



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org



CRITERION 6 - GOVERNANCE, LEADERSHIP AND MANAGEMENT

Key Indicator 6.5 Internal Quality Assurance System

Metric No6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities (For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives)

Sl. No	Contents	Page Number
1	Administrative and Academic Audit - Institute	1
2	Administrative and Academic Audit - Departments	10
3	Course File Audit	38

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



	<p align="center"> NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org </p>	
---	--	---

Date: 28.02.2022

CIRCULAR

This is to inform that our institution is going to conduct an **Academic and Administrative Audit** for our **Institution** on **02.03.2022**. All the HODs and Staff members are asked to extend their co-operations to complete the auditing successfully.

Academic Audit Experts

Sl. No	Name and Designation of the External Auditor	Name and Designation of the Internal Auditor
1	<p align="center"> Mr.R.Anand, Principal, NPR Polytechnic College, Natham – 624401 </p>	<p align="center"> Dr.A.Gopisaminathan, HoD/ECE NPR College of Engineering & Technology Natham - 624401 </p>

PRINCIPAL

Dr. J.SUNDARARAJAN,

B.E., M.Tech., Ph.D.,



Principal

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. The Administrative Office
2. All HODs - Circulate to all faculties and classes
3. IQAC
4. File



	NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org , www.nprcet.org , Email nprcetprincipal@nprcolleges.org	
---	--	---

24.02.2022

To

Mr.R.Anand,
Principal,
NPR Polytechnic College,
Natham, Dindigul - 624401.

Dear Sir,

Sub: Request to act as an **External Auditor** - NAAC Accreditation process - reg.


It is mandatory to conduct the **Academic and Administrative Audit**, as a part of evaluation in **NAAC Accreditation process**, in our Institution for the (odd/even) **Academic year 2021-22 on 02.03.2022**.

In view, I request you to act as an **External Auditor** and furnish a report for the mentioned purpose in the prescribed format.

Expecting the acceptance and confirmation from your end



Thank you.

With regards


Dr.J.Sundararajan
Principal

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



	
NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email:nprceprincipal@nprcolleges.org	

INTERNAL QUALITY ASSURANCE CELL (IQAC)

Academic and Administrative Audit - Institute

Academic Year: 2021-22

Date: 08.03.2022

College Name : NPR College of Engineering & Technology
 Principal Name : Dr.J.Sundararajan


A. Academic calendar

SL No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
1	Institute Level Academic Calendar Preparedness In line to University	Adhered to University	-

B. Student Admission


SL No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
2	Percentage of Student Admission	64 %	-





NPR
Nagar, Natham

NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



C. Faculty Profile and Faculty Development

Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
3	Total Number of Faculties on Roll	Teaching facilities are available.	-
4	Number of Faculties with PhD and pursuing PhD	18 - Awarded 11 - Pursuing	-
5	Initiatives for funded /Sponsored projects and consultancy works	It was Initiated	Encourage them to get more projects
6	Number of Papers published in UGC, SCOPUS, WEB of Science	Totally 15 Paper Published	-
7	Number of Conference Papers published with ISBN number	85 were Published	-
8	Number of patents published	16	Need to improve
9	Number of Faculty Awards	10	-





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website: www.nprcolleges.org, www.nprcet.org, Email: nprprincipal@nprcolleges.org



D. Infrastructure and Resources

Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
10	Number of Class rooms with ICT Facility	32	
11	Laboratory facility	Available with all equipment computer labs are furnished with air conditioning facilities	
13	Library facilities	Equipped with text books, reference books, journals, e-books computers with internet facility	
13	Number of new Books and Titles in Central library	1568 New books available	
14	Digital Library Utilisation of E-journals, eBooks, Etc	Digital utilizations like e-books and e journals added in the digital platform	
15	Stock Verification (Departments and Central Library)	Verified	
16	Website Update	It is done frequently	
17	Internet and Wi-fi facility	Adequate computing facilities exist with LAN & Wifi connection with internet speed	
18	Hostel Facility	seperate Hostel for girls and boys with seperate waiting hall	





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.


Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprprincipal@nprcolleges.org




19	Language Lab with required facility	Computer are functional with internet facility	-
20	Workshop facility	Available for students usage	-
21	Transport Facility	Buses available in good condition	-
22	Sports/Gym/Yoga Center etc	All the facilities are available.	-
23	RO and Power Supply details	Water cedes and power backups are available in the block	-
24	Safety and Security System	Fire extinguishers and first aid boxes are in usage. CCTVs are available.	-
25	Green initiatives, Campus Maintenance and Cleanliness	STP, Biogas, solar Stroelight and Rain water harvesting are in plastic pipes in campus	-
26	Seminar/ Conference Hall	totally 7 Seminars halls available	-
27	Medical care usage	tie up with local primary health centre, Ulupakudi Athabani	-





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



E. Governance and Administration

Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
28	Frequency of Meetings of all Committees and record keeping	Academic Audit committee, Discipline committee, Anti ragging committee and various other committees, extend monitoring and support	-
29	Faculty and Staff Empowerment Policy	FPP, Group Insurance, Advance emergency lead, Fees concession for facilities child support	-
30	Budget Allocation	The sum of was sanctioned	-
31	Budget Utilization	The sum of was utilized	-

F. Quality Initiatives

Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
32	Quality certification from National / International forum (NIRF, AISHE, NBA, NAAC, ISO, etc.)	Participated in AISHE and regularly uploaded, having ISO9001	-
33	Participation in National/ International events (Project Contest)	Regularly- Attended	-
34	Social Activities, Programs organized by NSS/YRC	8 programs	-

G. Student Support System and Progression





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org




Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
35	Institutional Scholarship, Free ship	Government, management Scholarship given	-
36	Placement and Graduation Day	Adhered	-
37	Placement Percentage	71% Registered & conducted	-
38	Alumni Registration and alumni meet	Regularly conducted	-
39	Sports activity	Regularly Conducted	-
40	Cultural Activities	Yes	-
41	EDC Initiatives / Activities	2 Programs on Entrepreneurship were conducted through EDC cell.	-
42	Grievance and Redressal Mechanism	meetings were conducted regularly Grievance were handled	-

H. Industry-Academic Interaction


Sl. No	Audit Parameters	Internal Monitoring and Audit findings	Corrective Measures
--------	------------------	--	---------------------





NPR
Group of Institutions
Reach the Star

NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544-246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email nprprincipal@nprcolleges.org



43	IPR workshop, Initiatives HR Connect, Industry Innovation	Programs were conducted regularly	-
44	MOUs and activeness	made all moves - 32	-

Name and Designation of Academic Audit Experts: Mr.R.Anand, Principal, NPR Polytechnic College, Natham

[Signature]
INTERNAL AUDITOR

Dr. A. Sani Saminathan

[Signature]
EXTERNAL AUDITOR

Mr. R. Anand Principal
NPR college

[Signature]

IQAC COORDINATOR

Mr. P. Aruna Senthil Kumar
[AP-MECH]

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



 <p>NPR Reach the Star</p>	<p>NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org</p>	
--	---	---

Date: 15.02.2022

CIRCULAR

This is to inform that our institution is going to conduct an Academic and Administrative Audit from **22.02.2022 to 26.06.2022**. All the HODs and Staff members are asked to extend their co-operations to complete the auditing successfully.

