NANDHA COLLEGE OF TECHNOLOGY

Approved by AICTE, New Delhi *Affiliated to Anna University, Chennai
Pitchandampalayam(PO), Vaikkalmedu, Erode- Perundurai Road, Erode- 638052
Website: www.nandhatech.org E-Mail: nandhatechnology@gmail.com

Academic Year 2022-23

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

Nandha College of Technology, Erode-52

Research and Development Cell

Academic Year 2022-23

Financial Support for Faculty Members

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2022-23	Dr.Jayanthi.R	NPTEL-Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL	1100
2022-23	Vinoth Kumar.P	NPTEL-Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL	600
2022-23	Rajkumar.T	NPTEL-Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL	1000
2022-23	Gowthami.D	NPTEL-Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL	1100
2022-23	Poornima.K	NPTEL-System Design Through VERILOG	NPTEL	1100
2022-23	Amsaveni	NPTEL-System Design Through VERILOG	NPTEL	1100
2022-23	Dr.Mohankumar.G.B	NPTEL-Introduction to Smart Grid	NPTEL	1100
2022-23	Vimala.V	NPTEL-Advanced Machining Process	NPTEL	600
2022-23	Viswanathan.N	NPTEL-Advanced Machining Process	NPTEL	1100
2022-23	Krishnamoorthi.T	NPTEL-LASER based Manufacuring	NPTEL	1100
2022-23	Arunkumar.S	NPTEL-Introduction to Composites	NPTEL	1100
2022-23	Saravanan.A.P	NPTEL-Engineering Mathematics - I	NPTEL	1000
2022-23	Anandharaj.A	NPTEL-Engineering Mathematics - I	NPTEL	1000
2022-23	Poongodi.R	NPTEL-Engineering Mathematics - I	NPTEL	1000
2022-23	Vijayakumar.N	NPTEL-Plastic Waste Management	NPTEL	1100

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

From

Dr.G.B.Mohankumar,
Professor & Head/EEE,
R&D Coordinator,
Nandha College of Technology,
Erode-52.

To

The Secretary,
Nandha College of Technology,
Erode – 638 052.

Through,

The Principal,
Nandha College of Technology,
Erode – 638 052.

Respected Sir,

Sub: Financial Assistance for SWAYAM Online Courses - reg.

In connection with Massive Open Online Courses (MOOCs) of SWAYAM, Online course certifications are approved for Faculty Development Programme (FDP) by AICTE. The faculty members those who have successfully completed the above said course, would be able to produce their certificates for our Institutional promotions under Career Advancement Scheme (CAS).

In our college, 15 faculty members have successfully completed the Online Course during the period July 2022 to Dec 2022. Herewith the faculties list is added with this letter along with the course title. I kindly request you to provide the financial assistance of Rs 15,200/-(Rupees Fifteen Thousand Two Hundred only) for the fees paid by the faculty members.

Thank You.

Yours truly,
(Dr.G.B.Mohankumar)

Date: 07.03.2023
Place: Erode

Nandha College of Technology * Erode-638 052 *

Enclosure:

1. SWAYUM-NPTEL Online Course Completed Faculty List.

Submitted to Director

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY, ERODE-52

Academic Year 2022 - 23

SWAYAM ONLINE COURSES COMPLETED BY THE FACULTY MEMBERS

Session : July - December 2022

S. No.	NAME OF THE FACULTY	DEPARTMENT	TITLE OF THE ONLINE COURSE	CONDUCTED BY	DURATION	STATUS & CATEGORY	FEES PAID in for completed certificate Rs.	FEES PAID for FDP certificate Rs.	Signature
1	Dr.R.Jayanthi	Electronics and Communication Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1,000	100.	
2	Mr.P.Vinoth Kumar	Electronics and Communication Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	500	100	
3	Mr.T.Rajkumar	Electronics and Communication Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1000		
4	Ms.D.Gowthami	Electronics and Communication Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1000	100	
5	Ms.K.Poornima	Electronics and Communication Engineering	System Design Through VERILOG	SWAYAM - NPTEL	JUL-SEP 2022 (8 Weeks Course)	Sucessfully Completed & Elite	1000	100	
6	Ms.S.Amasaveni	Electronics and Communication Engineering	System Design Through VERILOG	SWAYAM - NPTEL	JUL-SEP 2022 (8 Weeks Course)	Sucessfully Completed & Elite	1000	100	
7	Ms.V.Vimala	Electronics and Communication Engineering	Advanced Machining Process	SWAYAM - NPTEL	AUG-OCT 2022 (8 Weeks Course)	Sucessfully Completed	500	100	
8	Dr.G.B.Mohankumar	Electrical and Electronics Engineering	Introduction to Smart Grid	SWAYAM - NPTEL	JUL-SEP 2022 (8 Weeks Course)	Sucessfully Completed	1000	100	
9	Mr.N.Viswanathan	Mechanical Engineering	Advanced Machining Process	SWAYAM - NPTEL	AUG-OCT 2022 (8 Weeks Course)	Sucessfully Completed & Elite	1000	100	
10	Mr.T.Krishnamoorthi	Mechanical Engineering	LASER based Manufacturing	SWAYAM - NPTEL	AUG-OCT 2022 (8 Weeks Course)	Sucessfully Completed & Elite	1000	100	
11	Mr.S.Arunkumar	Mechanical Engineering	Introduction to Composites	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1000	100	
12	Mr.A.P.Saravanan	Science & Humanities	Engineering Mathematics - I	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed	1000	–	
13	Mr.A.Anandharaj	Science & Humanities	Engineering Mathematics - I	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1000	–	
14	Mrs.R.Poongodi	Science & Humanities	Engineering Mathematics - I	SWAYAM - NPTEL	JUL-OCT 2022 (12 Weeks Course)	Sucessfully Completed & Elite	1000	–	
15	Mr.N.Vijayakumar	Science & Humanities	Plastic Waste Management	SWAYAM - NPTEL	AUG-OCT 2022 (8 Weeks Course)	Sucessfully Completed & Elite	1000	100	

TOTAL AMOUNT 15,200

Amount in words:

SWAYAM - Online Course Coordinator

Nandha College of Technology Erode-638 052

Principal

Principal
Nandha College of Technology
Erode-52.

Principal
Nandha College of Technology
Erode-52.

Elite

NPTEL Online Certification

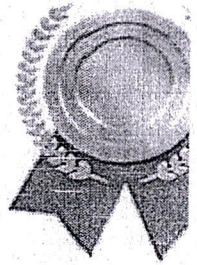
(Funded by the MoE, Govt. of India)

TOP TOPPER 2%

This certificate is awarded to

DR R JAYANTHI

for successfully completing the course



Introduction to Industry 4.0 and Industrial Internet of Things

with a consolidated score of **80** %

Online Assignments	24.56/25	Proctored Exam	55.85/75

Total number of candidates certified in this course: **5469**

Principal
Nandha College of Technology
Erode-52.

Jul-Oct 2022

(12 week course)

Nandha College of Technology * Erode-638052 *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22CS95S64500182

To validate the certificate

No. of credits recommended: 3

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

VINOTH KUMAR P

for successfully completing the course

Introduction to Industry 4.0 and Industrial Internet of Things

with a consolidated score of **71** %

Online Assignments	24.56/25	Proctored Exam	46.68/75

Total number of candidates certified in this course: **5469**

Principal
Nandha College of Technology
Erode-52..

Jul-Oct 2022

(12 week course)

Nandha College of Technology * Erode-638052. *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22CS95554501544

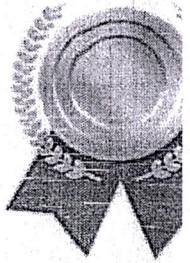
To validate the certificate

No. of credits recommended: 3 or

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

RAJKUMAR T

for successfully completing the course

Introduction to Industry 4.0 and Industrial Internet of Things

with a consolidated score of **76** %

Online Assignments	24.56/25	Proctored Exam	51.28/75

Total number of candidates certified in this course: **5469**

Principal
Nandha College of Technology
Erode-52.

Jul-Oct 2022

(12 week course)

Nandha College of Technology * Erode-638052. *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22CS95S54500081

To validate the certificate

No. of credits recommended: 3

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

GOWTHAMI D

for successfully completing the course

Introduction to Industry 4.0 and Industrial Internet of Things

with a consolidated score of **71** %

Online Assignments	24.56/25	Proctored Exam	46.28/75

Total number of candidates certified in this course: **5469**

Principal
Nandha College of Technology
Erode-52.

Jul-Oct 2022

(12 week course)

Nandha College of Technology * Erode-638052 *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22CS95S64500167

To validate the certificate

No. of credits recommended: 3

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

K POORNIMA

for successfully completing the course

System Design Through VERILOG

with a consolidated score of **64** %

Online Assignments	24/25	Proctored Exam	39.8/75

Total number of candidates certified in this course: **645**

Principal
Nandha College of Technology
Erode-52.

