



## MGM INSTITUTE OF HEALTH SCIENCES

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

**Grade 'A' Accredited by NAAC**

**UNIVERSITY DEPARTMENT OF PROSTHETICS AND ORTHOTICS**

Sector-01, Kamothe, Navi Mumbai - 410 209 Tel 022-27437620, Website- [www.mgmudpo.edu.in](http://www.mgmudpo.edu.in)

### **PROGRESS REPORT OF STUDENT'S PROJECTS OF B.P.O (2016-17) BATCH**

MGM Institute's University Department of Prosthetics & Orthotics is a constituent unit of MGM Institute of Health Sciences was started Bachelor in Prosthetics & Orthotics Programme (4.5 year) by the Affiliation of **Rehabilitation council of India (RCI)** in 2016 for development of specialized health care professionals which combines a unique blend of clinical and technological skills of Prosthesis & Orthosis for development of Divyangjan in the society.

The B.P.O Students have project work as a subject in their IV year of B.P.O curriculum as per the guidelines laid by **RCI (Rehabilitation Council of India)**, the Statutory Body. Under this subject they need to do some project of their own ideas. Which can be a prototype or it can be implemented on patients.

As per RCI guidelines the student has to take a project work under the supervision of a guide, Accordingly the students were well informed about the Project work & the rules and regulations about the project in the Month of **August 2019**.

The students choose their area of interest & accordingly the review of literature along with guide in the month of **September 2019**.

The topics of the Project work were finalized in the month of **October 2019**.

After deciding the topics, the students started working in the direction of prototype model & they presented the project work at institutional level in the month of **November 2019**.

Then with all necessary corrections MGMIUDPO Submitted the Project work proposal to the **Scientific Advisory Committee (SAC)** in the third week of **December 2019**.



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For the approval of the **proposed** project in **Scientific Advisory Committee (SAC) meeting** was held on **30<sup>th</sup> January 2020** in the Presence of Chairperson Dr. Rajani Mullerpatan , Member Secretary Dr. Bela Agrawal, Research Advisory Member Dr. Rita Abbi, Dr.Vrushali Panhale, Dr. Meruna Bose, Dr. Juhi Bharnuke (PT) , Dr. Uttara Deshmukh , Guide & HOD, MGMIUDPO & Dr. Deepshikha Raut, Guide & Assistant Professor, MGMIUDPO.

All students presented their projects in front of the SAC Members in the format of power point presentation & demonstrated the model which they have prepared.

The members of the **Scientific Advisory Committee (SAC)** recommended some changes after the presentation. As per advised by them, students rectified the points & submitted the revised proposal of their project work to SAC committee.

Recommendations provided by the Scientific Committee, have been incorporated in the project & revised version were forwarded to the **Institutional Ethical Committee (IEC)** review.

- The details of the projects work of IV B.P.O students is as follows.....

SR NO.	TITLE OF THE PROJECT	NAME OF THE AUTHOR	NAME OF THE GUIDE
1	Motorized Wrist Hand Orthosis with finger extension assist & wrist in 15-20 degree of extension	Mr.Tejas sanjay Pandit.	Dr.Deepshikha Raut
2	Spiral Elbow Extension Orthosis	Mr. Shubham Ajinath Pawar	Dr. Uttara U. Deshmukh
3	Modified Spring Action Articulated Ankle Foot Orthosis (Dorsiflexion Assist)	Mr. Rafiq Ahmed Rather	Dr. Uttara U. Deshmukh





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4	<b>Articulated Ankle Foot Orthosis with Hydraulic Damper at ankle Joint</b>	Ms. Manisha Yadav	Dr. Uttara U. Deshmukh
5	<b>Foot Parameter Device for measuring foot arch height, foot width &amp; foot length</b>	Ms. Simranjeet Kaur Manni	Dr. Uttara U. Deshmukh

As per RCI guidelines the students have submitted the projects to the institute in softcopy format. The projects were thoroughly checked with Plagiarism software by the respected guides & finally by the Head of the Department in the Month of **July-2020**.