Academic Audit Experts

Sl.No	Name of the Department	Date of Audit	Name and Designation of the Auditee	Name and Designation of the Auditor 1	Name and Designation of the Auditor2
1	CIVIL	16.03.2022	Dr.A.Hemalatha HOD-CIVIL	Dr.M.Ameena Banu Professor-ECE	Dr.C.Balamurugun Professor-Chemistry
2	CSE	20.06.2022	Dr.K.Ramanan HOD-CSE	Dr.S.Paul Singarayar HOD-MECH	Dr.A.Hemalatha HOD-CIVIL
3	EEE	08.04.2022	Prof.G.Elangovan HOD-EEE	Dr.A.Hemalatha HOD-CIVIL	Dr.S.Paul Singarayar HOD-MECH
4	ECE	16.06.2022	Dr.A.Ponmalar HOD-ECE	Dr.P.Kanirajan HOD-EEE	Dr.S.Paul Singarayar HOD-MECH
5	MECH	17.06.2022	Dr.S.Paul Singarayar HOD-MECH	Mr.K.Jeyaprakasam AP-ECE	Mr.T.Sivakumar AP-EEE
6	S&H	16.06.2022	Dr.T.Priya HOD- S&H	Dr.B.Velmurugan HOD-MBA	Dr.A.Hemalatha HOD-CIVIL
7	MBA	16.06.2022	Dr.B.Velmurugan HOD-MBA	Dr.T.Priya HOD- S&H	Dr.A.Hemalatha HOD-CIVIL

PRINCIPAL

Dr. J.SUNDARARAJAN,

B.E., M.Tech., Ph.D.,

Principal

N.P.R. College of Engineering & Technology

Natham, Dindigul (Dt) - 624 401.

Copy to:

1. The Administrative Office
2. All HODs - Circulate to all faculties and classes
3. IQAC
- 4 F.file





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email: nprceprincipal@nprcolleges.org



INTERNAL QUALITY ASSURANCE CELL (IQAC)
Academic and Administrative Audit- Department
Academic Year: 2021-2022

Date: 20.06.2022

Department: CSE

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	Yes, As Per university Norms	—
2	Adherence of Academic Calendar	Adhered as Planned.	—
3	Faculty Teaching Work load distribution	Yes Evenly Allocated to all Faculty	—
4	Number & Quality of Value-Added Courses /Add-on courses/ Certification Courses	Sufficient number of courses were conducted	—
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	Programs were organized Sufficiently.	—
6	Number & Quality of Students Internship/ In-plant Training	Students attended sufficient number of training.	—





NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
 An ISO 9001:2015 Certified Institution.
 Phone No: 04544- 246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



7	Number of student Conference/Journal Publications	Total number of conference 47	Instructed to Rubush papers
8	Number of Student participation in seminar / workshop / symposium	Total number of journals - Students Participated in Sufficient number of events	-
9	Number of Student Awards / Prizes	N/A	Instructed to Students to avail Awards and Prizes
10	Course File Evaluation	Evaluation were done by Head of department at end of each semester	-
11	Lab Manual with Master readings and Additional experiments	Available & conducted as per schedule.	-
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	Both in-home and in industry projects are done	-





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	93.33 %	—
14	Quality of Mentoring	Properly Implemented	—

C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS/GRC	Delayed through PPT	—
16	Innovations in TL Process	Modern teaching books are used in innovating projects	Inhibitors were made to get sponsored
17	Initiatives for funded/Sponsored projects and consultancy works	NIL	Instructed to do more in upcoming year
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	1 ?	





NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
 An ISO 9001:2015 Certified Institution.
 Phone No: 04544-246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



19	Number of Conference Papers published	2	Instructed to increase publication
20	Number of patents published	2	Instructed to increase further
21	Number of Faculty Awards	NIL	Motivated to get Awards
22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	NIL	Actions were taken,
23	FDP/STTP/ workshop /Seminar Participation	28 FDP, 17 workshops, 2 seminar	Instructed to do more seminar
24	Number of Faculties with Professional Membership	5	—

D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	Students utilized the computing facility with advanced tools	—





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprceprincipal@nprcolleges.org



E. Meeting Details

S.No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	Regularly conducted in each semester	-
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc.,)	Frequently conducted	-

F. Industry Academic Interaction and Professional Activities

S.No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	Not arranged due to covid.	Will be arranged in upcoming semester
29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	Yes conducted	-
30	MOUs and activeness	MOU signed with reputed companies	-
31	Technical Events under Professional Societies / Students Association	NIL	Instructed to do more in future.
32	Club activities	Inauguration of Data Science Club	-





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	Prepared following blooms taxonomy	-
34	Quality of Assignments	case studies & real time examples were given	-
35	Continuous evaluation of Lab Records and students' performance in Lab	Evaluated as per norms	-
36	Continuous review of Final year Projects	Carried out Periodically	-
37	University Result Analysis and action for Improvement	Analysed and Remedial actions are taken	-
38	Analysis of Stake holders' feedback, action plan and action taken report	Analysed by getting them in autes	-

Name and Designation of Academic Audit Experts:

Dr. K. Raman
AUDITEE
DR. K. RAMANAN

Dr. S. Paul Singarayar
AUDITOR I
DR. S. PAUL SINGARAYAR.

Dr. A. Hemalatha
AUDITOR II
DR. A. HEMALATHA.



IQAC CO-ORDINATOR

(K. Srinivasan)
K. Srinivasan
Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

W. Prasad



PRINCIPAL
Dr. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
AAAAPrincipal

NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.
 Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



INTERNAL QUALITY ASSURANCE CELL (IQAC)

Academic and Administrative Audit- Department

Academic Year: 2021-2022

Date: 16.3.22

Department: *CIVIL*

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	<i>Yes, As per University Norms</i>	
2	Adherence of Academic Calendar	<i>Adhered</i>	
3	Faculty Teaching Work load distribution	<i>Allocated and distributed evenly</i>	
4	Number & Quality of Value-Added Courses /Add-on courses/ Certification Courses	<i>Yes, 4- value added courses were conducted</i>	
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	<i>workshop, FDP, seminar organized - 5</i>	
6	Number & Quality of Students Internship/ In-plant Training	<i>Internship & Inplant training attended: 07</i>	





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



7	Number of student Conference/Journal Publications	Conference: 02 Journal: Nit
8	Number of Student participation in seminar / workshop / symposium	Workshop: 02, seminar & webinar - 3
9	Number of Student Awards / Prizes	Conference: best paper award
10	Course File Evaluation	course file evaluated
11	Lab Manual with Master readings and Additional experiments	Lab Manual available with readings & Additional experiments
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	Industry based projects done

B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	Intake: 30, Admitted - 16 percentage: 53%.	