Jul-Sep 2022

(8 week course)

Nandha College of Technology * Erode-638052 *

T.V.Bharat

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati

FREE ONLINE EDUCATION swayam

Roll No:NPTEL22EE104S23570672

To validate the certificate

No. of credits recommended: 2

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

AMSAVENI S

for successfully completing the course

System Design Through VERILOG

with a consolidated score of **67** %

Online Assignments	22.42/25	Proctored Exam	44.39/75

Total number of candidates certified in this course: **645**

Principal
Nandha College of Technology
Erode-52.

Jul-Sep 2022

(8 week course)

Nandha College of Technology * Erode-638052 *

T.V.Bharat

Prof. T. V. Bharat
Head, Centre for Educational Technol
NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22EE104S23571062

To validate the certificate

No. of credits recommended:

NPTEL-AICTE
Faculty Development Programme

(Funded by the MoE, Govt. of India)

This certificate is awarded to

G B MOHANKUMAR

for successfully completing the course

Introduction to Smart Grid

with a consolidated score of **46 %**

of. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Principal
Nandha College of Technology
Erode-52.

(Jul-Sep 2022)

Nandha College of Technology * Erode-638052. *

Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Development)
All India Council for Technical Education

No: NPTEL22EE82S23570562

Duration of NPTEL course : 8 Weeks

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams. certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2018, similar to other refresher / orientation courses. F.No. AICTE / RIFD / FDP through MOOCs / 2017-18

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

V VIMALA

for successfully completing the course

Advanced Machining Processes

with a consolidated score of **55** %

Online Assignments	24.71/25	Proctored Exam	30/75

Total number of candidates certified in this course: 937

Principal
Nandha College of Technology
Erode-52.

Aug-Oct 2022

(8 week course)

Nandha College of Technology Erode-638052

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati

FREE ONLINE EDUCATION swayam

Roll No: NPTEL22ME119S34500483

To validate the certificate

No. of credits recommended: 2 c

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

N VISWANATHAN

for successfully completing the course

Advanced Machining Processes

with a consolidated score of **60** %

Online Assignments	24.71/25	Proctored Exam	34.88/75

Total number of candidates certified in this course: **937**

Aug-Oct 2022

(8 week course)

Prof. T. V. Bhara...

Head, Centre for Educa...

NPTEL Coordinator, IIT...

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology * Erode-638052. *

Indian Institute of Technology Guwahati

swayam

NPTEL22ME19534500927 To validate the certificate No. of ...

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

ARUNKUMAR S

for successfully completing the course

Introduction to Composites

with a consolidated score of **67** %

Online Assignments	21.56/25	Proctored Exam	45/75

Total number of candidates certified in this course: **536**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Oct 2022

(12 week course)

Prof. Satyaki Ro
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

Nandha College of Technology * Erode-638052. (Tn)

Principal
Nandha College of Technology
Erode-52.

swayam

To verify the certificate

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SARAVANAN A P

for successfully completing the course

Engineering Mathematics - I

with a consolidated score of **53** %

Online Assignments	19.41/25	Proctored Exam	34/75

Total number of candidates certified in this course: **154**

Nandha College of Technology * Erode-638052.

Jul-Oct 2022

(12 week course)

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Certificate No: NPTEL22MA77S34500119

To validate the certificate

No. of credits recommended: 3 or

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

ANANDHARAJ A

for successfully completing the course

Engineering Mathematics - I

with a consolidated score of **60** %

Online Assignments	19.66/25	Proctored Exam	40.5/75

Total number of candidates certified in this course: **154**

Nandha College of Technology Erode-638052

Jul-Oct 2022
(12 week course)

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam

Certificate No: NPTEL22MA77S34500366

To validate the certificate

No. of credits recommended: 3 or 4

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

POONGODI R

for successfully completing the course

Engineering Mathematics - I

with a consolidated score of **72** %

Online Assignments	19.25/25	Proctored Exam	52.37/75

Total number of candidates certified in this course: **154**

Nandha College of Technology * Erode-638052.

Jul-Oct 2022

(12 week course)

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

NPTEL22MA77S34500873

To validate the certificate

No. of credits recommended: 3 or 4

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

VIJAYAKUMAR N

for successfully completing the course

Plastic Waste Management

with a consolidated score of **68** %

Online Assignments	18.96/25	Proctored Exam	48.95/75

Total number of candidates certified in this course: **3166**

Nandha College of Technology Erode-638052

Aug-Oct 2022

(8 week course)

Principal
Nandha College of Technology
Erode-52

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

NPTEL22CE72S34501053

To validate the certificate

No. of credits recommended: 2 or 3

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 1

Date : 13-03-2023

Debit .....

Rupees one thousand one hundred only

on account of Swayam online course

Paid to Dr. R. Jayanthi Prof / ECE

Rs. 1100/-

Received the above sum,

R. Jayanthi

Signature

Cashier

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 2

Date : 13-03-2023

Debit .....

Rupees six hundred only

on account of Swayam online Course

Paid to P. Vinoth kumar ASP / ECE

Rs. 600/-

Received the above sum,

13/3/23

Signature

Cashier

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 3

Date : 13-03-2023

Debit .....

Rupees One thousand only

on account of Swayam online course

Paid to T. Rajkumar AP / ECE

Rs. 1000/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 4

Date : 13-03-2023

Debit .....

Rupees One Thousand one hundred only

on account of swayam online course

Paid to D. Gowthami AP/ECE

Rs. 1100/-

Received the above sum,

13.03.2023

Cashier

Signature

Nandha College of Technology ★ Erode-638052. ★

Principal
Nandha College of Technology
Erode-52

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 5

Date : 13-03-2023

Debit .....

Rupees one Thousand one hundred only

on account of Swayam online course

Paid to K. Poornima AP/ECE

Rs. 1100/-

Received the above sum,

Cashier

Signature 15/3/23

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 6

Date : 13-03-2023

Debit .....

Rupees one Thousand one hundred only

on account of Swayam online course

Paid to S. Amasaveni AP/ECE

Rs. 1100 /-

Received the above sum,

Cashier

Signature 15/3/23

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 7

Date : 13-03-2023

Debit .....

Rupees ..... one Thousand one hundred only .....

on account of ..... swayam online course .....

Paid to ..... Dr. G.B. Mohan kumar ASP/EEE .....

Rs. 1100/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 8

Date : 13-03-2023

Debit .....

Rupees ..... six hundred only .....

on account of ..... swayam online course .....

Paid to ..... V. Vimala AP/Mech .....

Rs. 600/-

Received the above sum,

Cashier

Signature

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 9

Date : 13-03-2023

Debit .....

Rupees one Thousand one hundred only

on account of Swayam online course

Paid to N. Viswanathan AP/ Mech

Rs. 1100/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 10

Date : 13.03.2023

Debit .....

Rupees one Thousand one hundred only

on account of Swayam online course

Paid to T. Krishnamoorthi AP/ Mech

Rs. 1100/-

Received the above sum,

Cashier

Signature 13/3/23

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 11

Date : 13.03.2023

Debit .....

Rupees one Thousand one hundred only

on account of Swayam online course

Paid to S. Arunkumar AP/Mech

Rs. 1100/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 12

Date : 13.03.2023

Debit .....

Rupees one Thousand only

on account of Swayam online course

Paid to A.P. Saravanan ASP/S&H

Rs. 1000/-

Received the above sum,

Cashier

A.P. Saravanan

Signature

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 13

Date : 13-03-2023

Debit .....

Rupees one Thousand only

on account of Swayam online course

Paid to A. Anandharaj AP / S & H

Rs. 1000/-

Received the above sum,

Cashier

A. Anandharaj 15/3/23

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 14

Date : 13-03-2023

Debit .....

Rupees one thousand only

on account of Swayam online course

Paid to R. Poongodi ASP / S & H

Rs. 1000/-

Received the above sum,

Cashier

R. Poongodi 13/3/23

Signature

Nandha College of Technology ★ Erode-638052 ★

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 15

Date : 13.03.2023

Debit .....

Rupees ..... one thousand one hundred only .....

on account of ..... Swayam online course .....

Paid to ..... N. Vijaya kumar. Prof / S & H .....

Rs. 1100/-

Received the above sum,

Cashier

13/3/2023

Signature

Nandha College of Technology ★ Erode-638052. ★

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology, Erode-52

Research and Development Cell

Academic Year 2022-23

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2022-23	B.M.S.Javed Ahamed	NPTEL-Design and Analysis of Algorithms	NPTEL	1000
2022-23	V.S.Sureshkumar	NPTEL-Introduction to Internet of Things	NPTEL	1100
2022-23	S.A.Srinivasan	NPTEL- Engireering Graphics and Design	NPTEL	1000
2022-23	T.Krishnamoorthi	NPTEL-Engireering Graphics and Design	NPTEL	1000
2022-23	R.Girimurugan	NPTEL-Design,Technology and Innovation	NPTEL	1100
2022-23	Pon.Maheskumar	NPTEL-Fundamental of Welding Science and Technology	NPTEL	1100
2022-23	K.Adithya	NPTEL-Fundamental of Welding Science and Technology	NPTEL	1100
2022-23	Dr.R.Jayanthi	NPTEL-Biomedical Signal Processing	NPTEL	1000
2022-23	P.Vinothkumar	NPTEL-Biomedical Signal Processing	NPTEL	500
2022-23	D.Baskaran	NPTEL-Microprocessors and Microcontrollers	NPTEL	1000
2022-23	K.Poornima	NPTEL-Digital Electronic Circuits	NPTEL	1000
2022-23	D.Gowthami	NPTEL-Biomedical Signal Processing	NPTEL	1000
2022-23	Dr.P.Savitha	NPTEL-Cloud computing	NPTEL	1000
2022-23	R.Poongodi	NPTEL-Transform Calculus and its Applications in Differential Equations	NPTEL	1000

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

From

Dr.G.B.Mohankumar,
Head of the Department,
Dept. of Electrical and Electronics Engineering,
Nandha College of Technology,
Erode-52.

