



1.3.2 (VAC 1)

EXCEL ENGINEERING COLLEGE
(Autonomous)

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NBA (AERO, CSE, ECE & MECH), NAAC with "A+" and Recognised by UGC (2f & 12B)
KOMARAPALAYAM – 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

02.03.2022

Circular

Our department is planned to conduct **Value added course** on "**Computational Analysis of Biomolecules**" on 07.03.2022 (Monday) to 11.03.2022 (Friday) at 09.30 am-04.00 pm at MB313, Smart classroom, Biomedical Engineering. The Resource person will be **Dr. Atheena Milagi Pandian**, Founder and managing director of Atheena Pandian Pvt. Ltd. We request all the students for kind co-operation to conduct the event in an effective manner. On behalf of our Department, all the students are invited.


Coordinator




HOD

To

1. Department Notice Board

Copy To,

1. Circulated to all faculty members
2. File





Excel

ENGINEERING COLLEGE

(AUTONOMOUS)

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Accredited by NBA (AERO, MECH, CSE & ECE), NAAC (A+ Grade- 3.26) and
Recognized by UGC (2f&12B)

Date

07.03.2022

To

11.03.2022

Time

09.30 a.m. –
04.00 p.m



B.E. - AERO,
MECH, CSE,
ECE

DEPARTMENT OF BIOMEDICAL ENGINEERING

Value ADDED course on

“COMPUTATIONAL ANALYSIS OF BIOMOLECULES”



Dr. Atheena Milagi Pandian
Founder and Managing Director,
Atheena Pandian Pvt. Ltd.

Mrs. T. Sasikala
Program Co-ordinators

Venue: MB313, Smart Class Room, Department of Biomedical Engineering

Ms. Jini Thomas
Activity Coordinator

Dr.B. Balasubramanian
Head of the Department





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DEPARTMENT OF BIOMEDICAL ENGINEERING

Value Added Course on Computational Analysis of Biomolecules

Syllabus

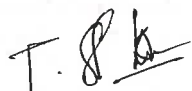
Day I: Cell Biology: The cell as basic unit of life- Prokaryotic cell and Eukaryotic cell, Cell Structure and Function- cell membrane, cell organelles, Cell Division; Mitosis & Meiosis.

Day II: Cell Energetics: Laws of Thermodynamics, Photosynthesis, Anaerobic & aerobic respiration, Structure and function of mitochondria, respiratory pathways: Glycolysis, Krebs Cycle, Electron transport chain.


Day III: Chromosome-Genome-Genes-Databases: Bio-molecules- DNA, RNA, Protein and amino acids, Chargaff's Rules, Codon bias, GC content. Central Dogma: Replication, Transcription, Translation, Post transcriptional & post translational modifications, RNA processing, RNA splicing and RNA editing. Sense/coding and anti-sense/template strands, Genetic code, wobble hypothesis. Introduction to DNA and Protein sequencing, Human Genome Project, Bioinformatics databases, Type of databases, Nucleotide sequence databases, Primary nucleotide sequence databases-EMBL, Gene Bank, DDBJ; Secondary nucleotide sequence databases.

Day IV: Proteins and Databases: Protein structure and function, Protein Primary structure, Amino acid residues, Secondary, Tertiary, Quaternary Structure of Protein, Protein sequence databases- SwissProt/ TrEMBL, PIR, Sequence motif databases -Pfam, PROSITE, Protein structure databases, Protein Data Bank-SCOP, CATH, KEGG, ChEMBL, Sequence, structure and function relationship.

Day V: Introduction to Computational Biology and Bioinformatics: Nature and scope of Computational Biology and Bioinformatics, Basic algorithms in Computational Biology, Introduction to sequence alignment (only general ideas, not algorithm) - Local and global, pair wise and multiple, BLAST.