After checking by the institute, the students were given the projects in the corrected format to submit the hardcopy to the institute in the Month of **August-2020**

Before the Final Year Exam all students submitted their Project work to the Department in the documented format in the Month of **September-2020**.

During Final year Examination (**October-2020 for regular Batch & January-2021 for Casual Batch**) students presented in front of the external & internal examiner, on the basis of their knowledge & effectiveness of the project work & presentation skills examiner gave marks in the project work.

**Dr. Uttara Deshmukh (P&O)**

I/C Head of the Department,

MGM Department of Prosthetics and Orthotics,

Kamothe, Navi Mumbai

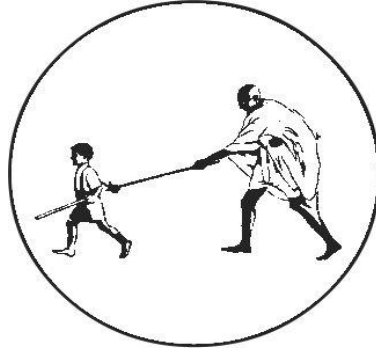
**Dr. Uttara Deshmukh (P & O),**

**H. O. D. In-Charge,**

**MGM Institute's University Department**

**of Prosthetics and Orthotics,**

**Kamothe, Navi Mumbai.**



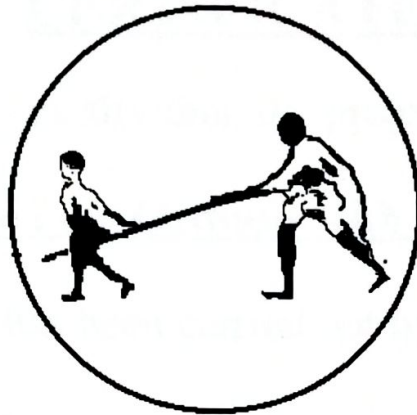
# **COVER PAGE OF** **PROJECTS**

**B.P.O (2016-17)**  
**BATCH**

**MGMIUDPO**

**MGM INSTITUTE OF HEALTH SCIENCES**

**MGM INSTITUTE'S UNIVERSITY**  
**DEPARTMENT OF PROSTHETICS AND**  
**ORTHOTICS**



PROJECT SUBMITTED BY  
**MANISHA VEERBAHADUR YADAV**  
**IV BPO**

ON THE TOPIC

**“ARTICULATED ANKLE FOOT ORTHOSIS  
WITH  
HYDRAULIC DAMPER”**



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Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27437620, Fax 022 - 27431094

### CERTIFICATE

This is to certify that, the project entitled

**"Articulated Ankle Foot Orthosis with Hydraulic Damper"**

has been carried out by:

Miss Manisha Veerbahadur Yadav

PR Number (11610600005)

Class Roll Number (MGMUDPO201605)

BPO IV year

under my supervision in the partial fulfillment of the requirement for  
the award of degree of **BACHELOR in Prosthetics and Orthotics**  
(BPO) during the academic year 2019-20.

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Guide

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Head of the Department

**Dr. Uttara Deshmukh (P & O),**  
H. O. D. In-Charge,  
MGM Institute's University Department  
of Prosthetics and Orthotics,  
Kamothe, Navi Mumbai,





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Tel 022-27437620, Fax 022 - 27431094

### EXAMINER CERTIFICATION

This project report of

**“Manisha Veerbahadur Yadav”**

Entitled

**“Articulated Ankle Foot Orthosis With Hydraulic Damper”**

is approved and acceptable in quality and form.

