. The applicant for admission should be a Resident Indian National.
- B. Candidate who has passed 10+2 in science or equivalent with physics, chemistry, biology /mathematics and English with minimum aggregate 50% in PCBE/PCME will be eligible for admission to this course.
- C. Lateral Entry for Diploma in Prosthetics and Orthotics (D.P.O.) holders
- Candidates who have passed D.P.O. from a RCI recognized institute shall be eligible for admission directly in 3rd year of B.P.O. programme.
 - Admissions will be on the availability of the seats within sanctioned seats by the Council.

PROGRAMME PATTERN

The programme pattern has been developed on Annual basis.

EXAMINATIONS

Examinations are conducted as per the MGMIHS University norms. Minimum passing marks for every subject will be **50% both in theory and practical, separately**. Each candidate will be given **maximum (n+2) attempts** to clear the examination in the annual examination pattern.

NATURE OF EVALUATION

Internal Assessment will be calculated by conducting minimum two class tests, two assignments, examination/practical examination and any other activities implemented by the MGM Institute's University Department of Prosthetics and Orthotics. Marks of Internal Assessment will be informed to the students prior to commencement of university examinations.

CERTIFICATION AS A REGISTERED PROFESSIONAL

It is mandatory as per **Section 13 of RCI Act** for every Prosthetist and Orthotist to obtain a “**Registered Professional Certificate**” from the **Rehabilitation Council of India** to work in the field of Prosthetics and Orthotics in India. As continuous professional growth is necessary

for the renewal of the certificate, the faculty as well as Prosthetist and Orthotist will undergo in-service programme periodically to update their professional knowledge. Amendments, if any, to the regulations of the programme will be made periodically by the Rehabilitation Council of India. Any deviation from the above regulations should have the prior approval of the Rehabilitation Council of India.

The successful students will be registered as Prosthetist and Orthotist (Professional). The MGM Institute's University Department of Prosthetics and Orthotics will take appropriate action to ensure that all passed out students are registered with the Council.

AWARD OF DEGREE

After successful completion of all examinations and internship, candidate will be awarded with the Degree of “**Bachelor in Prosthetics and Orthotics (B.P.O.)**”.

CLINICAL PRACTICUM

The student should be able to meet the following learning objectives:

- Assess the medical condition of a patient related to their orthotic or prosthetic management using appropriate investigative techniques, which include patient history taking and clinical testing.
- Formulate an optimal prosthetic and orthotic solution using information from the patient assessment, other members of the health care team, medical charts, etc.
- Communicate and discuss patient goals and expectations and discuss and debate the prosthetic management with the patient, co-workers and other members of the health care team.
- Reliably measure and capture a positive cast or image of patient's appendages, while correctly positioning the body part and if appropriate, apply the necessary corrective force system.
- Identify, prescribe and justify selection of appropriate materials and components in the fabrication of the prostheses or orthoses.
- Construct the prostheses or orthoses by using appropriate fabrication techniques in

preparation for the initial fitting.

- Fit the prostheses or orthoses to the patient using static and dynamic functional criteria established from the original assessment.
- Evaluate the quality of the prostheses or orthoses fit to ensure the appropriate interface contouring, force application and trim lines.
- Identify problems related to device fit and/or alignment and be able to suggest and implement appropriate correction.
- Assess and solve prosthetic or orthotic problems as part of short and long term patient care.
- Maintain accurate records of patient treatment and follow up as well as confidentiality of such information.
- Communicate effectively with patient, co-workers, and other health care professionals in such a manner that will ensure the highest quality of service and reflect a professional attitude on the part of the student.
- Educate the patient and/or caregiver on use, care and function of the prostheses or orthoses.
- Understand the methodology of problem identification, problem solving in a process that includes all stake holders, with the patient at the centre.