Coordinator




HOD

DEPARTMENT OF BIOMEDICAL ENGINEERING
Computational Analysis of Biomolecules

Students Attended

We the department of Biomedical Engineering, Excel Engineering College have conducted a Value-added course on “Computational Analysis of Bio-molecules” on 07.03.2022 (Monday) to 11.03.2022 (Friday) at 09.30 am-04.00 pm at MB313, Smart classroom, Biomedical Engineering... The entire sessions were handled by Dr. Atheena Milagi Pandian. Founder and managing director of Atheena Pandian Pvt. Ltd. Around 41 student's 3rd year attended the course.

SL NO.	Reg. No.	Name of Student	07.03.2022	08.03.2022	09.03.2022	10.03.2022	11.03.2022
1	19BME001	AKSHAI KRISHNA	P	P	P	P	P
2	19BME002	ALEENA JOSHY	P	P	P	P	P
3	19BME003	ANSHAD P	P	P	P	P	P
4	19BME004	ARTHI K	P	P	P	P	P
5	19BME005	ASHWINI .R	P	P	P	P	P
6	19BME006	ATHUL K.V	P	P	P	P	P
7	19BME007	BHUPEASH C	P	P	P	P	P
8	19BME009	CHANDAN KUMAR THAKUR	P	P	P	P	P
9	19BME011	DILIPKUMAR K	P	P	P	P	P
10	19BME012	DINESH S	P	P	P	P	P
11	19BME013	GAJENDRAN K	P	P	P	P	P
12	19BME014	GAYATHRI T	P	P	P	P	P
13	19BME015	GOKULKUMAR M	P	P	P	P	P

14	19BME016	GOPIKA M	P	P	P	P	P
15	19BME017	GUNASEKARAN E	P	P	P	P	P
16	19BME018	HARI PRASATH SRININIVASAN	P	P	P	P	P
17	19BME019	HARSHINI SRI.S	P	P	P	P	P
18	19BME020	JAYAVARTHINI M	P	P	P	P	P
19	19BME021	JITESH KUMAR	P	P	P	P	P
20	19BME022	KAVIYA K	P	P	P	P	P
21	19BME023	KAVIYA R	P	P	P	P	P
22	19BME024	KIRUTHIGA M	P	P	P	P	P
23	19BME025	KRISHNAVENI S	P	P	P	P	P
24	19BME026	MOHANRAJA R	P	P	P	P	P
25	19BME027	MONISHA.N	P	P	P	P	P
26	19BME028	MUHAMMAD NOUFAL T.P	P	P	P	P	P
27	19BME029	MYTHINI A	P	P	P	P	P
28	19BME031	PIRYADHARSHINI. T.	P	P	P	P	P
29	19BME032	POOVIZHI T	P	P	P	P	P
30	19BME033	PRAVEEN V	P	P	P	P	P
31	19BME034	REVANTH P	P	P	P	P	P
32	19BME035	SABITHA M	P	P	P	P	P
33	19BME036	SHARON SHAJI DOMINIC S	P	P	P	P	P

34	19BME037	SHIVANI S	P	P	P	P	P
35	19BME038	SRIKAVIN S	P	P	P	P	P
36	19BME039	SURENDAR G	P	P	P	P	P
37	19BME041	THOUFEEQ SINAN.M.K.	P	P	P	P	P
38	19BME042	VASUDEVAN C	P	P	P	P	P
39	19BME043	VIJRENDRA GOSWAMI.	P	P	P	P	P
40	19BME045	VITHYA A	P	P	P	P	P
41	20RBME046	MOULIDHARAN A	P	P	P	P	P