To

The Secretary,
Nandha College of Technology,
Erode-52.

Through,

The Principal,
Nandha College of Technology,
Erode-52.

Respected Sir,

SUBJECT: Financial Assistance for MOOCs On-Line Courses-Regarding.

In connection with Massive Open Online Courses (MOOCs) of Swayam (NPTEL), Online certification courses are approved for Faculty Development Programme (FDP) by AICTE. The Faculty members those who have successfully completed the above said course, would be able to produce their certificates for our Institutional promotions under Career Advancement Scheme (CAS).

In our College, Fourteen faculty members have completed the Online Course; the list is enclosed with this letter. Kindly, I request you to provide the fees paid by the faculty members as a financial support.

Thank you.

Yours truly,

(Dr.G.B.Mohankumar)

Nandha College of Technology * Erode-638 052 *

Date: 12.08.2022
Place: Erode

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

Enclosed:

1. SWAYAMOnline Course Completed Faculty List.

NANDHA COLLEGE OF TECHNOLOGY, ERODE-52

Academic Year 2021 - 22

SWAYAM:ONLINE COURSES(AICTE,CEC,IGNOU,IIMB,NCERT,NIOS,NITTR,NPTEL & UGC)COMPLETED BY THE FACULTY MEMBERS

No.	NAME OF THE FACULTY	DEPARTMENT	TITLE OF THE ONLINE COURSE	NATIONAL COORDINATOR(S)	DURATION	STATUS & CATEGORY	FEES PAID FOR EXAMINATION REGISTRATION IN RS	FEES PAID FOR FDP CERTIFICATE IN RS	SIGNATURE
1	Mr.Javed Ahamed.B.M.S	Computer Science and Engineering	Design and Analysis of Algorithms	SWAYAM - NPTEL	JAN-MARCH 2022 (8 Week Course)	Sucessfully Completed	1000		
2	Mr.Sureshkumar.V.S	Computer Science and Engineering	Introduction to Internet of Things	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed	1000	100	
3	Mr.Srinivasan.S.A	Mechanical Engineering	Engineering Graphics and Design	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed &Elite	1000		
4	Mr.Krishnamoorthi.T	Mechanical Engineering	Engineering Graphics and Design	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed &Elite	1000		
5	Mr.Girimurugan.R	Mechanical Engineering	Design,Technology and Innovation	SWAYAM - NPTEL	FEB-APRIL 2022 (8 Week Course)	Sucessfully Completed &Elite	1000	100	
6	Mr.Pon.Maheshkumar	Mechanical Engineering	Fundamental of Welding Science and Technology	SWAYAM - NPTEL	JAN-MARCH 2022 (8 Week Course)	Sucessfully Completed	1000	100	
7	Mr.Adhithya.K	Mechanical Engineering	Fundamental of Welding Science and Technology	SWAYAM - NPTEL	JAN-MARCH 2022 (8 Week Course)	Sucessfully Completed	1000	100	
8	Dr.R.Jayanthi	Electronics and Communication Engineering	Biomedical Signal Processing	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed & Elite	1000		
9	Mr.Vinothkumar.P	Electronics and Communication Engineering	Biomedical Signal Processing	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed	500		
10	Mr.Baskaran.D	Electronics and Communication Engineering	Microprocessors and Microcontrollers	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed	1000		
11	Mrs.Poornima.K	Electronics and Communication Engineering	Digital Electronic Circuits	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed	1000		
12	Mrs.Gowthami.D	Electronics and Communication Engineering	Biomedical Sgnal Processing	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed	1000		
13	Dr.Saveetha.P	Information Technology	Cloud Computing	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed & Elite	1000		2/1/3/23
14	Mrs.Poongodi.R	Science &Humanities/ Mathematics	Transform Calculus and its Applications in Differential Equations	SWAYAM - NPTEL	JAN-APRIL 2022 (12 Week Course)	Sucessfully Completed & Elite	1000		
							13500	400	

13,900/-

R&D Coordinator
(Dr.G.B.MOHANKUMAR,Prof & Head/EEE,NCT)

Principal
Principal
Nandha College of Technology
Erode-52.

Principal
Nandha College of Technology
Erode-52.

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22CS27S43411220

To
B M S JAVED AHAMED
31, MOHAMEDIAR STREET, B.P.AGRAHARAM
ERODE
TAMIL NADU - 638005
PH. NO :9952312381

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

B M S JAVED AHAMED

for successfully completing the course

Design and Analysis of Algorithms

with a consolidated score of **41** %

Online Assignments	11/25	Proctored Exam	30/75

Total number of candidates certified in this course: **371**

Principal
Nandha College of Technology
Erode-52.

Devendra Jalihal

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Mar 2022
(8 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

3

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22CS53S14140470

To
SURESH KUMAR V S
82 A /1C, ANNAIILLAM,
VALLUVAR NAGAR, FIRST ST,ANNADHANAPATTY
SALEM
TAMIL NADU - 636002
PH. NO :8056552243

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completec
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SURESH KUMAR V S

for successfully completing the course

Introduction to Internet of Things

with a consolidated score of **57** %

Online Assignments	24.16/25	Proctored Exam	33/75

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52..

Total number of candidates certified in this course: **6573**

Prof. Jayanta Mukhopadhyay
Dean Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

Roll No: NPTEL22CS53S14140470

To validate and check scores: https://nptel.ac.in/noc

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SRINIVASAN S A

for successfully completing the course

Engineering Graphics and Design

with a consolidated score of **70** %

Online Assignments	23.94/25	Proctored Exam	46.5/75

Total number of candidates certified in this course: **85**

Devendra Jalihal

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2022
(12 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

FREE ONLINE EDUCATION swayam

No: NPTEL22ME68S14491221 To validate and check cer

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

KRISHNAMOORTHI T

for successfully completing the course

Engineering Graphics and Design

with a consolidated score of **75** %

Online Assignments	23.6/25	Proctored Exam	51/75

Total number of candidates certified in this course: **85**

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2022
(12 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Principal
Nandha College of Technology
Erode-52.

Indian Institute of Technology Madras

SWAYAM

NPTEL22ME68S14490990

To validate and check scores

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

GIRIMURUGAN R

for successfully completing the course

Design, Technology and Innovation

with a consolidated score of **79** %

Online Assignments	21.5/25	Proctored Exam	57.25/75

Total number of candidates certified in this course: **347**

Feb-Apr 2022

(8 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay

Indian Institute of Technology Bombay

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

swayam

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

PONMAHESKUMAR

for successfully completing the course

Fundamental of Welding Science and Technology

with a consolidated score of **52** %

Online Assignments	21.13/25	Proctored Exam	30.75/75

Total number of candidates certified in this course: **485**

Jan-Mar 2022

(8 week course)

Nandha College of Technology Erode-638052

Principal
Nandha College of Technology
Erode-52.

Prof. Hemant B Kaushik
Head, Center for Educational Technology
NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati

swayam

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

ADITHYA

for successfully completing the course

Fundamental of Welding Science and Technology

with a consolidated score of **51** %

Online Assignments	21.46/25	Proctored Exam	30/75

Total number of candidates certified in this course: **485**

Jan-Mar 2022

(8 week course)

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology Erode-638052

Prof. Hemant B Kaushik

Head, Center for Educational Technologies

NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati

swayam

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

DR R JAYANTHI

for successfully completing the course

Biomedical Signal Processing

with a consolidated score of **60** %

Online Assignments	15/25	Proctored Exam	45/75

Total number of candidates certified in this course: **254**

Prof. Jayanta Mukhopadhyay
Head, Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

No: NPTEL22EE19S24490942

To validate and check scores: https://nptel.ac.in/noc

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

VINOTH KUMAR P

for successfully completing the course

Biomedical Signal Processing

with a consolidated score of **50** %

Online Assignments	14.53/25	Proctored Exam	35.25/75

Total number of candidates certified in this course: **254**

Prof. Jayanta Mukhopadhyay
Dean (Outreach)
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

No: NPTEL22EE19S144906649

To validate and check scores: https://nptel.ac.in/noc

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

BASKARAND

for successfully completing the course

Microprocessors and Microcontrollers

with a consolidated score of 45 %

Online Assignments	13.28/25	Proctored Exam	31.5/75

Total number of candidates certified in this course: 737

Prof. Jayanta Mukhopadhyay
Dean Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

swayam

Indian Institute of Technology Kharagpur

No: NPTEL22EE12S24490256

To validate and check scores: https://nptel.ac.in/noc

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

K POORNIMA

for successfully completing the course

Digital Electronic Circuits

with a consolidated score of 45 %

Online Assignments	12.31/25	Proctored Exam	33/75

Total number of candidates certified in this course: 291

Prof. Jayanta Mukhopadhyay
Head, Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Nandha College of Technology ★ Erode-638052 ★

Principal
Nandha College of Technology
Erode-52.