NPR

College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



14	Quality of Mentoring	Implemented properly
----	----------------------	----------------------

C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS/GRC	Delivered through PPT	
16	Innovations in TL Process	Modern teaching tools available and used, students update their online	
17	Initiatives for funded/Sponsored projects and consultancy works	Nil	
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	04	
19	Number of Conference Papers published	03	
20	Number of patents published	01	
21	Number of Faculty Awards	Nil	





NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.



Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org

22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	Nit	To motivate the faculty to give guest lecture to offer Innovation & Indus-train
23	FDP/STTP/ workshop /Seminar Participation	43	
24	Number of Faculties with Professional Membership	08	

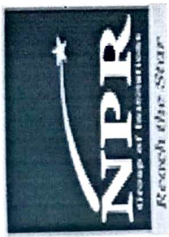
D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	utilized in partials period and recorded in entry note	

E. Meeting Details

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	periodically conducted	
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc.,)	Conducted	





NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



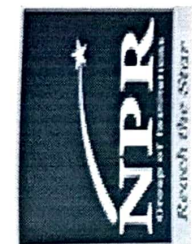
F. Industry Academic Interaction and Professional Activities

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	Nil	Due to pandemic period
29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	02	
30	MOUs and activeness	01	
31	Technical Events under Professional Societies / Students Association	Nil	
32	Club activities	Nil	

G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	Question paper were set outcome based education	
34	Quality of Assignments	Real time example and problems were given	





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



35	Continuous evaluation of Lab Records and students' performance in Lab	Evaluation of records and monitoring students performance in Lab done properly
36	Continuous review of Final year Projects	Final-year project reviewed periodically
37	University Result Analysis and action for Improvement	Result analysis done and action taken for Improvement
38	Analysis of Stake holders' feedback, action plan and action taken report	Analysis done.

Name and Designation of Academic Audit Experts:

[Signature]
AUDITEE
(Dr. A. Hemalatha)
HOD/CIVIL

[Signature]
IQAC CO-ORDINATOR

[Signature]
AUDITOR I
(Dr. M. Ameena Banu)
PROF (ECE)

[Signature]
AUDITOR II
(Dr. CPALAMURUGAN)
PROF (CHE)



PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

AAA



NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
 An ISO 9001:2015 Certified Institution.
 Phone No: 04544- 246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, [Email:nprprincipal@nprcolleges.org](mailto:nprprincipal@nprcolleges.org)



INTERNAL QUALITY ASSURANCE CELL (IQAC)

Academic and Administrative Audit- Department

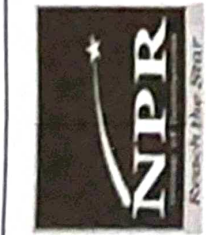
Academic Year: 2021-2022

Department: EEE

Date: 8/4/22

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	Yes, Academic calendar were prepared as per Norms.	—
2	Adherence of Academic Calendar	Yes, strictly followed	—
3	Faculty Teaching Work load distribution	Yes, allocated based on their specification	—
4	Number & Quality of Value-Added Courses /Add-on courses/ Certification Courses	Sufficient number of Courses were conducted	—
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	Sufficient number of programmes were organized.	—
6	Number & Quality of Students Internship/ In-plant Training	Sufficient number of trainings were attended by all students	—



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



7	Number of student Conference/Journal Publications	-	Instructed and motivated to publish quality papers
8	Number of Student participation in seminar / workshop / symposium	Sufficient number of events were participated by the students	-
9	Number of Student Awards / Prizes	-	Motivated to participate in the coming semester
10	Course File Evaluation	Evaluations were done at the end of the Semester by HOD	-
11	Lab Manual with Master readings and Additional experiments	Available	-
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	Both in house and Industry projects were carried out as per plan	-

B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	45%	-



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



14	Quality of Mentoring	Based on the evidence there is improvement in mentoring.	-
----	----------------------	--	---

C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS/GRC	Delivered using ppt and available in LMS	-
16	Innovations in TL Process	Introduced Innovations in TL Process	-
17	Initiatives for funded/Sponsored projects and consultancy works	Initiatives were made to get sponsored projects	-
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	2 papers	Instructed to improve the publications.
19	Number of Conference Papers published	published	Instructed to increase the publications
20	Number of patents published	published	Instructed to increase the publications
21	Number of Faculty Awards	-	Instructed to improve



NPR

College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



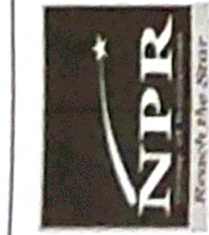
22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	Renewer	Insured to have interaction
23	FDP/STTP/ workshop /Seminar Participation	18 Nos	-
24	Number of Faculties with Professional Membership	6	-

D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	Students utilized the computing facilities with advanced simulation package.	-

E. Meeting Details

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	Regularly conducted in each Semester	-
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc.,)	Frequently conducted	-



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org

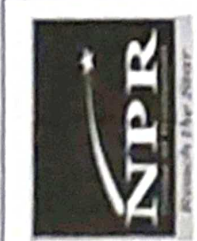


F. Industry Academic Interaction and Professional Activities

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	Not arranged due to Covid-19	Will be arranged in the forthcoming semester.
29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	Conducted	-
30	MOUs and activeness	MoU signed with reputed companies.	-
31	Technical Events under Professional Societies / Students Association	-	Plan to start societies.
32	Club activities	Have Renewable Energy club	Plan to start few more clubs.

G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	Prepared following blooms taxonomy.	-
34	Quality of Assignments	Case studies & real time examples were given	-



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



35	Continuous evaluation of Lab Records and students' performance in Lab	Evaluation as per the norms.	-
36	Continuous review of Final year Projects	Carried out periodically	-
37	University Result Analysis and action for Improvement	Analyzed and actions were taken	-
38	Analysis of Stake holders' feedback, action plan and action taken report	Analyzed by getting their inputs	-

Name and Designation of Academic Audit Experts:

[Signature]

HAUITEE
Department of Electrical & Electronics Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401

IQAC CO-ORDINATOR

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (DT)-624 401



IQAC

[Signature]

AUDITOR I

Dr. A. HEMARAJAN
Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

[Signature]

Dr. S. PAUL SINGARASAI

AUDITOR II
Department of Mechanical Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.


PRINCIPAL

Dr. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.