T. Shk
Coordinator



July
HOD



EXCEL ENGINEERING COLLEGE

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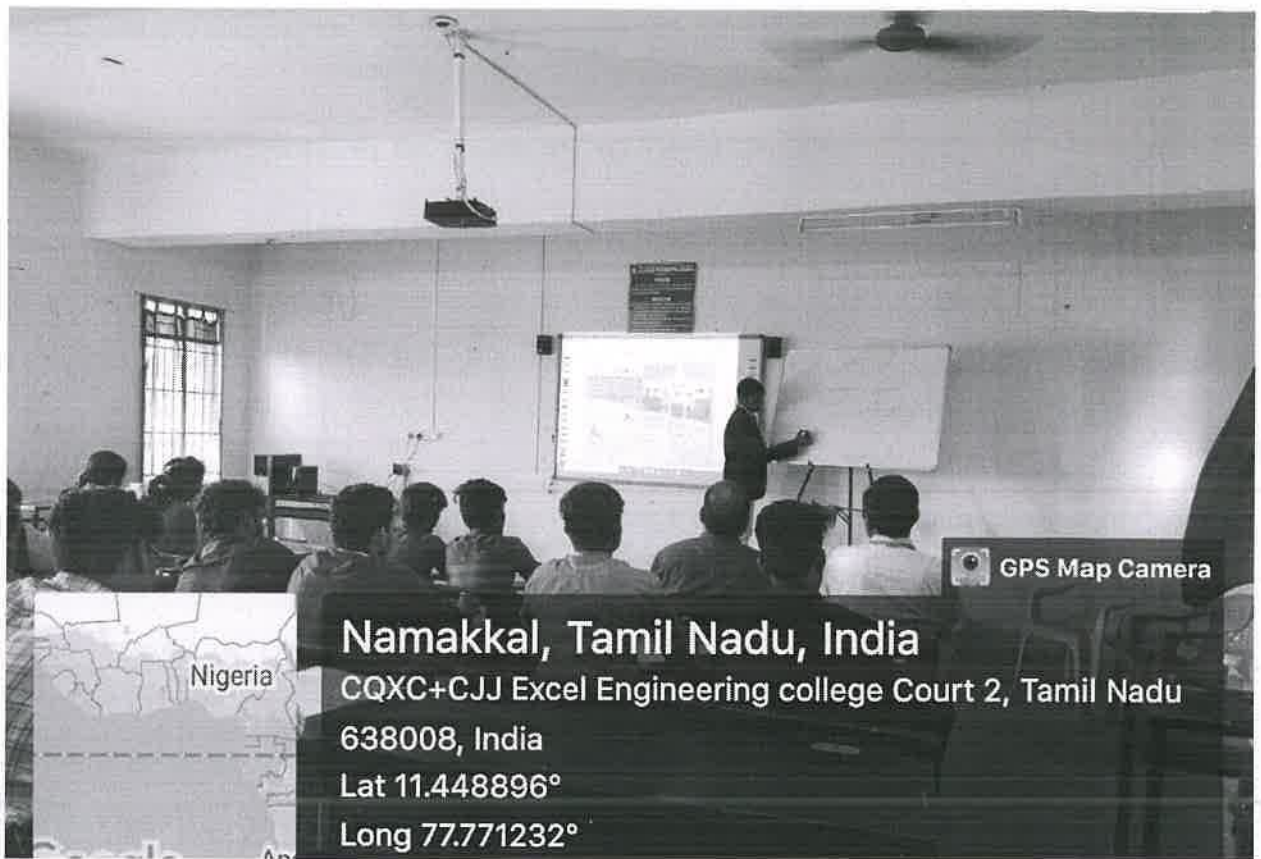
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KOMARAPALAYAM – 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

Computational Analysis of Biomolecules

We the department of Biomedical Engineering, Excel Engineering College have conducted a **Value added course** on **"Computational Analysis of Biomolecules"** on **07.03.2022 (Monday) to 11.03.2022 (Friday)** at **09.30 am-04.00 pm** at **MB313, Smart classroom, Biomedical Engineering..** The entire sessions were handled by **Dr. Atheena Milagi Pandian**. Founder and managing director of Athena Pandian Pvt. Ltd. Around 41 students 3rd year attended the course.





