

# **Criterion-1: Curricular Aspects**

# Key Indicator – 1.3: Curriculum Enrichment Metric: 1.3.3

# Programmes: M.Sc. Electronic Science M.Tech. Microwave Electronics

Syllabus	M.Sc. Electronic Science:
	https://www.du.ac.in/uploads/RevisedSyllabi1/Annexure-
	31.%20Electronic%20Science-
	MSc%20Electronics%2024.09.2018.pdf
	M.Tech. Microwave Electronics:
	https://electronics.du.ac.in/docs/Department info bulletien
	<u>23 24.pdf</u>
Number of Students	Annexure-I
Sample Project Reports	Annexure-II



# **Annexure-I** Number of Students



डॉ. हरसुप्रीत कौर एसोसिएट प्रोफेसर एवं प्रमुख इलेक्ट्रॉनिक विज्ञान विभाग दिल्ली विश्वविद्यालय दक्षिण परिसर बेनिटो जुआरेज़ रोड नई दिल्ली-110021, भारत

Tel. (0): +91-11-24110440 Tel. (0): +91-11-24117204 Ext. 7199 head.does@south.du.ac.in

To, Professor Shyama Rath, Coordinator, Internal Quality Assurance Cell, University of Delhi Delhi-110007.

#### Subject: Regarding Data of field projects/Research project/Internships

Dear Sir/Madam,

This is in reference to your email dated 10<sup>th</sup> January 2024. The details are as follows:

1. Name of the Programmes offered by the HEI is M.Sc. (Electronics) and M.Tech. (Microwave Electronics)

2. Number of students undertaking the major projects / dissertation is 147 in M.Sc. (Electronics) and 89 in M.Tech. (Microwave Electronics) during 2018 to 2023.

Thanks and Regards.

IKan.

Dr. Harsupreet Kaur



# Annexure-II(a)

# Sample Project Reports M.Sc. Electronic Science

This is to certify that the dissertation entitled "Optical and Structural Properties of the ZnO nanostructure grown on glass substrate by Hydrothermal Method" submitted by "MOHD REHAN ANSARI" in partial fulfilment for the award of the degree of M.Sc. in ELECTRONICS to the Department of Electronic Science, University of Delhi, South Campus is an original record of the work carried out under the guidance and supervision of Dr. KOTESWARA RAO PETA from January 2019 – May 2019. The matter embodied in this dissertation has not been submitted elsewhere for the award of degree or diploma.

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Dr. Koteswara Rao Peta (Project Guide) Department of Electronic Science

Avinashi Kaloor

**Prof. Avinashi Kapoor** Head of department Department of Electronic Science University of Delhi South Campus

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Dr. Harsupreet Kaur (Project co-ordinator) Department of Electronic Science University of Delhi South Campus

#### Certificate

This is to certify that the project work entitled "**Fabrication and characterization of Organic solar cells**" submitted **by Anurag Singh** in partial fulfillment for the award of the degree Master of Science in Electronic Science to the department of Electronic Science , University of Delhi, South Campus is an original record of work carried out by Anurag Singh under the guidance and supervision of **Dr. P. Koteswara Rao** from 2<sup>nd</sup> January 2019 to 30<sup>th</sup> May 2019. The matter embodied in this project has not been submitted elsewhere for the award of degree or diploma of any University.

Date 04/06/2019

Dr. Harsupreet Kaur

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G

(Project Coordinator)

Department of Electronic Science

Dr. P. Koteswara Rao

(Project Supervisor) Department of Electronic Science

Avinashi Kajoon Prof Avinashi Kapoor

(Head of Department) Department of Electronic Science University of Delhi South Campus

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I hereby certify that the work which is being presented I this project entitled "Studies On Synthesis & Characterization Of Sm<sup>3+</sup>-ZnO /P3HT Composite For Solar Cell Applications" in partial fulfilment of the requirement for the award of degree of Master of Science in Electronics submitted in Department of Electronic Science of University of Delhi ,South Campus, Delhi, in an authentic record of my work carried out under the supervision of Dr.P.Koteswara Rao and refers other researcher's work which are duly listed in the reference section.

This is to certify that the above statement made by candidate is correct and true to the best of my knowledge.

Dr. Koteswara Rao P

(Supervisor and Coordinator) Department of Electronic Science University of Delhi South Campus

05/01/23. Dr. Harsupreet Kaur

(Head of Department) Department of Electronic Science University of Delhi South Campus

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# **Certificate**

This is to certify that the report on dissertation work entitled "*Piezoelectric based MEMS design for low frequency energy harvesting applications*" is carried out by Ms. Pooja Mittal under the guidance of the undersigned. This project is done as a partial fulfilment for the award of the degree "Master of Science in Electronics" from Department of Electronic Science, University of Delhi South Campus, New Delhi during 4<sup>th</sup> Semester-2023. This report embodies original work of the candidate and has not been submitted in full or any part for the award of any other degree or diploma.