AAA

Page 6 of 6



NPR
Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544-246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email nprcetrprincipal@nprcolleges.org



INTERNAL QUALITY ASSURANCE CELL (IQAC)

Academic and Administrative Audit - Department

Department: **MBA**

Academic Year: 2021-2022

Date: **16.6.2022**

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	Yes, As per university Norms	-
2	Adherence of Academic Calendar	Held Time	-
3	Faculty Teaching Work load distribution	Yes, evenly allotted	-
4	Number & Quality of Value-Added Courses /Add-on courses/ Certification Courses	Yes conducted (2 course)	-
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	Conducted as per calendar	-
6	Number & Quality of Students Internship/ In-plant Training	Yes, As per IV sem Av Curriculum	-
7	Number of student Conference/Journal Publications	Yes, Attended Conference	-



NPR College of Engineering & Technology


NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email: nprprincipal@nprcolleges.org




8	Number of Student participation in seminar / workshop / symposium	Yes, attendent.	-
9	Number of Student Awards / Prizes	Nil	To be improved
10	Course File Evaluation	Yes. IQAC	-
11	Lab Manual with Master readings and Additional experiments	Yes, available	-
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	As per Curriculum IV semester.	

B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	100 %	-
14	Quality of Mentoring	Successfully implemented	



NPR
College of Engineering & Technology



ISO 9001
CERTIFIED

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution
Phone No: 04544-246500, 246501, 246502.
Website: www.nprcolleges.org, www.nprcet.org, Email:nprprincipal@nprcolleges.org

C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS/GRC	Yes, available	-
16	Innovations in TL Process	NPTEL & Share market Video	-
17	Initiatives for funded/Sponsored projects and consultancy works	UBA & EAC Camp	-
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	04	Advised to increase
19	Number of Conference Papers published	05	-
20	Number of patents published	Nil	Encourage to apply
21	Number of Faculty Awards	Yes, Best Young faculty	-
22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	Yes delivered	-
23	FDP/STTP/ workshop /Seminar Participation	Participated, ATAL & etc	-
24	Number of Faculties with Professional Membership	Nil	To be initiated.



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544-246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	<i>Yes, all Class Rooms</i>	-

E. Meeting Details

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	<i>Yes, Regularly conducted</i>	-
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc..)	<i>Yes</i>	-

F. Industry Academic Interaction and Professional Activities

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	<i>Yes, Every semester</i>	-



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprceprincipal@nprcolleges.org



29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	Yes, based on MOU
30	MOUs and activeness	Yes, Currently 3 MOU
31	Technical Events under Professional Societies / Students Association	Nil
32	Club activities	Yes, Business Club

G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	As per the norms prepared.	
34	Quality of Assignments	Redline Case Study given an Assignment	



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.

Approved by AJCTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website: www.nprcolleges.org, www.nprcet.org. Email: nprceprincipal@nprcolleges.org



35	Continuous evaluation of Lab Records and students' performance in Lab	As per AN norms, monitoring regularly for second semester
36	Continuous review of Final year Projects	As per Academic Plan, Prepared & Executed well
37	University Result Analysis and action for Improvement	Result Analysis prepared.
38	Analysis of Stake holders' feedback, action plan and action taken report	Analysis done as per the report

Name and Designation of Academic Audit Experts:

[Signature]
AUDITEE
Dr. B. Veeramangala
HOD (MBA)

[Signature]
IQAC CO-ORDINATOR
(K. B. SURESH SENEKUMAR)
AP - MECH.
IQAC

[Signature]
AUDITOR I
(Dr. P. PRIYA)

[Signature]
AUDITOR II
(Dr. A. Hemalatha)

PRINCIPAL

Dr. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
 An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, Email: nprceprincipal@nprcolleges.org



INTERNAL QUALITY ASSURANCE CELL (IQAC)
 Academic and Administrative Audit- Department

Date: 17.06.2022

Department: MECHANICAL ENGINEERING Academic Year: 2021-2022

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	Institute level, Dept. level Academic calendar prepared as per norms	
2	Adherence of Academic Calendar	Yes, Adherenced	
3	Faculty Teaching Work load distribution	Yes, faculty Teaching work load Distributed evenly	
4	Number & Quality of Value-Added Courses /Add-on courses/ Certification Courses	NO	More Value Added Course
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	Yes, organized as per the Plan	
6	Number & Quality of Students Internship/ In-plant Training	47% Quality was Good	

IQAC

Page 1 of 6



AAA



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



7	Number of student Conference/Journal Publications	09	
8	Number of Student participation in seminar / workshop / symposium	09	
9	Number of Student Awards / Prizes	04	
10	Course File Evaluation	Course file evaluation was Good	
11	Lab Manual with Master readings and Additional experiments	Yes, Having Lab manual with master reading & Additional experiments	
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	Planned & Progressed well In-house project	

B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	UG - 50 %	





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprprincipal@nprcolleges.org

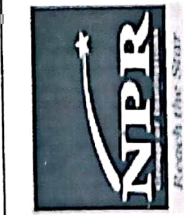


14	Quality of Mentoring	Quality of mentoring was Good
----	----------------------	-------------------------------

C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS GRC	Delivered through PPT & Available	
16	Innovations in IT Process	Working videos, Animation are used effectively	
17	Initiatives for funded Sponsored projects and consultancy works	Funded Project Applied	
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	16	
19	Number of Conference Papers published	05	
20	Number of patents published	05	
21	Number of Faculty Awards	NIL	Motivate the faculty to participate & win awards





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	02	
23	FDP/SITP/ workshop /Seminar Participation	26	
24	Number of Faculties with Professional Membership	08	

D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	36 Computers Available & well maintained, utilized effectively	

E. Meeting Details

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	Regularly conducted as per the plan	
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc..)	Conducted as per the plan	





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprceprincipal@nprcolleges.org



F. Industry Academic Interaction and Professional Activities

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	02	
29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	Yes, 4 Persons arranged	
30	MOUs and activeness	04	
31	Technical Events under Professional Societies / Students Association	No, not arranged	Motivate the Students to join in Student chapters Societies
32	Club activities	No	Motivate the Students to join & conduct Club activities

G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	Internal Test Question Papers Prepared well as per norms	
34	Quality of Assignments	Real time examples are given for assignments	

IQAC

Page 5 of 6



AAA



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org



35	Continuous evaluation of Lab Records and students' performance in Lab	Yes, monitored regularly as per norms
36	Continuous review of Final year Projects	Plan prepared and executed well as per schedule
37	University Result Analysis and action for Improvement	Yes, Result Analysis was prepared & actions are taken
38	Analysis of Stake holders' feedback, action plan and action taken report	Yes, Analysis were done based on the feedback

Name and Designation of Academic Audit Experts:

J. Sundararajan
AUDITEE
Dr. S. Paul Sujayan
ASP (Tech)

John
IQAC CO-ORDINATOR
Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

K. Jayaprakasam
AUDITOR I
K. JAYAPRAKASAM
APIECE

T. Sivakumar
AUDITOR II
T. SIVAKUMAR, AP/GEE



Dr. J. Sundararajan
PRINCIPAL
Dr. J. SUNDARARAJAN,
B.E., M.Tech, Ph.D.,
Principal
N.P.R. College of Engineering & Technology,
Natham, Dindigul (Dt) - 624 401.