T. Sh. K.
Coordinator





EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

KOMARAPALAYAM - 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Computational Analysis Of Biomolecules

This is to certify that Mr/Ms., ASHWINI .R of Third year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on "COMPUTATIONAL ANALYSIS OF BIOMOLECULES" held on 07/03/2022 to 11/03/2022.

T. S. Lakshmi

CO-ORDINATOR

[Signature]

HOD/BME





EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

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DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Computational Analysis Of Biomolecules

This is to certify that Mr/Ms., CHANDAN KUMAR THAKUR of Third year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on "COMPUTATIONAL ANALYSIS OF BIOMOLECULES" held on 07/03/2022 to 11/03/2022.

T. Shk

CO-ORDINATOR





EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

KOMARAPALAYAM - 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Computational Analysis Of Biomolecules

This is to certify that Mr/Ms., GUNASEKARAN. E of Third year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on “COMPUTATIONAL ANALYSIS OF BIOMOLECULES” _held on 07/03/2022 to 11/03/2022.

T. S. K.

CO-ORDINATOR

[Signature]
HOD/BME



1-3.2 (Voc-2)



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KOMARAPALAYAM – 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

03.04.2022

Circular

Our department is planned to conduct **Value added course** on "**Robotics in Healthcare**" on **07.04.2022 (Monday) to 11.04.2022 (Friday)** at **09.30 am-04.00 pm** at **Kandasamy Hall..** The Resource person will be **Mr.Vikram Kumar**, Trainer: MATLAB, Arduino Projects. We request all the students for kind co-operation to conduct the event in an effective manner. On behalf of our Department, all the students are invited.


Coordinator




HOD

To

1. Department Notice Board

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Date

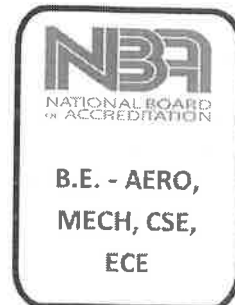
07.04.2022

To

11.04.2022

Time

09.30 a.m. –
04.00 p.m



DEPARTMENT OF BIOMEDICAL ENGINEERING

Value ADDED course on

“ROBOTICS IN HEALTHCARE”



Mr. Vikram Kumar
Trainer: MATLAB, Arduino
projects, Robotics

Ms. Jini Thomas
Program Co-ordinator

Venue: Kandasamy Seminar Hall

Ms. Jini Thomas
Activity Coordinator

Dr.B. Balasubramanian
Head of the Department





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DEPARTMENT OF BIOMEDICAL ENGINEERING

Value Added Course on Robotics in Healthcare

Syllabus

Day I: Introductory topics Introduction to medical robotics (applications and paradigms) Basic kinematics concepts (forward, inverse, remote center of motion) Basic control concepts (impedance, admittance) Surgery for engineers Interventional radiology for engineers

Day II: Minimally Invasive Surgery (MIS) Human-machine interfaces Teleoperation Cooperative manipulation Port placement for MIS Robot design concepts Video images in MIS Augmented reality Minimally invasive surgery training

Day III: Image-Guided Interventions Medical imaging modalities (e.g., MRI, US, X-ray, CT) Robot compatibility with medical imagers Image segmentation and modeling

Day IV: Tracking devices Frames and transformations Surgical navigation Calibration Rigid and non-rigid registration Radiosurgery Current topics in medical robotics (as time permits)

Day V: Existing clinical applications, controversies, and outcomes: - Cardiac, abdominal, and urologic procedures with teleoperated robots Orthopaedic surgery with cooperative robots - Prostate interventions with manual "robots" - Robotic catheters for heart electrophysiology

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DEPARTMENT OF BIOMEDICAL ENGINEERING