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

No:NPTEL22EE55S24491651

To validate and check scores: https://nptel.ac.in/noc

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

GOWTHAMI D

for successfully completing the course

Biomedical Signal Processing

with a consolidated score of 45 %

Online Assignments	15.31/25	Proctored Exam	30/75

Total number of candidates certified in this course: 254

Prof. Jayanta Mukhopadhyay
Head, Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Principal
Nandha College of Technology
Erode-52

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

No: NPTEL22EE19S24490932

To validate and check scores: https://nptel.ac.in/noc

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22CS20S44521382

To
SAVEETHA P
LENA AVENUE, VAIKKAL MEDU, ERODE
PROF/IT,NANDHA COLLEGE OF TECHNOLOGY
ERODE
TAMIL NADU - 638052
PH. NO :9750233555

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SAVEETHA P

for successfully completing the course

Cloud Computing

with a consolidated score of 66 %

Online Assignments	22.13/25	Proctored Exam	43.88/75

Principal
Nandha College of Technology
Erode-52.

Total number of candidates certified in this course: 4701

Prof. Jayanta Mukhopadhyay
Dean Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Nandha College of Technology * Erode-638052 *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

This certificate is computer generated and can be verified by scanning the QR code given below.

28

Roll No: NPTEL22MA32S34521094

To
POONGODI R
RATHNA IYER THOTTAM,VADUGAPALAYAM
MODACHUR
GOBICHETTIPALAYAM
TAMILNADU - 638476
PH. NO :9865627930

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

POONGODI R

for successfully completing the course

Transform Calculus and Its Applications In Differential Equations

with a consolidated score of 64 %

Online Assignments	18.94/25	Proctored Exam	45/75

Total number of candidates certified in this course: 148

Principal
Nandha College of Technology
Erode-52.

Prof. Jayanta Mukhopadhyay
Dean Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Nandha College of Technology * Erode-638052 *

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 01

Date : 17/08/2022

Debit .....

Rupees ..... One Thousand Only .....

on account of ..... Swayam online course .....

Paid to ..... B.M.S. Javed Ahamed AP/CSE .....

Rs. 1000/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 2

Date : 17/08/2022

Debit .....

Rupees ..... One Thousand One Hundred Only .....

on account of ..... Swayam online course .....

Paid to ..... V.S. Sureshkumar ASP/CSE .....

Rs. 1100/-

Received the above sum,

Cashier

Signature

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 3

Date : 17/08/2022

Debit .....

Rupees ..... One Thousand Only .....

on account of ..... Swayam Online course .....

Paid to ..... S. A. Srinivasan ASP / Mech .....

Rs. 1000/-

Received the above sum,

S. A. Srinivasan 22/8/22

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 4

Date : 17/08/2022

Debit .....

Rupees ..... One Thousand only .....

on account of ..... Swayam Online course .....

Paid to ..... T. Krishnamoorthi AP / Mech .....

Rs. 1000/-

Received the above sum,

22/8/22

Cashier

Signature

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 5

Date : 17/08/2022

Debit .....

Rupees ..One.. Thousand ..One.. Hundred ..Only..

on account of ..Swayam.. Online ..Course..

Paid to ..R. Girimurugan.. ASP/ Mech..

Rs. 1100/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 6

Date : 17/08/2022

Debit .....

Rupees ..One.. Thousand ..One.. Hundred ..Only..

on account of ..Swayam.. Online ..Course..

Paid to ..Pon. Maheshkumar.. ASP/ Mech..

Rs. 1100/-

Received the above sum,

Cashier

22/8/22

Signature

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 7

Date : 17/08/2022

Debit .....

Rupees One Thousand One Hundred Only

on account of Swayam Online Course

Paid to K. Adhithya AP/Mech

Rs. 1100/-

Received the above sum,

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 8

Date : 17/08/2022

Debit .....

Rupees One Thousand Only"

on account of Swayam Online Course

Paid to Dr. R. Jayanthi Prof/ECE

Rs. 1000/-

Received the above sum,

Cashier

Signature

Nandha College of Technology ★ Erode-638052. ★

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 9

Date : 17/08/2022

Debit .....

Rupees ..... Five ..... Hundred ..... only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... P. Vinothkumar ..... ASP/ ECE .....

Rs. 500/-

Received the above sum,

17/8/22

Cashier

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 10

Date : 17/08/2022

Debit .....

Rupees ..... One ..... Thousand ..... only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... D. Baskaran ..... AP/ ECE .....

Rs. 1000/-

Received the above sum,

Cashier

Signature

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 11

Date : 17/08/2022

Debit .....

Rupees ..... One ..... Thousand ..... Only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... K. Poornima ..... AP/ECE .....

Rs. 1000/-

Received the above sum,

Cashier

Signature 17/8/22

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 12

Date : 17/08/2022

Debit .....

Rupees ..... One ..... Thousand ..... Only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... D. Gowthami ..... AP/ECE .....

Rs. 1000/-

Received the above sum,

Cashier

Signature 17.08.22

Nandha College of Technology Erode-638052

Principal
Nandha College of Technology
Erode-52.

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 13

Date : 17/08/2022

Debit .....

Rupees ..... One ..... Thousand ..... only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... Dr. P. Saveetha ..... Prof / IT .....

Rs. 1000/-

Received the above sum,

Cashier

17/8/22

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 14

Date : 17/08/2022

Debit .....

Rupees ..... One ..... Thousand ..... only .....

on account of ..... Swayam ..... Online ..... Course .....

Paid to ..... R. Poongodi ..... ASP / S&H .....

Rs. 1000/-

Received the above sum,

Cashier

23/8/22

Signature

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology, Erode-52

Research and Development Cell

Academic Year 2022-23

Financial Support for Faculty Members

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2022-23	Dr.S.Nandagopal	Scopus-Journal of Optimized sesame Leaf Disease Diagonis and Controlling Using Machine Learning Techniques with Environmental Monitoring	Scopus	5000
2022-23	T.Sureshkumar	Scopus-Journal of Design and Implementation of a frame work for blockchain based security using IOT	Scopus	5000
2022-23	P.Balamurugan	Scopus-Journal of A Certain Investigation on Energy Efficient Techniques on Wireless Sensor Networks Over Smart Grid	Scopus	3500
2022-23	S.Parthiban	Scopus-Journal of The High Efficiency Supercapacitor Electrode Influencing Laser-Induced Nanomaterials with Co-Doped Nitrigen and Phosphorous	Scopus	2500
2022-23	S.Saravanan	Scopus-Journal of The High Efficiency Supercapacitor Electrode Influencing Laser-Induced Nanomaterials with Co-Doped Nitrigen and Phosphorous	Scopus	1500
2022-23	S.Hemasilviavinothini	Scopus-Journal of The High Efficiency Supercapacitor Electrode Influencing Laser-Induced Nanomaterials with Co-Doped Nitrigen and Phosphorous	Scopus	1000
2022-23	D.Baskaran	Scopus-Journal of Alternate of manual Weeding Tools. A Research into an Automatic Wedding Control Strategies Enabled by Embedded System	Scopus	5000
2022-23	B.Pitchia Krishnan	Scopus-Journal of Implementation of Proper Hardening Method and Hardness Range (35-40 HRC) for tool holder sleeve in CNC Turning Machine	Scopus	2500
2022-23	N.Viswanathan	Scopus-Journal of Implementation of Proper Hardening Method and Hardness Range (35-40 HRC) for tool holder sleeve in CNC Turning Machine	Scopus	1500

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2022-23	V.Vimala	Scopus-Journal of Implementation of Proper Hardening Method and Hardness Range (35-40 HRC) for tool holder sleeve in CNC Turning Machine	Scopus	1000
2022-23	V.Vimala	Scopus-Journal of Analysis of Marine Propeller using Computational Fluid Dynamics	Scopus	2500
2022-23	N.Viswanathan	Scopus-Journal of Analysis of Marine Propeller using Computational Fluid Dynamics	Scopus	1500
2022-23	B.Pitchia Krishnan	Scopus-Journal of Analysis of Marine Propeller using Computational Fluid Dynamics	Scopus	1000
2022-23	Pon.Maheskumar	Scopus-Journal of Development of novel environmental proficient hybrid composites based on the marble dust and poultary's egg shell	Scopus	3000
2022-23	Dr.R.Girimurugan	Scopus-Journal of Development of novel environmental proficient hybrid composites based on the marble dust and poultary's egg shell	Scopus	2000
2022-23	Dr.R.Girimurugan	Scopus-Journal of The Effects of Nano Alumina particles on the Enrichment of Tensile, Flexural and Impact Properties of carbon Fiber Reinforced Epoxy	Scopus	3000
2022-23	Pon.Maheskumar	Scopus-Journal of The Effects of Nano Alumina particles on the Enrichment of Tensile, Flexural and Impact Properties of carbon Fiber Reinforced Epoxy	Scopus	2000
2022-23	Dr.S.Ananthi	Scopus-Journal of The Effcet of Molybedenum (Mo) Concentration on the Mechanical and Magnetic Properties of Electrodeposited Co Rich Teenary CoMoW thin Films from Citrate Electrolyric Bath	Scopus	5000

R&D Coordinator

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Principal

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From

Dr.G.B.Mohankumar,

Head of the Department,

Dept. of Electrical and Electronics Engineering,

Nandha College of Technology,

Erode-52.