23 Dr. P. Koteswara Rao

(Supervisor and Coordinator) Department of Electronic Science University of Delhi South Campus

**Dr. Harsupreet Kaur** (Head of Department) Department of Electronic Science University of Delhi South Campus



# **Annexure-II(b)**

Sample Project Reports M.Tech. Microwave Electronics

## CENOWLEDGEMENT



# CERTIFICATE

This is to certify that Ms. Sarita Rani, student of Department of Electronic Science, University of Delhi, South Campus has successfully completed her project work entitled as "Design of C-band 10 Watt Solid State Power Amplifier" under the partial fulfillment of her Master's degree (M.Tech) in Microwave Electronics from the Department of Electronic Science, University of Delhi, South Campus, New Delhi.

To the best of my knowledge, the content of this report does not form a basis for the award of any previous degree to anyone else.

Dr. P. K. Rao

(Internal Project Guide)

Department of Electronic

Science, UDSC, New Delhi

Dr. Kamlesh Patel

(Project Coordinator)

Department of Electronic

Science, UDSC, New Delhi

Avinash: Ko Prof. Avinashi Kapoor

Head of Department Department ofElectronicScience

UDSC, New Delhi



This is to certify that Ms. Puja Kumari, M. Tech. IV Semester student of Department of Electronics Science, University of Delhi South Campus has successfully completed her project work entitled "DESIGN OF X-BAND GaN MMIC POWER AMPLIFIER" for the partial fulfillment of her Master's degree (M. Tech) in Microwave Electronics from the Department of Electronic Science, University of Delhi South Campus, New Delhi-110021 at SPACE APPLICATION CENTRE (SAC)-INDIAN SPACE RESEARCH ORGANISATION-(ISRO) from 1st January 2019 to 27<sup>th</sup> May 2019.

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Dr. Enakshi K. Sharma Professor (Internal Project Guide) Department of Electronic Science UDSC, New Delhi

204.06.209

Dr. Kamlesh Patel Assistant Professor (Project Coordinator) Department of Electronic Science UDSC, New Delhi

Avinashi Kfo

Dr. Avinashi Kapoor 44449 Head of Department Department of Electronic Science UDSC, New Delhi

## DEPARTMENT OF ELECTRONIC SCIENCE

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University of Delhi, South Campus

Benito Juarez road, New Delhi 110021, India



CERTIFICATE

This is to certify that Mr. **Brajraj Singh**, MTech. IV Semester student of Department of Electronic Science, University of Delhi South Campus has successfully completed his project work entitled **Design of Generalized Chebyshev Microwave FilterSuspended Stripline using**" for the partial fulfillment of his Master's degree (M. Tech) in Microwave Electronics from the Department of Electronic Science, University of Delhi South Campus, New Delhi at "DRDO- Solid State Physics Laboratory" New Delhi. From th Janu5rary 2018 to 25<sup>th</sup> May 2019.

Dr.Harsupreet Kaur 6 11

(Internal Project Guide)

Dept. of Electronic Science

UDSC, New Delhi

Dr. Kamlesh Patel

(Project Coordinator)

Dept. of Electronic Science

UDSC, New Delhi

Avinashi Kaloon

Prof. Avinashi Kapoor

Head of Department

Dept. of Electronic Science

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# DEPARTMENT OF ELECTRONICS SCIENCE

University of Delhi South Campus Benito Juarez road, New Delhi 110021 India



#### CERTIFICATE

This is to certify that ARJUN YADAV, M.Tech. IV Semester student of Department of Electronics Science, University of Delhi South Campus has successfully completed his project work entitled "DESIGN AND DEVELOPMENT OF LOG DETECTOR VIDEO AMPLIFIER" for the partial fulfilment of his Master's degree (M.Tech.) in Microwave Electronics from the Department of Electronics Science, University of Delhi South Campus, New Delhi at BHARAT ELECTRONICS LIMITED (BEL), Ghaziabad from 03<sup>rd</sup> Jan 2022 to 27<sup>th</sup> May 2022.

Asst. Prof. P. Koteswara Rao (Internal Project Guide) Dept. of Electronics Science UDSC, New Delhi

Asst. Prof.Amit Birwal (Project Co-ordinator) Dept. of Electronics Science UDSC, New Delhi

Sr. Prof. Mridula Gupta Head of Department Dept. of Electronics Science UDSC, New Delhi

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### DEPARTMENT OF ELECTRONIC SCIENCE

University of Delhi, South Campus Benito Juarez Road, New Delhi-110021, India



#### CERTIFICATE

This is to certify that Ms. Shivangi Yadav, Roll No. 20251882023, M.Tech student of University of Delhi, South Campus has successfully completed her project work entitled "Design and Development of Tri Band Microstrip Patch Antenna for NavIC Receiver" for partial fulfillment of the requirements of the degree "MASTER OF TECHNOLOGY (M.TECH) IN MICROWAVE ELECTRONICS" from the Department of Electronic Science, University of Delhi, South Campus, New Delhi at Society For Applied Microwave Electronics Engineering And Research (SAMEER),Mumbai, India from 6<sup>th</sup>Jan 2022 to 27<sup>th</sup> May 2022.