Robotics in Healthcare

STUDENT LIST

SL NO.	Roll. No.	Name of Student
1	20BM001	AARTHI K
2	20BM002	ABINISHA A
3	20BM003	ABIPRIYA T
4	20BM004	ALEN SEBASTIN
5	20BM005	ARAVINTII N
6	20BM006	ASWIN G
7	20BM007	BHUVANESWARI M
8	20BM008	BHUVANESWARI V
9	20BM009	DEEPALAKSHMI S
10	20BM010	DEEPIKA M
11	20BM011	DEVI MEENATCHI G
12	20BM012	DHANUSH M
13	20BM013	DHARUNPRAKASH S
14	20BM014	DHILIPKUMAR M
15	20BM015	DINESH G

16	20BM016	DURKA M
17	20BM017	FAREEN N
18	20BM018	GUNA S
19	20BM019	JANANAYAGAN S
20	20BM020	JANSIRANI S
21	20BM021	JAYA N
22	20BM022	JEEVA P
23	20BM023	JENIN G
24	20BM024	KAVIARASU V
25	20BM025	KAVITHA P
26	20BM026	KAVIYA K
27	20BM027	KAVIYA S
28	20BM028	KISHORE A
29	20BM029	KOKILA M
30	20BM030	KUMAREESAN S
31	20BM032	MADHESHWARAN P
32	20BM033	MAHENDHIRAN S
33	20BM034	MANAV MELVIN S
34	20BM035	MANIKANDAN S
35	20BM036	MD MUZAMIL
36	20BM037	MONIKA M.P

37	20BM038	MUGESH M
38	20BM039	NILUSIYA RAAI J
39	20BM040	PANDIDEVI T
40	20BM041	PAVITHRA M
41	20BM042	POOVARASAN N
42	20BM043	PRIKANTH G
43	20BM044	RAJAVELU V
44	20BM045	RAMESH G
45	20BM046	RAMYA SHRI S
46	20BM047	RAQEEB UL MASNAAD K M
47	20BM048	RAUSHANI BHARATI
48	20BM049	RUBHA SRI S
49	20BM050	SABISHEK R
50	20BM051	SANKAR P
51	20BM052	SASI PRAKASH S
52	20BM053	SHANMUGAM M
53	20BM054	SHOBANA V
54	20BM055	SOWMIYA A R

55	20BM056	SUMIT RAJ
56	20BM057	SWETHA S
57	20BM058	THAMARAI SELVAN K
58	20BM059	VANITHA M
59	20BM060	VASANTHAKUMAR K
60	20BM061	VELAN K
61	20BM062	VIGNESH A
62	20BM063	YOGAVATHI M
63	21LBM064	LOCHANA SHILAL
64	21LBM065	PRIYA R
65	21RBM064	VIKRAHAMBRIDHA E


Coordinator




HOD

DEPARTMENT OF BIOMEDICAL ENGINEERING
Robotics in Healthcare

Students Attended

We the department of Biomedical Engineering, Excel Engineering College have conducted a Value-added course on “Robotics in Healthcare” on 07.04.2022 (Monday) to 11.04.2022 (Friday) at 09.30 am-04.00 pm at Kandasamy Seminar Hall. The entire sessions were handled by Mr.Vikram Kumar, Trainer: MATLAB, Arduino Projects. Around 65 students of second year BME attended the course.

SL NO.	Roll. No.	Name of Student	07.04.2022	08.04.2022	09.04.2022	10.04.2022	11.04.2022
1	20BM001	AARTHI K	P	P	P	P	P
2	20BM002	ABINISHA A	P	P	P	P	P
3	20BM003	ABIPRIYA T	P	P	P	P	P
4	20BM004	ALEN SEBASTIN	P	P	P	P	P
5	20BM005	ARAVINTH N	P	P	P	P	P
6	20BM006	ASWIN G	P	P	P	P	P
7	20BM007	BHUVANESWARI M	P	P	P	P	P
8	20BM008	BHUVANESWARI V	P	P	P	P	P
9	20BM009	DEEPALAKSHMI S	P	P	P	P	P
10	20BM010	DEEPIKA M	P	P	P	P	P
11	20BM011	DEVI MEENATCHI G	P	P	P	P	P
12	20BM012	DHANUSH M	P	P	P	P	P
13	20BM013	DHARUNPRAKASH S	P	P	P	P	P
14	20BM014	DHILIPKUMAR M	P	P	P	P	P
15	20BM015	DINESH G	P	P	P	P	P