To

The Secretary,

Nandha College of Technology,

Erode-52.

Through,

The Principal,

Nandha College of Technology,

Erode-52.

Respected Sir,

SUBJECT: Seeking Financial Assistance for Scopus/WOS/UGC Care/SCI AU Annexure Indexed Journal Publishing-Regarding.

In connection with Journal Publications (Indexed in Scopus/WOS/UGC Care/SCI/Anna University Annexure List), We are in need of financial support from our institution. Hence I request you to give the publication charges to the faculty members.

Number of Journal Papers published in 2022-2023: 10 nos.

Publications fees: Rs.48,500/-

Thank You

Yours truly,

(Dr.G.B.Mohankumar) 12/6/2023

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Date: 12.06.2023

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Faculty Journal Publication List

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RESEARCH AND DEVELOPMENT
ACADEMIC YEAR 2022 TO 2023

DATE:09/06/2023

11.7.2023

Journal Publications

SLNO	NAME OF THE FACULTY MEMBER	DESIGNATION/ DEPARTMENT	TITLE OF THE JOURNAL PAPER	NAME OF THE JOURNAL	YEAR/VOLUME NO/ISSUE/PAGE NUMBER	PUBLICATION AMOUNT IN Rs	Indian Bank, Chennai
1	Dr.S Nandagopal	Professor/CSE	Optimized Sesame Leaf Disease Diagnosis and Controlling Using Machine Learning Techniques with Environmental Monitoring	Journal Of Environmental Protection And Ecology	2022,23(4),1683–1692	5,000.00	168472
2	Mr.T.Sureshkumar	Assistant Professor/CSE	Design and implementation of a framework for blockchain based security using IoT	Journal of Intelligent & Fuzzy Systems	44 (2023) 905–918	5,000.00	168473
3	Mr.P.Balamurugan	Associate Profesor/EEE	A Certain Investigations On Energy Efficient Techniques On Wireless Sensor Networks Over Samart Grid	Journal of Machine and Computing	2023,3(1),38-46	3,500.00	168474
4	S.Saravanan	Assistant Professor/EEE	The High Efficiency Supercapacitor Electrodes Influencing Laser-Induced Nanomaterials with Co-Doped Nitrogen And Phosphorous	Materials Today:proceedings	2023,April	5,000.00	168475
5	Mr.D.Baskaran	Assistant Professor/ECE	Alternate Of Manual Wedding Tools: A Research Into An Automatic Wedding Control Strategies Enabled By Embedded System	International Journal on Recent and Innovation Trends in Computing and Communication	2022 ISSN:2321-8169,vol:10,Issue:2s/Page No:1-6	5,000.00	168476
6	Mr.N.Viswanathan	Assistant Professor/Mech	Implementation Of Proper Hardening Method And Hardness Range(35-40 HRC) For Tool Holder Sleeve In CNC Turning Machine	Materials Today:proceedings	2023	5,000.00	168477
7	Mr.Vimala	Assistant Professor/Mech	Analysis Of Marine Propeller Using Computational Fluid Dynamics	Materials Today:proceedings	2022/68/2375-2381	5,000.00	168478
8	Mr.Pon Maheshkumar	Assistant Professor/Mech	Development of novel environmental proficient hybrid composites based on marble dust and poultry`s eggshell	Materials Today:proceedings	2023,3	5,000.00	168479
9	Dr.R Girimurugan	Assistant Professor/Mech	The Effects Of Nano-Alumina Particles On The Enrichment Of Tensile. Flexural And Impact Properties Of Carbon Fiber-Reinforced Epoxy	Materials Today:proceedings	2023,April/	5,000.00	168480
10	Dr.S Anantha	Associate Professor - S&H-Chemistry	The Effect Of Molybdenum (Mo) Concentrations On the Mechanical and Magnetic Properties Of Electrdeposited Co Rich Ternary CoMoW Thin Films From Citrate Electrolyric Bath	The Journal Of Ovonic Research	2022,Vol 18,4,507-517	5,000.00	168481
					TOTAL	48,500.00	

R & D CO-ORDINATOR

Nandha College of Technology Erode-638 052 PRINCIPAL

DIRECTOR

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Statement Date :Wed Aug 02 09:38:57 IST 2023
Cleared Balance :327939.00
Uncleared Amount :0.00
Drawing Power :0.00
nterest Rate : 2.750

Value Date	Post Date	Remitter Branch	Description	Cheque No	DR	CR	Balance
			BALANCE B/F				376439.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL Nandagopal S TRANSFER TO 6219439243/Nandagopal S	00168472	5000.00		371439.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL P BALAMURUGAN TRANSFER TO 6055028688/P BALAMURUGAN	00168474	3500.00		367939.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL PON MAHESHKUMAR TRANSFER TO 6250923008/PON MAHESHKUMAR	00168479	5000.00		362939.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL R GIRIMURUGAN TRANSFER TO 6053799541/R GIRIMURUGAN	00168480	5000.00		357939.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL N. VISWANATHAN TRANSFER TO 946566005 /N. VISWANATHAN	00168477	5000.00		352939.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL VIMALA V TRANSFER TO 6264820167/VIMALA V	00168478	5000.00		347939.00CR
11/07/2023	11/07/2023	THOTTANI	CHEQUE WDL Saravanan S TRANSFER TO 6640759851/Saravanan S	00168475	5000.00		342939.00CR
12/07/2023	12/07/2023	THOTTANI	CAS SINGLE SURESHKUMART	00168473	5000.00		337939.00CR

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इंडियन बैंक Indian Bank

इलाहाबाद ALLAHABAD

STATEMENT OF ACCOUNT from 01/07/2023 to 02/08/2023 for Account Number 6093852793.

Value Date	Post Date	Remitter Branch	Description	Cheque No	DR	CR	Balance
25/07/2023	25/07/2023	THOTTANI	CAS SINGLE Baskaran D	00168476	5000.00		332939.00CR
26/07/2023	26/07/2023	THOTTANI	CHEQUE WDL S ANANTHI TRANSFER TO 6055080503/S ANANTHI	00168481	5000.00		327939.00CR

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Journal of Environmental Protection and Ecology 23, No 4, 1683–1692 (2022)

Computer application

OPTIMISED SESAME LEAF DISEASE DIAGNOSIS AND CONTROLLING USING MACHINE LEARNING TECHNIQUES WITH ENVIRONMENTAL MONITORING

S. NANDAGOPAL[a*], M. G. KAVITHA[b],
S. SHAHUL HAMEED SHABEER[c], T. JAYASANKAR[d]

[a]*Department of Computer Science and Engineering, Nandha College of Technology, Erode Tamil Nadu, India*
E-mail: asnandu@gmail.com
[b]*Department of Computer Science and Engineering, University College of Engineering Pattukkottai, Tamil Nadu, India*
[c]*Department of Electronics and Communications Engineering, University College of Engineering, Nagercoil, Tamil Nadu, India*
[d]*Department of Electronics and Communications Engineering, University College of Engineering, BIT campus Anna University, Trichy, Tamil Nadu, India*

Abstract. Agriculture is the oldest and essential work in India, and hence the utmost care is necessary for food production. Preferable excellence is attained in agriculture nowadays by means of scientific support and better production is also attained. Nuisances like rats, cockroaches, and infections cause damage to yields or portions of vegetables, which causes diminished production and leads to a scarcity of food. In this paper, infections in sesame leaves are identified and categorised using the multiclass support vector machine (multiclass SVM) algorithm, and the K-means clustering algorithm is used for splitting up images. The proposed method gives a better yield for farmers because infections in leaves can be identified in their early stages so that necessary remedial action can be taken to avoid further spread of infections in leaves. And also, since the severity of plant disease is identified in advance, fungicides and pesticides can be applied to crops in the correct proportion so that the contamination of ground water due to excessive toxic waste, which ends up with agricultural loss, is avoided.

Keywords: environmental monitoring, ground water contamination, leaf disease, multiclass SVM, toxic waste.