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution

Phone No: 04544- 246 500, 246501, 246502

Website: www.nprcolleges.org, www.nprcet.org. Email: nprcprincipal@nprcolleges.org



Date: 16.06.2022

INTERNAL QUALITY ASSURANCE CELL (IQAC)

Academic and Administrative Audit- Department

Academic Year: 2021-2022

Department: ECE

A. Curriculum Planning and Implementation

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
1	Institute Level / Department Level Academic Calendar Preparedness In line to university	Yes, As per University norms	
2	Adherence of Academic Calendar	Adherence	
3	Faculty Teaching Work load distribution	Allocated and distributed evenly	
4	Number & Quality of Value-Added Courses / Add-on courses/ Certification Courses	4 - Value added Course Conducted	
5	Workshops / Seminars / Guest Lectures / FDP / Symposium Organized	09	
6	Number & Quality of Students Internship/ In-plant Training	Internship & Inplant training offered, Total - 80	

AAA





NPR College of Engineering & Technology

NPR Nagar, Nathamb, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution

Phone No. 04544-246500, 246501, 246502.
Website: www.nprcolleges.org www.nprcet.org Email:nprceprincipal@nprcolleges.org



7	Number of student Conference/Journal Publications	Conference - 32 Journal - NPR/
8	Number of Student participation in seminar / workshop / symposium	Workshop - 05, Webinar / Seminar / Quiz - 25, Online Course - 11
9	Number of Student Awards / Prizes	Symposium - 01 Prize - 02 (3rd prize)
10	Course File Evaluation	Course file evaluated File Name: Discrete Time Signal Processing
11	Lab Manual with Master readings and Additional experiments	Lab manual available with reading and additional experiments
12	Students Final Year Project Planning, Progress and quality (In-house/ Industry based)	In-house projects done

B. Student Admission and Mentoring

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
13	Percentage of Student Admission	T-64 in-take : 126 Admitted Students: 96, percentage: 80%	



IQAC





NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.
 Phone No: 04544- 246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, Email:nprceprincipal@nprcolleges.org



14	Quality of Mentoring	Implementation properly
----	----------------------	-------------------------


C. Faculty Profile and Faculty Development

S. No	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
15	Course contents delivered through PPT and available in LMS/GRC	Delivered through PPT and available	
16	Innovations in TL Process	Modern teaching tools used, Students Undergone Online Course	
17	Initiatives for funded/Sponsored projects and consultancy works	Funded projects - DST applied	
18	Number of Papers published in UGC, SCOPUS, WEB of Science and others.	07	
19	Number of Conference Papers published	12	
20	Number of patents published	05	
21	Number of Faculty Awards	01	



IQAC






NPR
NATHAM
NAGAR

NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org. Email:nprceprincipal@nprcolleges.org



22	Number of outside Interactions (Guest Lectures, Jury, Reviewer)	Nil	To motivate the faculty to give the guest lecture to other institutions & industry
23	FDP/STTP/ workshop /Seminar Participation	21	
24	Number of Faculties with Professional Membership	06	

D. Infrastructure and Resources

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
25	Computing Facilities with utilizations	Utilized in pre-lect period any excess of is student entry note	

E. Meeting Details

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
26	Class Committee meeting	Periodically Conducted	
27	Stakeholder's Meeting (Parent-Teacher, Employer, Alumni, etc.,)	Conducted	



IQAC



Page 4 of 6

AAA



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

An ISO 9001:2015 Certified Institution.

Phone No. 04544- 246 500, 246501, 246502

Website : www.nprcolleges.org, www.nprcet.org, Email:nprprincipal@nprcolleges.org



F. Industry Academic Interaction and Professional Activities

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
28	Industrial Visit	NIP	To arrange industrial visit for the students to know the industry environment & expectation.
29	Industry Person as Guest Lecture / Visiting faculty / Adjunct faculty	01	
30	MOUs and activeness	07	
31	Technical Events under Professional Societies / Students Association	Student association : 13	
32	Club activities	NIP.	To initiate the Citizen awareness program for students

G. Continuous Evaluation

S. No.	Audit Parameters	Internal Monitoring and Audit findings	Action to be taken
33	Quality of Internal Question Papers	Question Paper standard maintained	
34	Quality of Assignments	Real time examples and problems were given	

IQAC



Page 5 of 6



AAA



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.

Phone No: 04544-246 500, 246501, 246502.
Website: www.nprcolleges.org, www.nprcet.org, Email:nprceprincipal@nprcolleges.org



35	Continuous evaluation of Lab Records and students' performance in Lab	Evaluation of records and monitoring of students' performance in lab done properly
36	Continuous review of Final year Projects	Final year Projects reviewed periodically
37	University Result Analysis and action for Improvement	Result analysis done and action taken for improvement
38	Analysis of Stake holders' feedback, action plan and action taken report	Analysis done

Name and Designation of Academic Audit Experts:

S. Ponnudurai
16.6.22
AUDITEE

[Signature]

IQAC CO-ORDINATOR
(K. PRASAD SENOOTH KUMAR)
Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401



S. Nirmala
16/6/22
AUDITOR I

(Dr. P. KAMARAJAN)

hru/EEE

[Signature]
16/6/22
AUDITOR II
Dr. S. Paulrajagan
ASP (Mudra)

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624-401.



	<p>NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website: www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org</p>	
---	---	---

PREFACE

NAME OF THE FACULTY : J. PRISCA MARY

DESIGNATION : ASSISTANT PROFESSOR

NAME OF THE SUBJECT : DATA STRUCTURES

SUBJECT CODE : CS8391

YEAR : II

SEMESTER : 03

ACADEMIC YEAR : 2021-2022(ODD)

REGULATION : 2017


PREPARED BY

J. PRISCA MARY
 AP - CSE


APPROVED BY

Prof. G. ELANUVAN
 HOD - CSE





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



PREFACE

NAME OF THE FACULTY : J. PRISCA MARY

DESIGNATION : ASSISTANT PROFESSOR

NAME OF THE SUBJECT : DATA STRUCTURES

SUBJECT CODE : CS8391

YEAR : II

SEMESTER : 03

ACADEMIC YEAR : 2021-2022(ODD)

REGULATION : 2017

PREPARED BY

J. PRISCA MARY

AP - CSE

APPROVED BY

Prof. G. ELANUVAN

HOD - CSE





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FACULTY FEEDBACK REPORT DURING OCTOBER -2021-2022-ODD

S.NO	CONTENT	MARKS(10)
1.	STAFF NAME J. PRISCILLA MARY	
2.	BRANCH/SEM CSE 103	
3.	TOTAL NO. OF STUDENTS 53	
4.	SUBJECT CODE/TITLE - CSB391 IDS	
5.	DOES THE TEACHER COME PREPARED ON LESSONS?	09
6.	SUBJECT KNOWLEDGE AND CLARITY OF THE FACULTY	10
7.	IMPARTIALITY & FAIRNESS TO STUDENTS?	09
8.	INTERACTION WITH STUDENTS BY THE FACULTY	10
9.	VALUABLE EXTRA INFORMATION GIVEN DURING THE LECTURES BY THE FACULTY?	10
10.	ENTHUSIASM FOR SUBJECT	10
11.	SHOWING CONCERN & FOR THE STUDENTS?	10
12.	UNIFORMITY IN EVALUATION OF EXAM PAPERS/ ASSIGNMENTS?	10
13.	WHEATHER SYLLABUS FOR IA TESTS/UNIVERSITY EXAMINATION COMPLETED STEADILY	10
14.	ABILITY TO SPEAK LOUDLY & CLEARLY	10
	TOTAL	98