16	20BM016	DURKA M	P	P	P	P	P
17	20BM017	FAREEN N	P	P	P	P	P
18	20BM018	GUNA S	P	P	P	P	P
19	20BM019	JANANAYAGAN S	P	P	P	P	P
20	20BM020	JANSIRANI S	P	P	P	P	P
21	20BM021	JAYA N	P	P	P	P	P
22	20BM022	JEEVA P	P	P	P	P	P
23	20BM023	JENIN G	P	P	P	P	P
24	20BM024	KAVIARASU V	P	P	P	P	P
25	20BM025	KAVITHA P	P	P	P	P	P
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27	20BM027	KAVIYA S	P	P	P	P	P
28	20BM028	KISHORE A	P	P	P	P	P
29	20BM029	KOKILA M	P	P	P	P	P
30	20BM030	KUMAREESAN S	P	P	P	P	P
31	20BM032	MADHESHWARAN P	P	P	P	P	P
32	20BM033	MAHENDHIRAN S	P	P	P	P	P
33	20BM034	MANAV MELVIN S	P	P	P	P	P
34	20BM035	MANIKANDAN S	P	P	P	P	P
35	20BM036	MD MUZAMIL	P	P	P	P	P
36	20BM037	MONIKA M.P	P	P	P	P	P

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39	20BM040	PANDIDEVI T	P	P	P	P	P
40	20BM041	PAVITHRA M	P	P	P	P	P
41	20BM042	POOVARASAN N	P	P	P	P	P
42	20BM043	PRIKANTH G	P	P	P	P	P
43	20BM044	RAJAVELU V	P	P	P	P	P
44	20BM045	RAMESH G	P	P	P	P	P
45	20BM046	RAMYA SHRI S	P	P	P	P	P
46	20BM047	RAQEER UJ MASNAAD K M	P	P	P	P	P
47	20BM048	RAUSHANI BHARATI	P	P	P	P	P
48	20BM049	RUBHA SRI S	P	P	P	P	P
49	20BM050	SABISHEK R	P	P	P	P	P
50	20BM051	SANKAR P	P	P	P	P	P
51	20BM052	SASI PRAKASH S	P	P	P	P	P
52	20BM053	SHANMUGAM M	P	P	P	P	P
53	20BM054	SHOBANA V	P	P	P	P	P
54	20BM055	SOWMIYA A R	P	P	P	P	P
55	20BM056	SUMIT RAJ	P	P	P	P	P
56	20BM057	SWETHA S	P	P	P	P	P

57	20BM058	T PAMIAKAI SELVAN K	P	P	P	P	P
58	20BM059	VANITHA M	P	P	P	P	P
59	20BM060	VASANTHAKUMA R K	P	P	P	P	P
60	20BM061	VELAN K	P	P	P	P	P
61	20BM062	VIGNESH A	P	P	P	P	P
62	20BM063	YOGAVATHI M	P	P	P	P	P
63	21LBM064	LOCHANA SHILAL	P	P	P	P	P
64	21LBM065	PRIYA R	P	P	P	P	P
65	21RBM064	VIKRAHAMBRIDH A E	P	P	P	P	P