AIMS AND BACKGROUND

Artificial intelligence (AI), which is a division of computer science, generates smart machines that respond like human beings and has turned out to be a vital portion of knowledge engineering. With the help of AI, machines acquire knowledge and accomplish jobs like humans according to input values. Most examples of AI depend greatly on deep learning and natural language processing. Computers have

* For correspondence.

Journal of Intelligent & Fuzzy Systems 44 (2023) 905–918
DOI:10.3233/JIFS-220366
IOS Press

Design and implementation of a framework for blockchain based security using IoT

T. Sureshkumar[a,*], R. Sivaraj[b] and M. Vijayakumar[c]
[a]*Department of Information Technology, Nandha College of Technology, Perundurai, Erode, Tamil Nadu, India*
[b]*Department of Computer Science & Engineering, Nandha Engineering College, Perundurai, Erode, Tamil Nadu, India*
[c]*Department of Computer Science & Engineering, Sasurie College of Engineering, Tirupur, Tamil Nadu, India*

Abstract. The Internet of Things (IoT) has altered the world in the last few years due to its capacity to impact almost every part of life. However, IoT raises concerns about data security and privacy because it collects data from devices via the cloud, increasing its vulnerability to hacking. IoT security is a serious issue that has delayed its widespread adoption. Several security and privacy solutions have been proposed for IoT contexts that meet prevalent security criteria such as authentication, integrity, and secrecy. However, due to resource restrictions and heterogeneous IoT devices, present solutions are unable to address the security requirements of the approaching large-scale IoT paradigm. Blockchain, well known for bitcoin and Ethereum, provides an intriguing approach for IoT security. The IoT and blockchain technologies may be combined and significant improvements in distributed systems have been made as a result of the widespread use of IoT technology. A novel framework with a unique design was proposed to improve security in bitcoin transaction by combining blockchain and SHA-256 hash algorithm. Additionally, the performance of proposed framework is compared with the state-of-the-art algorithms like MD5 and SHA1 in term of encryption time, power consumption, latency, speed and security. It is observed that the proposed framework takes 12 ms lesser latency than MD5 and consumes 2.7Wh lesser power consumption than SHA1 and provides better security than both the techniques.

Keywords: Blockchain, IoT, security, bitcoin, privacy

1. Introduction

Blockchain is one of the latest trending technologies in the IT industry and is still emerging. People are still attempting to learn more about the technology and apply it to a variety of other industries than cryptocurrency, where it may be used more effectively. The concept of block-chain was proposed as the underlying technology for the cryptocurrency called Bitcoin. Block-chain was the building block for this peer-to-peer electronic cash system, which solved many existing problems in the prior versions of such systems. The blockchain is a growing list of records that are added to at the end when new blocks are added. Cryptography is used to connect and secure the neighboring blocks. The blockchain is inherently resistant to data changes contained inside the blocks. Once a data block is added to a blockchain, a change to that data will make changes to all subsequent data blocks. This is therefore preferred when it is appropriate to deny authorization for modifications. Blockchain has gathered enormous popularity since its implementation in cryptocurrencies owing to the numerous application possibilities it provides. As IoT moves closer to smart city standards, device or data security appears to be a key problem. As a result, a decentralized and distributed system based on the

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ISSN: 2788–7669 *Journal of Machine and Computing 3(1)(2023)*

A Certain Investigations on Energy Efficient Techniques on Wireless Sensor Networks over Smart Grid

[1]Balamurugan P and [2]Selvakumar K
[1]Department of EEE, Nandha College of Technology, Erode, Tamil Nadu, India.
[2]Department of EEE, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India.
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Correspondence should be addressed to Balamurugan P: bala1983nandha@gmail.com.

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Received 30 June 2022; Revised form 14 October 2022; Accepted 10 December 2022.
Available online 05 January 2023.

Abstract – Energy efficiency plays biggest role in the wireless sensor network as the sensors are smaller and restricted in their resource capacity. Due to their nature of restricted resource capacity, data transmission would become more complex. So, it is required to concentrate more on data transmission strategies, to ensure the interruption avoided data transmission. There are different examination strategies has been presented before for performing data transmission. Among them most of research methodologies focused on attaining energy consumption reduced optimal data transmission. The working principlee and processing flow of previous research methodologies has been discussed here in details. This survey article is to discuss the research techniques which attempts to perform energy consumption reduced data handling, so that network lifetime of various sensor nodes can be utilized effectively along with increased data transmission rate. And this research work discussed the merits and demerits analysed over each research techniques discussed here. Finally, this research work is concluded with the performance analysis over varying number of nodes. The examination of the analysis work is done in the matlab. The mathematical qualities have been examined to predict the exhibition level of various examination procedures as far as their packet transmission rate, delay and energy utilization.

Keywords – Packet Transmission Rate, Energy Consumption, End to End Delay, Reliable Data Transmission, Overhead.

I. INTRODUCTION

Wireless sensor network is characterizing collectively of sensor nodes which are circulated in the climate for detecting and dissecting the climate information [1]. WSN has been preferred and utilized in different environments such as military, agricultural, hospitals and so on [2]. This is most preferred due to its nature of independent and decentralized characteristics. As the sensor nodes are smaller in nature, capacity of them also limited to certain extends [3]. Sensor nodes with limited resource capacities cannot execute the tasks for long time which might lead to run time failure [4]. The main characteristics of sensor nodes which are limited in nature and have greater impact on data transmission are, "energy consumption, memory consumption, and bandwidth availability" [5].

The energy utilization is characterized as the all-out power consumed by the sensor nodes for the specific timeframe [6]. The remaining energy consumption is defined as the remaining power available in the sensor nodes after particular period of time [7]. Energy plays a greater impact on data transmission in wireless sensor network [8]. As the number of sensor nodes are increased in nature the data transmission rate also increased which required to spend more energy for reliable data transmission [9]. So, the energy factors need to be concentrated more at the time of data transmission.

WSN comprises of a greater number of nodes by using which different alternate route paths can be constructed to reach the destination node [10]. These nodes will transmit the volume of data to the destination nodes with the goal of reaching the maximum packet delivery ratio. In these cases, packet delivery ratio will get affected with reduced energy availability of

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The high-efficiency supercapacitor electrodes influencing laser-induced nanomaterials with co-doped Nitrogen and Phosphorous

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ABSTRACT

In this research, a double laser pyrolysis method was used to create nitrogen and phosphorus co-doped laser-stimulated graphene. This method has proven to be both versatile and cost-effective. There was a significant impact on the Graphene – Laser Induced Nitrogen(N) and Phosphorous(P) Graphene performance, dopant absorption, and laser power. In the N and P -Laser Induced Graphene (LIG) optimized with 3 wt% Si $(OH)_4$ and laser power of 3.6 W (Nitrogen and Phosphorous – Laser induced graphene-3.6), a specific areal capacitance (CA) of 165.8 mF/cm^2 was achieved in the next pyrolysis process, while 1 M H_2SO_4 is employed as dissolved electrolyte. LIG-NP demonstrated a capacitance of 70.1 mF/cm^2 at a density of 0.6 mA/cm^2, which is four times and 16 times more than that of N-doped LIG and single pyrolyzed LIG NPs, respectively, using a gel electrolyte. Cycling stability was good (capacitance retention of 84%). Coulombic efficiency was around 100%, and area energy density was 9.67 N/cm^2 with 10,000 cycles. Flexible and wearable electronics could benefit from a simple fabrication method for heteroatom-coated LIG electrodes.

Selection and peer-review under responsibility of the scientific committee of the 2 nd International Conference on Advanced Materials and Nanotechnology.

1. Introduction

An increasing number of batteries are being developed because of the growing need for environmentally friendly energy sources. This is due to the Supercapacitors (SCs) promising characteristics, such as their lightweight design, rapid filling, quick operating, and extended cycle life [1]. SCs commonly employ Activated Nitrogen, a Nitrogen-based compound, as an electrode material. Even with its enormous specific surface area, maximum conduction, and chemical and exceptional automatic resilience. Graphene has long been considered a potential electrode material for SCs [2,3]. Since electrolytes are prevented from gaining entry to the many available open-air spaces within graphene electrodes due to strong contacts between the graphene layers, pure graphene on an electrode size is limited in capacitance due to the restacking of graphene layers [4]. A pure graphene electrode's estimated capacitance is therefore substantially lower than the theoretical limit (21 μF/cm) given by the electric double-layer (EDL) process. To improve graphene's capacitive performance, various approaches have been proposed, Functionalization and doping Nitrogen frameworks with heteroatoms are examples of this type of research [5–8]. Heteroatom doping, which includes the addition of N and B as well as S and P, is extensively used to overcome graphene's low capacitance. The accumulation of foreign atoms to the Nitrogen lattice increases capacitance by improving impedance permeability and forming electroactive patches [9]. By altering graphene's microstructure and electrical conductivity, as well as introducing chemical reactions occurring on the object's surface processes, N-doping boosts graphene's capacitive performance. This may be done by employing co-doped graphite, or graphite with two different heterocyclic rings, to boost the graphene's particular capacitance [10,11]. As far as co-dopants for graphene go, Nitrogen/Boron, Nitrogen/Sulphur, and Nitrogen/Phosphorous heteroatoms have proven their worth [12]. Furthermore, these co-dopants enhance capacitive performance by providing more active sites for the electrochemical reactions that take place between electrodes and liquids. Traditional methods like hydrothermal doping, for example, thermal pyrolysis requires costly Nitrogen preservatives as well as special-

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Alternate of Manual Weeding Tools: A Research into an Automatic Weeding Control Strategies Enabled by Embedded Systems

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Abstract—A key enabling factor for treating individualized weeds in the crops is the Automatic Weeding Control device (AWCd) as it is being capable of finding and distinguishing weeds in the field. The non-herbicide approaches used to manage weeds are a component of the personalized treatment of weed crops. In this study, mechanical weed control techniques are investigated as an alternative. In this study, three specifications—a cutting mechanism, a head-surface tilling (tines), and a foot-surface tilling (arrow hoe)—are taken into account. With different rates of application to herbicide-resistant, these processes were estimated in a controlled field and the efficacy of the implementation is estimated by using the demographic analysis and also, the importance of early interface has also been highlighted. For all the weeds accounted in this research, Automatic weeding control was found to be very effective thus ended up in overall survival probability.