[Signature]
HOD-CSE

[Signature]
IQAC Audit Member 1

[Signature]
DR. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

[Signature]
IQAC Audit Member 2





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FACULTY REPORT FOR CORRECTIVE ACTION (STUDENTS FEEDBACK)

NAME: J. PRISCILLA MARY										
SUBJECT CODE/SUBJECT TITLE: CS8391 DATA STRUCTURES										
ACADEMIC YEAR/SEM: 02/03										
1.Does The teacher come prepared on lessons?	2.Subject knowledge And clarity of the faculty	3.Impartiality & fairness to students?	4.Interaction with students by the faculty	5.Valuable extra information given during the lectures by the faculty?	6.Enthusiasm for subject?	7.Showing concern & for the students?	8.Punctuality in evaluation of exam papers/ Assignments?	9.Wheather syllabus for is tests/ University examination completed steadily?	10.Ability to speak loudly & clearly	TOTAL
10	10	10	10	10	10	10	10	10	10	100
10	10	09	10	10	10	10	10	10	10	99
CORRECTIVE ACTION:										
Students are asked to give the question bank and the important question for this subject										
REMARKS BY HOD:										
Question bank and the important questions are given to the students										

[Signature]
IQAC Audit Member 1

[Signature]
IQAC Audit Member 2



	<p align="center">NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org</p>	
---	---	---

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Statement for Syllabus Completion

I have handled the subject *CS8391 DATA STRUCTURES* for *03/II Sem/ year*, B.E-Department of Computer Science and Engineering during the Academic year 2021-2022, Odd Semester.

In this regard, I confirm that have taught all the topics mentioned in the syllabus, and took lectures for 47 Periods and discussed the Anna University question papers of the last 5 years.

Signature : *[Signature]*
 Name : *J. PRISCA MARY*
 Designation : *ASSISTANT PROFESSOR*
 Department : *COMPUTER SCIENCE AND ENGINEERING*
 Date : *16.06.2022*

Signature of the HoD : *[Signature]*

Signature of the Principal :

Dr. J.SUNDARARAJAN,
 B.E., M.Tech., Ph.D.,
 Principal
 N.P.R. College of Engineering & Technology
 Natham, Dindigul (Dt) - 624 401.

[Signature]
 IQAC Audit Member1

[Signature]
 IQAC Audit Member2

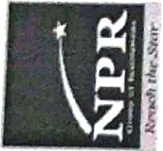


	<h2 style="margin: 0;">NPR College of Engineering & Technology</h2> <p style="margin: 0;">NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org</p>	
---	--	---

COURSE FILE-CONTENTS

S.NO	CONTENTS	REVIEW 1	REVIEW 2	REVIEW 3
1	PREFACE OF THE SUBJECT-1	Yes	Yes	Yes
2	INSTITUTE V/M,DEPARTMENT V/M ,PSO, PEO & PO STATEMENTS-1	Yes	Yes	Yes
3	COURSE INFORMATION SHEET-1	Yes	Yes	Yes
4	TIME TABLE WITH INDIVIDUAL WORK LOAD-1	Yes	Yes	Yes
5	TENTATIVE LESSON PLAN-1	Yes	Yes	Yes
6	LESSON PLAN AND EXECUTION.(IF ANY DEVIATION MAKEUP CLASS)-3	Yes	Yes	Yes
7	LECTURE NOTES-1	Yes	Yes	Yes
8	OHP/PPT/SUBJECT CDS-1	Yes	Yes	Yes
9	TOPIC BEYOND SYLLABUS WITH REFERENCE DETAILS.-1	Yes	Yes	Yes
10	GAP IN SYLLABUS – PLAN AND EXECUTION.-1	Yes	-	Yes
11	UNIVERSITY QUESTION PAPERS WITH ANSWER KEY.-1	Yes	-	Yes
12	INTERNAL QUESTION PAPER WITH ANSWER KEY.-3	Yes	Yes	Yes
13	ASSIGNMENT TOPICS WITH SUBMISSION DATES.-3	Yes	Yes	Yes
14	INTERNAL ASSESMENT MARK RECORDS-3	Yes	Yes	Yes
15	STUDENTS NAME LIST-COMMON AND CATEGORYWISE-3	Yes	Yes	Yes
16	REMEDIAL CLASS PLAN AND CONTINUOUS EVALUATION RECORDS.-3	Yes	Yes	Yes
17	COURSE HAND OUT-1	Yes	Yes	Yes
18	DELIVERY MONITORING.-3	Yes	Yes	Yes
19	COURSE ASSESMENT SHEET-3	Yes	Yes	Yes
20	SAMPLE ASSIGNMENTS.-3	Yes	Yes	Yes
21	TUTORIAL SHEETS-3	Yes	Yes	Yes
22	SAMPLE ANSWER SHEETS.-3	Yes	Yes	Yes
SIGNATURE OF THE STAFF IN CHARGE		<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
SIGNATURE OF THE HOD		<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>





NPR College of Engineering & Technology
 NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
 Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
 An ISO 9001:2015 Certified Institution.
 Phone No: 04544- 246 500, 246501, 246502.
 Website : www.nprcolleges.org, www.nprcet.org, Email:nprprincipal@nprcolleges.org



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

IQAC-AUDIT REPORT

Year/sem	Subject code	Name of the faculty	INTERNAL TEST-1				INTERNAL TEST-2				MODEL TEST-1						
			No. Of students registered	No. of students attended	No. of absences	No. Of failures	Pass%	No. Of students registered	No. of students attended	No. of absences	No. Of failures	Pass%	No. Of students registered	No. of students attended	No. of absences	No. Of failures	Pass%
			53	48	5	3	81	53	50	3	6	83	53	52	1	3	92
			5	5	-	-	100%	3	3	-	-	100	3	3	-	-	100
			Avoid more Absences				Improve Pass percentage										
			Remarks														
		SIGNATURE OF IQAC MEMBER WITH NAME	Dr. A. HEMALATHA				Dr. A. HEMALATHA				Dr. A. HEMALATHA						
		SIGNATURE OF HOD	yub				yub				yub						
		PRINCIPAL															