Coordinator




HOD



EXCEL ENGINEERING COLLEGE

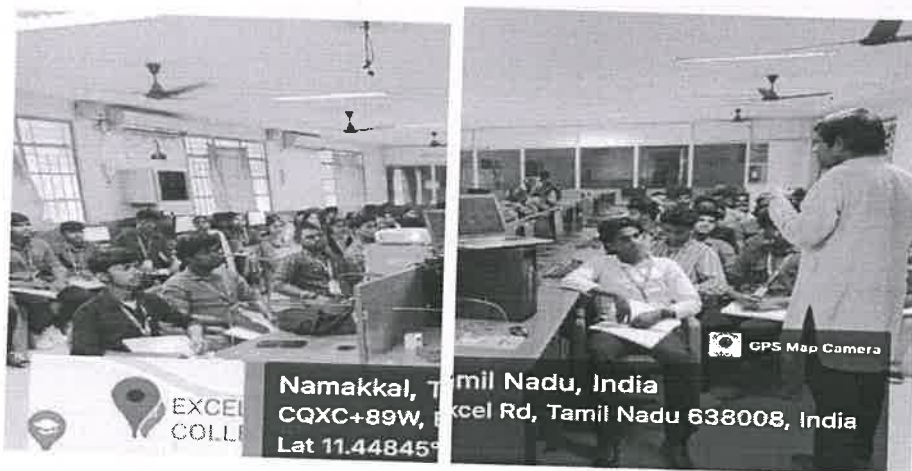
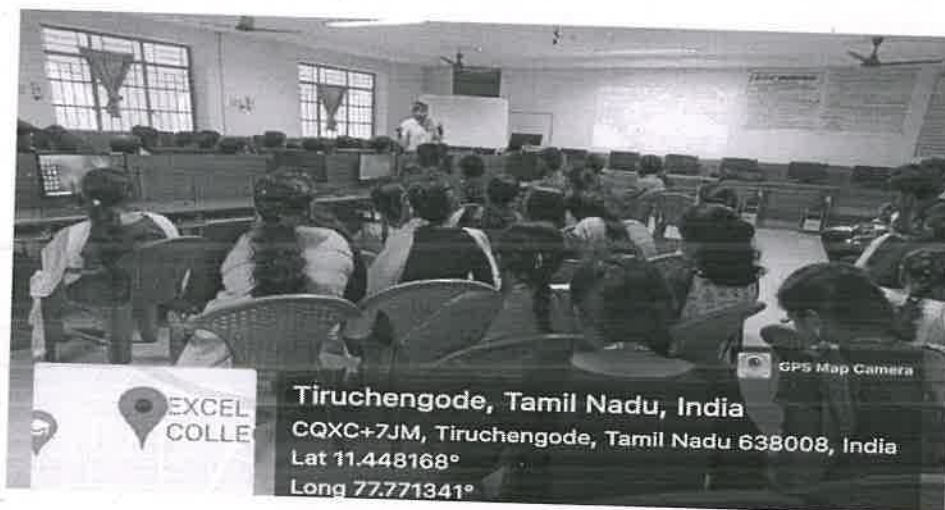
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DEPARTMENT OF BIOMEDICAL ENGINEERING


Robotics in Healthcare

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Coordinator




HOD



EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

KOMARAPALAYAM - 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Robotics in Healthcare

This is to certify that Mr/Ms., ASWIN .G of Second year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on "ROBOTICS IN HEALTHCARE" held on 07/04/2022 to 11/04/2022.

CO-ORDINATOR

HOD/BME





EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

KOMARAPALAYAM - 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Robotics in Healthcare

This is to certify that Mr/Ms. JAYA N of Second year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on "ROBOTICS IN HEALTHCARE" held on 07/04/2022 to 11/04/2022.

CO-ORDINATOR

HOD/BME





EXCEL ENGINEERING COLLEGE (AUTONOMOUS)

KOMARAPALAYAM - 637303

DEPARTMENT OF BIOMEDICAL ENGINEERING

CERTIFICATE OF COMPLETION

Robotics in Healthcare

This is to certify that Mr/Ms., DINESH.G of Second year Biomedical Engineering, Excel Engineering College has successfully completed Value Added Course on "ROBOTICS IN HEALTHCARE" held on 07/04/2022 to 11/04/2022.

CO-ORDINATOR

HOD/BME