Fee Structure for the Batch 2018-2019 :

Fee Structure of the Programme	
Particular	Amount (Rs.)
Tuition fees	Rs.50,000/- per annum
Eligibility & Registration fee	Rs 10,000/- + Rs 1000
Caution Money Deposit	Rs 20 ,000/-
Other fee	Rs 25 ,000/-

Tentative dates of cancellation & Cancellation charges applicable :	
Particulars	Permissible Deduction
Cutoff date of Admission	31 st August, 2018
Cancellation up to 15 th August 2018	Rs 10 ,000/- Cancellation fees
Cancellation up to 25 th August 2018	Rs 10 ,000/- Cancellation fees + Proportionate
After 4:00 pm of 25 th August 2018	Students has to pay Tuition Fees for entire Programme

1. Refund of fees by the college, after change of college for higher preference by the same competent authority for the same year, the deduction of Rs 10,000/- will be made from the tuition fees.
2. Hostel Fees + Hostel Deposit to be paid separately subject to availability of hostel.

**ACTIVITIES OF THE DEPARTMENT OF PROSTHETICS AND
ORTHOTICS FROM 2014 TO 2018**

- ❖ On 2nd & 3rd August 2014, a Continuous Rehabilitation Education Programme (CRE) was organized in MGM Hospital, Kamothe, Navi Mumbai. The CRE was organized by the Department of Prosthetics & Orthotics in collaboration with Orthotics Prosthetics Association of India (OPAI) with proper approval from Rehabilitation Council Of India (RCI).

Total 50 individuals which includes students as well as professionals were benefitted by this CRE ,by upgrading their knowledge in “Advancements in Prosthetics & Orthotics “ & getting RCI POINTS which are essential for their continuation of professional registration.

- ❖ A Camp was organized in MGM Hospital, Kamothe, Navi Mumbai from on 23rd to 27th feb 2015, by the Department of Prosthetics & Orthotics in collaboration with PODIAPRO Pvt. Ltd.

Approximately 100 individuals were assessed for different types of foot deformities which includes staffs, students as well as professionals of P & O and other fraternities. Amongst all, approximately 20-30 patients were benefitted with insoles.



- ❖ MGM Institute's University Department of Prosthetics & Orthotics organized a Seminar on 17th April 2015.

Total 20 individuals including staffs as well as professionals of different fraternity were benefitted by this Seminar , by upgrading their knowledge in “Advanced systems in Prosthetics“, where two patients were taken into pipeline for fitting.



- ❖ A Two Days' CRE programme & Hands on Workshop was organized in MGM Hospital, Kamothe, Navi Mumbai. The workshop was organized by the Department of Prosthetics & Orthotics in association with Indian Pedorthic Association (IPA) on 30th April & 1st May 2016.

Total 50 individuals which includes Delegates, students as well as professionals were benefitted by this workshop , by upgrading their knowledge in “Advancements in Pedorthic Medicines “ ,where 3 – 5 patients were given the foot insoles free of charge.



- ❖ MGM Institute Universities Department of Prosthetics & Orthotics conducted A Two Days' Rehabilitation Camp on 28th & 29th March 2017 in association with Artificial Limbs Manufacturing Company (ALIMCO), which is a government statutory body.

Total 50 patients which includes Prosthetic & Orthotic Cases were benefitted by this camp.



- ❖ On 18th August 2017, Department of Prosthetics and Orthotics had conducted a distribution camp in the collaboration with ALIMCO at MGM University, Kamothe, Navi Mumbai.

Nearly 400 Divyangajan (specially abled patients) were distributed aids and appliances such as Prostheses and Orthoses, Motorised wheelchairs, Smart canes, MSEID KITS etc. sponsored by Mazgaon dock ship Builders Ltd. Under CSR (Corporate Social Responsibility) project.





एमजीएच इंस्टीट्यूट ऑफ हेल्थ साइंसेस में आयोजित कार्यक्रम में भाग ले रहे डॉ. स्वर्णलता मिश्रा, उमरा देवमुख, गीरी पाण्डे, डॉ. खंडकर, एस.एस. कदम, विकास कोशिक, आरती मान्यर



- ❖ On 23rd and 24th March 2018, Department of Prosthetics & Orthotics organized Two days Hands On C.R.E. On Orthotic Management of Cerebral Palsy with approval of Rehabilitation Council of India dated 5/12/2017. Total 35 delegates including 6 speakers were benefitted by this CRE. Two patients were fitted with Bilateral Tone Reducing Ankle Foot Orthosis.



CONTACT DETAILS:

For further information please keep browsing our University website www.mgmuhs.com

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