Internal Project Guide Dr. Harsupreet Kaur Assistant Professor Department of Electronic Science UDSC, New Delhi

Project Coordinator Dr. Amit Birwal Assistant Professor Department of Electronic Science UDSC, New Delhi

Sr. Prof. Mridúla Gupta Head, Department of Electronic Science UDSC, New Delhi

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This is to certify that Ms. Akanksha Sneh, student of M.Tech (Microwave Electronics) Department of Electronic Science, University of Delhi, South campus, New Delhi has successfully completed his project work entitled as Link analysis of Quad diversity Troposcatter Communication System at Ku band under the partial fulfilment of his Master's degree (M.Tech) in Microwave Electronics from the Department of Electronic Science, University of Delhi South Campus, New Delhi.

To the best of my knowledge, the content of this report does not form a basis for the award of any previous degree to anyone else.

Avinashi Kapon Internal Project Guide 4.6. 19

Dr. Avinashi Kapoor Professor Department of Electronic Science UDSC, New Delhi

Project Coordinator

Dr. Kamlesh Patel Assistant Professor Department of Electronic Science UDSC, New Delhi

Avinashi Kofeon Head of the Department 4.6.19

Dr. Avinashi Kapoor Professor Department of Electronic Science University of Delhi, South Campus New Delhi

## DEPARTMENT OF ELECTRONIC SCIENCE University of Delhi, South Campus Benito Juarez Road, New Delhi-110021, India



## Certificate

This is to certify that Mr. Sanjeev Kumar Rao, Roll No. 20251882028, M.Tech IV Semester student of University of Delhi South Campus has successfully completed his project work entitled —Design and Simulation of High Data Rate Underwater Wireless Optical Communication System (UWOCS) in partial fulfillment of the requirements for the degree —MASTER OF TECHNOLOGY IN MICROWAVE ELECTRONICS" from the Department of Electronic Science, University of Delhi, South Campus, New Delhi, at Solid State Physics Laboratory (SSPL), Delhi from 03<sup>rd</sup> Jan 2022 to 27th May 2022.

Internal Project Guide Sr. Prof. Mridula Gupta, Head, Department of Electronic Science University of Delhi, South Campus, New Delhi

6.6.202

Project Coordinator Dr. Amit Birwal Assistant Professor, Department of Electronic Science University of Delhi, South Campus, New Delhi.

Sr. Prof. Mridula Gupta Head, Department of Electronic Science University of Delhi, South Campus, New Delhi



This is to certify that Mr. SAMEER ANSAARI, an M. Tech. IV Semester student of Department of Electronics Science, University of Delhi South Campus, has successfully completed his project work entitled "DESIGN OF A GENERALIZED CHEBYSHEV FUNCTION LOW PASS FILTER" for the partial fulfilment of his Master's degree (M. Tech) in Microwave Electronics from the Department of Electronic Science, University of Delhi South Campus, New Delhi at SOLID STATE PHYSICS LABORATORY, DEFENCE AND RESEARCH ORGANISSATION (SSPL-DRDO), DELHI from 5<sup>th</sup> January 2019 to 25<sup>th</sup> May 2019.

#### Dr. Kamlesh Patel

(Project Coordinator)

Department of Electronic Science UDSC, New Delhi

#### **Prof. Mridula Gupta**

HG4 616/19

(Internal Project Guide)

Department of Electronic Science UDSC, New Delhi

Avinashi Kapoor 6.6.19

Head of Department Department of Electronic Science

UDSC, New Delhi

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### DEPARTMENT OF ELECTRONIC SCIENCE

University of Delhi, South Campus Benito

Juarez Road, New Delhi-110021, India



CERTIFICATE

This is to certify that Ms. Neha Pal, Roll No. 21/1113, M. Tech IV Semester student of University of Delhi South Campus has successfully completed her project work entitled "Design of Broadband High Efficiency Array Antenna at Ka Band" for partial fulfillment of the requirements of the degree "MASTER OF TECHNOLOGY IN MICROWAVE ELECTRONICS" from the Department of Electronic Science, University of Delhi South Campus, New Delhi at Space Application Center (SAC), ISRO from 9<sup>th</sup> Jan 2023 to 26<sup>th</sup> May 2023.

Internal Guide

Dr. Kamlesh Patel Associate Professor Department of Electronic science UDSC, New Delhi

Project Coordinator

Sr. prof. Mridula Gupta

Senior Professor

Mridula G W Bectronic Science Senior Professor Department of Epstonic Science University of Delhi South Campus New Delhi-110021

28 25 Dr. Harsupreet Kaur

Head of Department

Department of Electronic Science

UDSC, New Delhi

हरसुप्रीत कौर / Harsupreet Kaur सह-आयार्य एवं अव्यव/Associate Professor & Head इलेक्ट्रोनिक विज्ञान विभाग Department of Electronic Science दिल्ली विश्वविद्यालय दक्षिण परिसर University of Dethi South Campus नई दिल्ली-110021/New Dythi-110021