*12/10/2020*  
*12/10/2020*

**Internal Examiner**

*12/10/2020*  
*12/10/2020*

**External Examiner**



**MAHATMA GANDHI MISSION'S**  
**INSTITUTE OF HEALTH SCIENCES,**  
**KAMOTHE, NAVI MUMBAI**

**MGM Institute's**  
**University Department of Prosthetics and Orthotics**



**Project Report**

**Submitted by,**

**RAFIQ AHMAD RATHER**

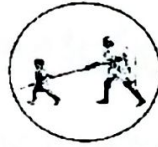
**BPO IV YEAR**

**On the topic**

**“Modified spring action**

**Articulated Ankle Foot Orthosis**  
**(Dorsiflexion Assist)”**





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Tel 022-27437620, Fax 022 - 27431094

## CERTIFICATE

This is to certify that, the project entitled

**“Modified spring action Articulated Ankle Foot Orthosis  
(Dorsiflexion Assist)”**

has been carried out by:

Mr. Rafiq Ahmad Rather

PR Number (11810600014)

Class Roll Number (MGMUDPO201606)

BPO IV year

under my supervision in the partial fulfillment of the requirement for the  
award of degree of **BACHELOR in Prosthetics and Orthotics (BPO)**  
during the academic year 2020.

Guide

Head of the Department

Dr. Uttara Deshmukh (P & O),

H. O. D. In-Charge,

MGM Institute's University Department  
of Prosthetics and Orthotics,  
Kamothe, Navi Mumbai.



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Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27437620, Fax 022 - 27431094

### EXAMINER CERTIFICATION

This project report of

**“Rafiq Ahmad Rather”**

Entitled

**“Modified Spring Action Articulated Ankle Foot Orthosis  
(Dorsiflexion assist)”**

is approved and acceptable in quality and form.

*Rafiq Ahmad Rather*  
12/10/2020

**Internal Examiner**

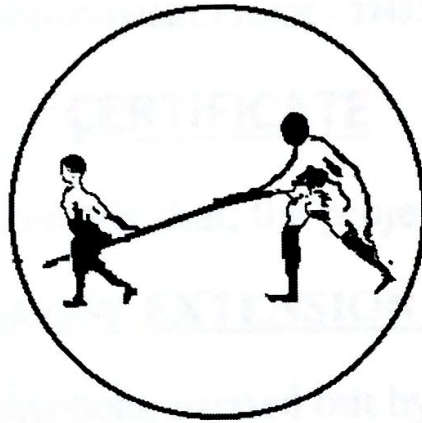
*Naresh*  
12/10/2020

**External Examiner**



**MAHATMA GANDHI MISSION'S**  
**INSTITUTE OF HEALTH SCIENCES,**  
**KAMOTHE, NAVI MUMBAI**

**MGM Institute's**  
**University Department of Prosthetics and Orthotics**



**Project Report**

**Submitted by,**

**SHUBHAM AJINATH PAWAR**

**(IV YEAR BPO)**

**ON**

**“SPIRAL ELBOW EXTENSION  
ORTHOSIS”**



# **SPIRAL ELBOW EXTENSION ORTHOSIS**



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Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27437620, Fax 022 - 27431094

## **CERTIFICATE**

This is to certify that, the project entitled

**"SPIRAL ELBOW EXTENSION ORTHOSIS"**

has been carried out by:

**Mr. Shubham Ajinath Pawar**

**PRN Number (11610600004)**

**Class Roll Number (MGMUDPO201604)**

**BPO IV year**

under my supervision in the partial fulfillment of the requirement for  
the award of degree of **BACHELOR in Prosthetics and Orthotics (BPO)**  
during the academic year 2020.

*Uttara Deshmukh*  
13/01/2021

*Uttara Deshmukh*  
13/01/2021

### **Guide**

**Dr. Uttara Deshmukh (P & O),**  
H. O. D. In-Charge,  
**MGM Institute's University Department**  
**of Prosthetics and Orthotics,**  
Kamothe, Navi Mumbai.

### **Head of Department**

**Dr. Uttara Deshmukh (P & O),**  
H. O. D. In-Charge,  
**MGM Institute's University Department**  
**of Prosthetics and Orthotics,**  
Kamothe, Navi Mumbai.

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Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27437620, Fax 022 – 27431094

### EXAMINER CERTIFICATION

This project report of

**“Shubham Ajinath Pawar”**

Entitled

**“Spiral Elbow Extension Orthosis”**

Is approved and acceptable in quality and form.