Keywords: Manual Weeding Tools, Embedded Systems, Automatic Weeding Control device etc.

I. INTRODUCTION

Century-long increase in agricultural productivity has been made possible by farm consolidation, which has increased economies of scale and the genetic engineering, bundled breeding, and increasing automation have made this possible. Human protected farms are almost today protected by large-scale machineries and chemical advancements as countries transition to broad-acre farming to boost food yield. Due to the increasing chemical weed control, usage of herbicides in agriculture has also been increased.For low-tillage situations, a mechanical tool application or field ploughing as a substitute to chemical arbitration are inappropriate. This has prompted the adoption of alternative strategies such crop and cultivar selection, intercropping which means growing multiple crops at a time, and alternative patterns for planting.

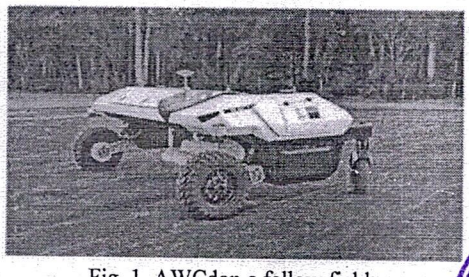

Fig. 1. AWCdon a fallow field.

One of the possible uses for agricultural robots is to replace this large-scale apparatus that conducts a wide range of chemical or mechanical procedures. Without depending on interventions of broadband and having the ability to take decisions based on the perceptions, Robots can alternate the methodologies for managing the weeds that do not rely on broadcast intervention.

Precision robots used for agriculture makes use of several techniques like head surface tilling, foot surface tilling, and the cutting mechanisms. On herbicide-resistant plants, the efficiency of these tools was assessed. We examined plants at their multiple growth stages along with their treatment timing and effects over the species. In terms of overall performance and overall survival probability, we discovered that head surface tilling has offered the enhanced results when deployed automatically.

II. BACKGROUND/RELATEDWORK

Weeds in agriculture lands are controlled by robots right for all from crops requiring inter-row or intra-row weed management at their growing stages. The most difficult circumstance for weeding is when it occurs within a row of cultivated plants; as a result, many of the earlier instruments are ineffective and risk harming the crops. Crop locations are

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Implementation of proper hardening method and hardness range (35–40 HRC) for tool holder sleeve in CNC turning machine

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ABSTRACT

Most of the machinery related components or parts must be hardened, because usages of those parts are regular. Likewise, various hardening process are available to harden the different kind of materials. Every hardening process is unique. It requires proper material, temperature etc., all machine shop which have a CNC turning machine must use the sleeve to hold the toolbars. This sleeve also is hardened. It will be in proper hardness. Most of the quality sleeve has a high price. Low price sleeve can't able to withstand minor accidents occur in machine. Hardening has a vital role in the sleeve. Aim of this particular project is to manufacture a quality steel for a moderate price with good hardening process (Good Quality). In this work, we obtained that the value of hardness and tensile strength are 35.40 HRC and 1100 MPa after heat treatment test.

Selection and peer-review under responsibility of the scientific committee of the Second International Conference on Advancements in Materials Science and Technology.

1. Introduction

Hardening is a metallurgical metal working process which is used to increase the metal hardness. The metal hardness is directly proportional to the yield stress at the imposed strain location. A harder metal will be having high resistance to plastic deformation compared to less hard metal.

In this paper, results shows that tension loading test is carried out on MS (EN8) specimen. At different loads, the specimen loads were carried. A finite element solution was attained to get additional insight to the loading modes effects [1]. In this paper, author found that specimen was tested in different types of modes. In this work, tensile force and axial displacement is maintained as constant. The FEA analysis result was validated with experimental analysis [2]. This paper indicated that laser hardening modelling process in terms of starting microstructure and laser operating parameter without any need of experimental values. The model gives the picture that will be very useful to predict profile hardness for different steels. It's shown that hardened layer depth and hardness in hypo eutectoid steels. It could be identified from this model with more accuracy [3]. In this work, result show that tempering and conventional quenching process can be used for 6 MW rotor treatment and this calculated result values are validated with newly design values [4]. This research paper indicates a new design that incorporate granulation and missing of feedstock for production of components at micro level and in mixing chamber, binder/metal powder flow is studied [5]. The insufficient uniform, radial, longitudinal and inclined grouting configurations were investigated experimentally with 126 specimens to analyse the bond character of grouted sleeve connection. The results shown that in shifting failure mode the specimens will be failed from tensile fracture of rebar [6]. In this work, author found that SMAW could be used as a pretreatment to boronize of steel and to control the volume fraction of the deleterious FeB phase [7]. This research article represents that the process parameters impact during turning operations of Carbon alloy steels in a CNC lathe machine. The operating parameters such as feed rate and spindle speed are varied to analyse their effects on surface roughness. Using one factor, experiments are conducted. The results revealed that feed rate and spindle speed is directly influence the surface roughness. It is shown that surface roughness will be increased with increasing feed rate [8]. In this work, the impact of machining parameters and suitable process parameters such as feed rate, spindle speed

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Analysis of marine propeller using computational fluid dynamics

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Propeller
Computational fluid dynamics
Marine
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ABSTRACT

This project aims at improving the performance of a marine propeller by varying the velocity at different condition. Solid work software is used for designing the marine propeller and the analysis is carried out in ANSYS fluent software using Computational Fluid Dynamics (CFD) methodology. The results of pressure, velocity and turbulence are obtained and the optimized rotational velocity has been determined.

Selection and peer-review under responsibility of the scientific committee of the 4th International Conference on Advances in Mechanical Engineering (ICAME 2022).

1. Introduction

The ship contains marine propeller which is used for the movement. Marine propellers are the fan like rotor structure made up of aluminum and stainless steel. The marine propeller are made from materials that with stand corrosion, since they are made to operate in sea water that accelerates corrosion. Other common materials used are alloys of nickel, aluminum and bronze which are 10–15 % lighter than other materials and havehigherstrength.The propulsive performance of a ship can be assessed using CFD analysis of propellers due to their reliability and computational efficiency [1]. Fully attached ONR tumblehome model simulations are performed using ship hydrodynamics and validated against ship self-propelled model trials. It was found that several reasons contribute to the lack on the ship to beat the hydrostatic yaw moment caused by the approaching wave [2]. Marine structures like ships and offshore platforms are commonly built with damage restraint and this design bear the accurate prediction of crack propagation process. The capability of the model is demonstrated [3]. The design methods include the conceptual and numerical optimization designs are proffered along with the swarm optimization algorithm and the model test. [4].All the design parameters of the ship are evaluated and its efficiency is improved. This paper investigates the inimical outcomes of bio-fouling on the execution of Potsdam Propeller Test Case (PPTC) propeller using Computational fluid dynamics (CFD) [5]. The propeller analysis in off-design conditions is one of the most attractive and challenging topics in marine hydrodynamics, because of its familiarity with different aspects of ship design and performances [6]. Under encasing conditions, marine propellers develop in-plane loads, in addition to thrust and torque, due to fatigue stresses in the propulsive shafts, hull-induced vibrations, and dynamic responses of the ship as it maneuvers or experiences waves [7]. For shipping safety, dynamic efficiency, vibrations and noise pollution need to be controlled and reliable predictions of these phenomena during design phase are necessary [8]. The free running model tests and CFD analysis of a modern twin screw reveal that yaw rates and small drift angles can be more critical than unyielding ones because of complex wake interactions [9–10]. This paper scrutinizes the new approaches and innovative tools to design a ship propeller in which the new tools are excessively used to produce better experimental results [11]. The analysis shows that the performance of the propeller may be reduced due to the kinematic conditions of the ship. Therefore, these criteria should also be considered in the early design phases [12]. A typical spade rudder has been modeled for steady state three dimensional crises during a free stream and in orientation of a propeller race. The results show increased association to experimental data from uncoupled hydrodynamic modeling also as definite contour contortion [13–15]. Flow speed and power output of a composite water turbine were analyzed for different rotation speeds. The result indicates that the diffuser and nozzle in the turbine can increase the pressure drop and generate more power. The power and torque of a composite water turbine at different rotating speeds were determined and analyzed for a designated flow speed. The result shows that usage of nozzle and diffuser in