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org



COURSE FILE-CONTENT

1. PREFACE OF THE SUBJECT
2. INSTITUTE V/M, DEPARTMENT V/M ,PSO, PEO & PO STATEMENTS
3. COURSE INFORMATION SHEET
4. TIME TABLE WITH INDIVIDUAL WORK LOAD
5. TENTATIVE LESSON PLAN
6. LESSON PLAN AND EXECUTION.(IF ANY DEVIATION MAKEUP CLASS)
7. LECTURE NOTES
8. OHP/PPT/SUBJECT CDS
9. TOPIC BEYOND SYLLABUS WITH REFERENCE DETAILS.
10. GAP IN SYLLABUS – PLAN AND EXECUTION.
11. UNIVERSITY QUESTION PAPERS WITH ANSWER KEY.
12. INTERNAL QUESTION PAPER WITH ANSWER KEY.
13. ASSIGNMENT TOPICS WITH SUBMISSION DATES.
14. INTERNAL ASSESMENT MARK RECORDS
15. STUDENTS NAME LIST-COMMON AND CATEGORYWISE
16. REMEDIAL CLASS PLAN AND CONTINOUS EVALUATION RECORDS.
17. COURSE HAND OUT
18. DELIVERY MONITORING.
19. COURSE ASSESMENT SHEET
20. SAMPLE ASSIGNMENTS.
21. TUTORIAL SHEETS
22. SAMPLE ANSWER SHEETS.

J. Prisca Mary
STAFF IN-CHARGE

J. Prisca Mary

J. Sundararajan
HOD-CSE

J. Sundararajan
PRINCIPAL

J. Sundararajan
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.



 NPR <small>College of Engineering & Technology</small> <small>Keen to the Start</small>	<h1>NPR College of Engineering & Technology</h1> <p>NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution Phone No: 04544- 246 500, 246501, 246502 Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org</p>	
---	--	---

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Register Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

INTERNAL EXAMINATION I – OCTOBER 2022

IIIrd Semester – CSE

CS8391 – DATA STRUCTURES

Duration: 90 Minutes

Date: 4/10/2021

Maximum marks: 50

Course Outcomes ,Question Number, Marks:

COs	CO1	CO2
Ques. No.	1,2,3,7	4,5,6,8
Max. Marks	22	28

COs & K-Level:

CO1: To understand and implement abstract data types for linear data structures using array and linked list.

CO2: Examine abstract data types for stack and queue data structures and apply for problem solution.

K-Levels	K1: Remember	K2: Understand	K3: Apply	K4: Analyse	K5: Evaluate	K6: Create
----------	--------------	----------------	-----------	-------------	--------------	------------

Q.No	Answer All Questions	Bloom's Taxonomy K-level
PART – A (5 x 2 = 10 marks)		
1.	Define LinkedList.	K1
2.	Define ADT and write any three advantages of ADT.	K2
3.	Write a procedure to deleting the last node from circular linked list.	K2
4.	Convert the following infix expression to postfix expression using stack $a+b*c+(d+e+f)/g$	K5
5.	What are priority queues? What are the ways to implement priority queue?	K2
PART – B (1 x 8 = 8 marks)		
6.	What is a DEQUEUE? Explain its operation with example.	K3
PART – C (2 x16 = 32 marks)		
7.	Explain the insertion operations performed in linked list. How nodes are inserted after a specified node?	K2
8.	What are circular queues? Write the procedure to insert and delete an element in circular queue using array implementation.	K2


FACULTY IN-CHARGE

A. PRISCILLA




HoD

[Prof. U. ELANDYAN]



NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
An ISO 9001:2015 Certified Institution
Phone No: 04544- 246 500, 246501, 246502.
Website: www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



INTERNAL TEST - I / II

- a) Register Number :

9	8	0	8								
---	---	---	---	--	--	--	--	--	--	--	--
- b) Year & Department : II X CSE
- c) Subject code & Title : CS8391 & DATA STRUCTURES
- d) Date & Session (FN/AN) : 04.09.2021 - FN
- e) Number of pages used : 11

Name and Signature of the Hall Superintendent with Date

Students has to put a tick (✓) mark for the questions attended in tick mark column

PART-A			
Question No.	✓	CO..... Marks	CO..... Marks
1.	✓	2	
2.	✓	2	
3.	✓		2
4.	✓		2
5.	✓		2
TOTAL		4	6
TOTAL MARKS		10	

Students has to put a tick (✓) mark for the questions attended in tick mark column

PART-B & C								
Question No.	✓	i		ii		Total Marks		
		CO..1. Marks	CO..2. Marks	CO..1. Marks	CO..2. Marks			
6.	✓		6		-	-	6	
7.	a)	✓		14		-	-	14
	b)							
8.	a)	✓	14	-				14
	b)							
TOTAL			14	20		-		34

CO. No.	Total Marks	Attained Marks
CO..1.	20	18
CO..2.	30	26

Grand Total	44
	50

Name and Signature of the Faculty
J. PRISCILLA MARY



Name and Signature of the HoD
Prof. G. ELANIKOVAN

	<h2 style="text-align: center;">NPR College of Engineering & Technology</h2> <p style="text-align: center;">NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org</p>	
---	---	---

COURSE INFORMATION SHEET

PROGRAMME: Computer Science & Engineering	DEGREE: BE
COURSE: DATA STRUCTURES	SEMESTER: 3 CREDITS: 3
COURSE CODE: CS8391 / C203	COURSE TYPE: CORE /ELECTIVE / BREADTH/ S&H : CORE
COURSE AREA/STREAM : PROGRAMMING	CONTACT HOURS: 5+1 (Tutorial) hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY): CS8391 / C206	LAB COURSE NAME : Data Structures Lab
COURSE COORDINATOR NAME : J.Dinesh	

SYLLABUS:

UNIT	DETAILS	HOURS
I	LINEAR DATA STRUCTURES – LIST Abstract Data Types (ADTs) – List ADT – array-based implementation – linked list implementation – singly linked lists- circularly linked lists- doubly-linked lists – applications of lists – Polynomial Manipulation – All operations (Insertion, Deletion, Merge, Traversal).	9
II	LINEAR DATA STRUCTURES – STACKS, QUEUES Stack ADT – Operations - Applications - Evaluating arithmetic expressions- Conversion of Infix to postfix expression - Queue ADT – Operations - Circular Queue – Priority Queue - deQueue – applications of queues.	9
III	NON LINEAR DATA STRUCTURES – TREES Tree ADT – tree traversals - Binary Tree ADT – expression trees – applications of trees – binary search tree ADT – Threaded Binary Trees- AVL Trees – B-Tree - B+ Tree - Heap – Applications of heap.	9
IV	NON LINEAR DATA STRUCTURES - GRAPHS Definition – Representation of Graph – Types of graph - Breadth-first traversal - Depth-first traversal – Topological Sort – Bi-connectivity – Cut vertex – Euler circuits – Applications of graphs.	9
V	SEARCHING, SORTING AND HASHING TECHNIQUES Searching- Linear Search - Binary Search. Sorting - Bubble sort - Selection sort - Insertion sort - Shell sort – Radix sort. Hashing- Hash Functions – Separate Chaining – Open Addressing – Rehashing – Extendible Hashing.	9