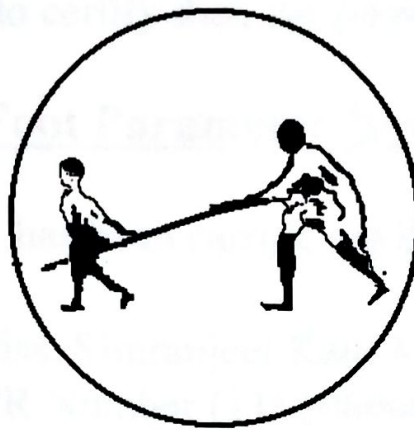
*Tushar Deshmukh*  
18/04/2021  
**Internal Examiner**



*[Signature]*  
**External Examiner**

**MAHATMA GANDHI MISSION'S**  
**INSTITUTE OF HEALTH SCIENCES**

**MGM INSTITUTE'S UNIVERSITY DEPARTMENT OF**  
**PROSTHETICS AND ORTHOTICS**  
**KAMOTHE, NAVI MUMBAI**



**PROJECT SUBMITTED BY**  
**SIMRANJEET KAUR MANNI**  
**(IV YEAR BPO)**

**ON THE TOPIC**  
**"FOOT PARAMETER DEVICE"**





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Tel 022-27437620, Fax 022 - 27431094

## CERTIFICATE

This is to certify that, the project entitled

### "Foot Parameter Device"

has been carried out by:

Miss. Simranjeet Kaur Manni

PR Number (11610600002)

Class Roll Number (MGMUDPO201602)

BPO IV year

Under my supervision in the partial fulfillment of the requirement for the award of degree of **BACHELOR in Prosthetics and Orthotics (BPO)** during the academic year 2020.

*Uttara Deshmukh*  
13/01/2021

**Guide**

Dr. Uttara Deshmukh (P & O),  
H. O. D. In-Charge,  
MGM Institute's University Department  
of Prosthetics and Orthotics,  
Kamothe, Navi Mumbai.

*Uttara Deshmukh*  
13/01/2021

**Head of the Department**

Dr. Uttara Deshmukh (P & O),  
H. O. D. In-Charge,  
MGM Institute's University Department  
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Sector-01, Kamothe, Navi Mumbai - 410 209  
Tel 022-27437620, Fax 022 – 27431094

**EXAMINER CERTIFICATION**

This project report of

**“Simranjeet Kaur Manni”**

Entitled

**“Foot Parameter Device”**

is approved and acceptable in quality and form.

*Internal Examiner*  
*13/01/2021*

**Internal Examiner**

*External Examiner*

**External Examiner**

**MAHATMA GANDHI MISSION'S**  
**INSTITUTE OF HEALTH SCIENCES**

**MGM INSTITUTE'S UNIVERSITY DEPARTMENT OF**  
**PROSTHETICS AND ORTHOTICS**  
**KAMOTHE, NAVI MUMBAI**



**PROJECT SUBMITTED**  
**BY**

**TEJAS SANJAY PANDIT**  
**(IV YEAR BPO)**

**ON**

**“MOTORIZED WRIST HAND ORTHOSIS”**





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## CERTIFICATE

This is to certify that, the project entitled

**"Motorized Wrist Hand Orthosis"**

has been carried out by:

Mr. Tejas Sanjay Pandit

PR Number (11610600003)

Class Roll Number (MGMUDPO201603)

BPO IV year

Under my supervision in the partial fulfillment of the requirement for the award of degree of **BACHELOR in Prosthetics and Orthotics (BPO)** during the academic year 2020.

Guide

Head of the Department

Dr. Uttara Deshmukh (P & O),

H. O. D. In-Charge,

MGM Institute's University Department  
of Prosthetics and Orthotics,

Kamothe, Navi Mumbai.



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### **EXAMINER CERTIFICATION**

This project report of

**“Tejas Sanjay Pandit”**

Entitled

**“Motorized Wrist Hand Orthosis”**

Is approved and acceptable in quality and form.

*Tejas Sanjay Pandit*  
12/10/2020

**Internal Examiner**

*Alankar*  
12/10/2020

**External Examiner**