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Development of novel environmental proficient hybrid composites based on marble dust and poultry's eggshell

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Poultry's eggshell
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Glass fiber
Hybrid composites
Experimentation
Mechanical properties

ABSTRACT

Poultry eggshell and marble dust were added to a mixture that was then reinforced with glass fibres and epoxy resin, and the resulting material was studied for its effect. The samples were created utilizing the hand Lay-up method, chopped glass fibre (6 wt%), and powdered marble dust as the matrix material (2, 4, 6, and 8 wt%). The tensile, flexural, and impact characteristics of specimens reinforced with marble dust, poultry eggshell powder, glass fibre, and epoxy resins are evaluated. Chicken eggshell powder and marble dust both had mean particle sizes of 14.3 and 0.7 to 1.4 μm, respectively, when measured by a particle size analyzer. The maximum tensile strength of 212.64 and 191.46 MPa were noticed in 6 wt% of fiber/-filler combinations. The tensile and impact test outcomes displayed that the modulus of elasticity and impact strength values are, increased with the addition 6 wt% of fiber and 8 wt% of fillers, the maximum modulus of elasticity and impact strength values are found in the range of 7.78 GPa, 7.16 GPa, 7.51 kJ/m^2 and 7.17 kJ/m^2 for poultry's eggshell, marble dust particles correspondingly. Conversely the percentage of elongation was decreased with respect to the increased manner of both filler materials. The maximum elongation percentage of 3.67 was observed in controlled samples (94 wt% of Epoxy + 6 wt% chopped glass fiber). In terms of flexural characteristics, the maximum flexural strength and flexural modulus for 6 wt% of fibre and 8 wt% of marble dust powder and poultry's eggshell particles, respectively, were estimated to be 369.51 MPa, 261.62 MPa, 15.83 GPa, and 14.68 GPa.

Selection and peer-review under responsibility of the scientific committee of the Fourth International Conference on Recent Advances in Materials and Manufacturing 2022.

1. Introduction

Wind power has emerged as one of the rapidly expanding sources of energy during the last few years. Our reliance on conventional energy distribution networks is lessened by the use of wind energy, which also benefits the environment and the techno-commercial sector. Researchers from all across the world are actively working to develop novel, affordable methods to capture wind and transform it into useable energy. The use of materials that are inexpensive and simple to synthesized can significantly reduce the overall cost and energy required for the production of wind energy. When these materials are produced, they can be integrated into important parts like wind turbine blades to test their performance and stability [1]. Blades for wind turbines are often made of lightweight metallic alloys. Due to its inherent advantages, including easy availability, high production, paired with superior mechanical capabilities and decreased weight, fibre reinforced polymer composites have currently established themselves as a viable substitute for traditionally used blade materials. For usage in wind turbine blade applications, a lot of research has been done on the development of fiber-reinforced polymer composites using materials including glass, carbon, and aramid [2]. It is claimed that carbon and aramid fibre reinforcement made blade materials lighter and stiffer, but at the expense of compressive strength, fatigue strength, and moisture absorption that were inferior to those of glass fibre reinforced blade materials. Additionally, glass fibre became more widely used as reinforcement in materials for wind turbine blades due to its lower cost. These results

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Effect of nano alumina powder and water hyacinth stem powder addition on tensile properties of polypropylene matrix hybrid composites – An experimental study

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ABSTRACT

Many traditional metals and materials have been replaced in modern engineering by polymers reinforced with natural and artificial components. With the advantages of natural resources reinforced polymers over conventional materials, this is possible. At a lower energy cost per unit, natural resources reinforced polymer composites are both light and rigid. However, the strength of these composites is barely perceptible. Somewhat quantity of nano alumina powder has been added to the existing fibre polymer composites in various weight ratios in an effort to enhance their mechanical properties. Experimentally, three examples of hybrid polymer composites are made utilising injection moulding machines employing polypropylene, nano alumina, and water hyacinth stem powder. All specimens were manufactured in accordance with ASTM standards and tested for tensile properties following the fabrication procedure.

Selection and peer-review under responsibility of the scientific committee of the International Conference on Latest Developments in Materials & Manufacturing.

1. Introduction

FRP composites often have significantly improved mechanical characteristics in comparison to the polymer they are made from [1]. Polymer composites have recently been the subject of a slew of studies. Polypropylene, polyethylene, and a slew of other thermoplastic elastomers have a variety of organic fillers structural, thermal, and water-absorbency characteristics are all impacted by the filler content of the polymer [2]. Thermoplastic or thermoset can be used to make the polymer matrix in composites that use it. Composite structures' tensile load bearing capacity is greatly influenced by the matrix. Because of their biodegradability and light weight, natural fibres are becoming increasingly popular [3]. Many studies on polymer composites filled with organic fillers have been conducted, but none have examined water hyacinth cellulose. When water hyacinth quickly spreads into a mat-like growth, it can cause a number of issues [4]. Water hyacinth can be utilized as a basis substantial for amalgamated constituents due to its mechanical and physical qualities [5]. Chemically treated WH fibre composites outperformed untreated counterparts in terms of thermal stabilization and all mechanical characteristics excepting tensile toughness [6]. The finest mechanical properties have been found in Nano composites containing 4% clay, a modifier, and a coupling agent. When compared to the other composition, Nano composites that contain up to four per cent alumina as well as modifiers and coupling agents perform better in terms of heat transfer. Mechanical and thermal properties have both improved by 20–25 percent [7]. Nano composites outperformed conventional fillers in terms of mechanical performance and barrier characteristics even when nano filler was used at significantly lower loading levels. When it comes to producing a Nano composite with high mechanical qualities, a robust chemical interaction among the Nano fillers and the polymeric compound is required. Many elements are involved, including the properties of Nano fillers or polymers and their interactions with one other, as like as their diffusion in the matrix [8]. Polypropylene is a semi-crystalline thermoplastic with excellent mechanical, chemical, and electrical properties that is lightweight, affordable, and simple to manufacture [9]. The modulus and tensile strength of polypropylene Nano composites can be

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The effect of molybdenum (Mo) concentrations on the mechanical and magnetic properties of electrodeposited Co rich ternary CoMoW thin films from citrate electrolytic bath

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Cobalt Molybdenum-Tungsten (CoMoW) alloy thin films were prepared through an induced electroplating route from a citrate bath on the surface of the copper electrode at the controlled value of pH 8. The CoMoW thin films have been prepared by varying the Mo concentrations like 0.1, 0.2, 0.3 and 0.4 M at a deposition time of 30 minutes over a plating current potential of 40 mA / cm2. The electrodeposited CoMoW coatings have been investigated with the help of Field Emission Scanning Electron Microscopy (FESEM), powder crystal X-ray diffraction (XRD), Electrochemical studies (impedance and polarization) and Vibrating Sample Magnetometer (VSM) to reveal its respective microstructure-based information, mechanical and soft magnetic nature of the synthesized CoMoW thin layers. The CoMoW thin films of an HCP crystal structure have been attained. The induced electroplated condition such as Mo concentration has a significant impact on the crystal structure system, surface morphology, and soft magnetic performances. The crystalline size of the CoMoW thin layers has varied from 22.66 nm to 42.87 nm. The synthesized CoMoW thin layers were smooth, without cracks and had uniform morphology. All the electroplated CoMoW films have the highest Co content along with low Mo content (Co content gradually decreased while increasing the Mo content in the deposits) and thickness varied from 10 to 20 µm. Through the electrochemical investigation studies, it is concluded that the corrosion rate of CoMoW thin films was slightly increased by increasing the Mo content and the corrosion resistance varied from 80.2 KΩ to 92.7 KΩ. The CoMoW thin alloy films with higher Co content exhibited a lower coercivity value of 3.69 Oe and the saturation magnetization of 49.049 emu /cm^3.

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Keywords: CoMoW coatings, Mo concentrations, Electroplating route, Thickness, Low coercivity and corrosion rate

1. Introduction

The modern electronic-based industries have undergone rapid advancement towards the utilization of thin alloy films. From the industrial point of view, the synthesis of magnetic thin films (cobalt-based alloy films) has obtained numerous real-time applications, including miniaturized electronic component-based devices like MEMS and NEMS devices. The important magnetic MEMS-based devices like micrometers, recording heads, and micro gears need the requirement of both hard and soft magnetic materials. Also, in the storage device applications domain, the magnetic thin coating plays a significant role and particularly the soft magnetic Co-based coatings have increased the efficiency of storage devices and microsensors. The inclusion of Mo with Co-based alloys may improve its soft magnetic behavior and it was decided to use Mo content. The presence of Mo content in the Co-based thin layers also enhances its mechanical

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