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org



TOTAL HOURS	45
-------------	----

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
1	Mark Allen Weiss, —Data Structures and Algorithm Analysis in C, 2nd Edition, Pearson Education, 1997.
2	ReemaThareja, —Data Structures Using C, Second Edition , Oxford University Press, 2011
3	Thomas H. Cormen, Charles E. Leiserson, Ronald L.Rivest, Clifford Stein, —Introduction to Algorithms", Second Edition, Mcgraw Hill, 2002.
4	Aho, Hopcroft and Ullman, —Data Structures and Algorithms, Pearson Education, 1983.
5	Stephen G. Kochan, —" Programming in C", 3rd edition, Pearson Education.
6	Ellis Horowitz, SartajSahni, Susan Anderson-Freed, —Fundamentals of Data Structures in C, Second Edition, University Press, 2008

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
C106	Fundamentals of C programming language	Basics of C	2

COURSE OBJECTIVES:

1	To understand the concepts of ADTs
2	To Learn linear data structures – lists, stacks, and queues
3	To understand sorting, searching and hashing algorithms
4	To apply Tree and Graph structures

COURSE OUTCOMES:

SNO	DESCRIPTION
C203.1	Describe linear data structures using array and linked list.
C203.2	Apply data structures like stacks, queues in linear data structure.
C203.3	Discuss non-linear data structures tree and its application.



	<h1>NPR College of Engineering & Technology</h1> <p>NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org</p>	
---	--	---

C203.4	Apply various algorithms in graph.
C203.5	Solve searching, sorting and hashing techniques in data structures.
C203.6	Interpret sorting algorithms for a give problem.

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
C203.1	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
C203.2	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
C203.3	2	2	1	-	-	-	-	-	-	-	-	-	2	2	1
C203.4	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
C203.5	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
C203.6	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1
C203	3	2	2	1	-	-	-	-	-	-	-	-	2	2	1

JUSTIFICATION FOR CORELATION

SNO	RELATED POs	JUSTIFICATION
C203.1	PO1	The knowledge of arrays, linked lists, stacks and queues can be applied to solve complex engineering problems
	PO2	The knowledge of non linear data structures like trees and graphs can be applied to design solutions to complex engineering problems
	PO3	This knowledge helps to design good and efficient algorithms.
C203.2	PO1	The knowledge of arrays, linked lists, stacks and queues can be applied to solve complex engineering problems
	PO2	These concepts are fundamental to CS and can be used in research and other innovative ideas.
	PO3	This knowledge can be used to design efficient solutions to complex problems.
C203.3	PO1	The knowledge of non linear data structures like trees and graphs can be applied to design solutions to complex engineering problems.
	PO2	This knowledge can be used to design efficient solutions to complex problems.
	PO3	The knowledge of arrays, linked lists, stacks and queues can be





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org



		applied to solve complex engineering problems
C203.4	PO1	The knowledge of non linear data structures like trees and graphs can be applied to design solutions to complex engineering problems
	PO2	This knowledge can be used to design efficient solutions to complex problems.
	PO3	The knowledge of arrays, linked lists, stacks and queues can be applied to solve complex engineering problems
	PO4	These concepts are fundamental to CS and can be used in research and other innovative ideas.
C203.5	PO1	The knowledge of various hashing techniques can be applied in designing solutions to complex engineering problems
	PO2	This knowledge can be used to design efficient solutions to complex problems.
	PO3	The knowledge of arrays, linked lists, stacks and queues can be applied to solve complex engineering problems
	PO4	These concepts are fundamental to CS and can be used in research and other innovative ideas.
C203.6	PO1	This basic knowledge of sorting and searching can be used in designing solutions to complex multidisciplinary engineering problems
	PO2	This concept is fundamental in conducting investigations and interpretations of data.
	PO3	The knowledge of arrays, linked lists, stacks and queues can be applied to solve complex engineering problems
	PO4	These concepts are fundamental to CS and can be used in research and other innovative ideas.

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PS01	PSO2	PSO3
C203.1	1	1	1
C203.2	1	-	-
C203.3	1	-	-
C203.4	1	-	-
C203.5	1	-	-
C203.6	1	-	-

GAPS IN THE SYLLABUS - TO MEET INDUSTRY/PROFESSION REQUIREMENTS:

SNO	DESCRIPTION	PROPOSED ACTIONS



	<h1>NPR College of Engineering & Technology</h1> <p>NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org</p>	
---	---	---

1	Circular Queue Learning Material provided.	Circular Queue Learning Material provided.
2	Towers of Hanoi Problem(Example of recursion) Learning Material	Towers of Hanoi Problem(Example of recursion) Learning Material provided.

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Reason for introduction
1	Red-Black Trees	Advance topic
2	Splay Trees	Advance topic
3	Dijkstra's Algorithm	Real time example for Graph
4	Tree Sort	Advance topic
5	Real World Applications of Hashing	Application of Hashing

WEB SOURCE REFERENCES:

1	https://www.javatpoint.com/data-structure-tutorial
2	https://www.guru99.com/data-structure-algorithms-books.html
3	https://nptel.ac.in
4	https://www.cs.cmu.edu
5	https://tutorialspoint.com

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ Chalk & Talk	✓ Stud. Assignment	✓ Web resources	✓ Tutorial
✓ LCD/Smart Boards	✓ Stud. Seminars		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
1.	Chalk & Talk, Student. Assignment, Tutorial
2.	Chalk & Talk, Student. Assignment, Tutorial





NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

An ISO 9001:2015 Certified Institution.

Phone No: 04544- 246 500, 246501, 246502.

Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org



3.	Chalk & Talk , Student.Assignment, Web Resources
4.	Chalk & Talk, Lcd/Smart Boards, Web Resources, Tutorial
5.	Chalk & Talk, Student. Assignment, Lcd/Smart Boards, Web Resources
6.	Chalk & Talk, Lcd/Smart Boards, Stud.Seminars

ASSESSMENT METHODOLOGIES-DIRECT.

Assignments	Stud. Seminars	Tests/model exams	Univ. Examination
-------------	----------------	-------------------	-------------------

ASSESSMENT METHODOLOGIES-INDIRECT.

Student Feedback On Faculty (Once)	
------------------------------------	--

ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
CO1	Assignments, Univ. Examination, Stud. Seminars, Tests/Model Exams	Student Feedback On Faculty
CO2	Univ. Examination, Tests/Model Exams,	Student Feedback On Faculty
CO3	Univ. Examination, Tests/Model Exams, Assignments	Student Feedback On Faculty
CO4	Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
CO5	Assignments, Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
CO6	Univ. Examination, Tests/Model Exams, Stud Seminars	Student Feedback On Faculty

Prepared by
(Course Coordinator)

Mrs.J.Prisca Mary
Name and Signature

Approved by
(Programme Coordinator)

Prof.G.Elangovan
Name and Signature



Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Dindigul (DT) - 624 401.