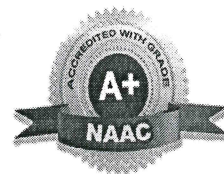




# St. JOSEPH'S COLLEGE OF ENGINEERING

St. Joseph's Group of Institutions  
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## INTERNAL ACADEMIC & ADMINISTRATIVE AUDIT ACADEMIC YEAR: 2022-2023

### A. ACADEMIC AUDIT

1. Name of the Department : BIOTECHNOLOGY
2. Year of establishment : 2002
3. Examination System : Semester
4. Information about research grants, projects completed and ongoing from funding agencies (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.)

S. No.	Name of the Investigator	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakhs)	Remarks (if any)
1.	Dr. S. Justin Packia Jacob	Polyherbal Infused Chitosan Films for Seed Storage.	Tamil Nadu State Forest Department 2 years 04.03.2022	3	Ongoing
2.	Dr.M. Chamundeeswari	CarbonQuantum Dots From Microalgae For Organic Dyes Degradation In Industrial Waste Water - A Novel Approach	Department of Science and Technology, Government of India, 2 years, 16.10.2019	28.75	Ongoing
3.	Dr.G.Sreekumar Dr. C. Karthik	Modernization of Analytical techniques in Biotechnology Laboratory	AICTE – Modernization and Removal of Obsolescence, GoI, 2 Years, 4.12.2019	12	Completed

S. No.	Name of the Investigator	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakhs)	Remarks (if any)
4.	Dr. C. Karthik	Green synthesized rGO-Silver nanoparticle coated protective mask for COVID-19	TNSCST, 11.03.2022	0.075	Completed
5.	Dr. G. Baskar	Saffron cultivation using assorted modern techniques	MSME 2021-2022	8.75	Ongoing
6.	Ms.K.R.Preethy	Synthesis of reduced graphene oxide using modified Hummer's method for cancer treatment	TNSCST 2022-2023 03.03.2023	0.075	Completed
7.	Ms.D.G.Caroline	Nanopolyglusams A multifunctional nanomaterial from Tamilnadu coastal waste	TNSCST 2022-2023 03.03.2023	0.075	Completed

## 5. Details of Publications :

S. No.	Papers published in peer reviewed journals	SCOPUS, Web of Science Indexing Papers	Total Citations	Impact factor range / Average Impact factor
1.	28	27	49	2.58-11.8/6.42

## 6. Details of patents filed &amp; granted and revenue income generated:

S. No.	No. of Patent filed	No. of Patent Published	No. of Patent Granted	Revenue generated if any
1.	3	3	-	-

7. Details of teachers invited as resource persons for Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.

S. No.	Name of the faculty	Refresher courses/Orientation courses/Seminars/Workshops/ Conferences
1.	Dr. G. Baskar	Sustainable Energy and Environmental Challenges (VII SEEC) conducted by IIT (BHU) Varanasi from 16/12/2022 to 18/12/2022
2.	Dr. G. Baskar	International Conference on Biotechnology, Sustainable Bioresources and Bioeconomy (BSBB-2022) conducted by IIT Guwahati from 07/12/2022 to 11/12/2022
3.	Dr. G. Baskar	International Conference on Biotechnology for Sustainable Agriculture, Environment and Health (BSAEH-2021) conducted by Malaviya National Institute of Technology, Jaipur from 04/04/2021 to 08/04/2021
<b>Total No. of Faculty invited</b>		<b>1</b>

8. Details of teachers participated in Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.(participant, presented paper, chaired the session)

S. No.	Name of the faculty	Participation in Refresher Courses/Orientation courses/Seminars/Workshops/Conferences
1.	Dr. G. Sreekumar	FDP, Online course & Webinar
2.	Dr. S. Justin Packia Jacob	FDP, Conference & Webinar
3.	Dr. G. Baskar	FDP, Webinar, Conference
4.	Dr. L. F. A. Anand Raj	FDP, Conference & Webinar
5.	Dr. M. Chamundeeswari	FDP, Workshop, Webinar & Conference
6.	Dr. C. Karthik	FDP, Conference & Webinar, NPTEL online course
7.	Ms. S. Yuwvaranni	FDP, Workshop, Webinar, Conference
8.	Ms. K. R. Preethy	FDP, Workshop, Webinar, Conference, NPTEL online course
9.	Ms. B. Sangeetha	FDP, Webinar, Conference
10.	Ms. D. G. Caroline	FDP, Conference & Webinar, NPTEL online course
11.	Dr.L.Antony Catherine Flora	FDP, Webinar & Workshop
12.	Ms. R. Umamageshwari	FDP, Webinar & Workshop
<b>Total No. of Faculty Attended</b>		<b>12</b>

9. Details of teachers appointed/nominated on Editorial Boards/Reviewers/BoS at university, state, national and international levels.

S.No.	Name of Faculty	Details
1.	Dr.G.Sreekumar	Board of Studies member, Syllabus sub committee member, AU, Chennai. Question paper setting, Adhiyaman College of Engineering, Hosur
2.	Dr. S. Justin Packia Jacob	Syllabi Sub Committee Member, AU, Chennai. Reviewer of journals, Chairman Technology Board, AU, Chennai. Doctoral committee member, Tamil Nadu Open University, Vels Institute of Science Technology and Advanced studies Expert committee member at Institutional Biosafety committee ( Ms. Luminol Biopharma Pvt. Ltd, Chennai)
3.	Dr. G. Baskar	Associate Editor (Frontiers in Nanotechnology), Reviewer of journals Doctoral committee member and Viva examiner, Anna University and SRM University, Chennai Question paper setting, Anna University, Chennai, GCT Coimbatore, Annamalai University, Chidambaram, BRSI chapter; ISTE chapter
4.	Dr. L.F.A. Anandraj	Question paper setting, Anna University, Chennai Reviewer of journals
5.	Dr. M. Chamundeeswari	Syllabi Sub Committee Member, AU, Chennai. Question paper setting, GCT Coimbatore, Reviewer of journals Doctoral committee member, Vels Institute of Science Technology and Advanced studies, Expert committee Reviewer of Elsevier and springer Journals DST sponsored collaborative project, M/s. Shibin exports, Chennai
6.	Dr. C. Karthik	Question paper setting, GCT Coimbatore Reviewer of journals, Doctoral committee member (Bharath university)
7.	Ms. D G Caroline	Reviewer of journals
8.	Dr. L. Antony Catherine Flora	Reviewer of journals



## 10. Awards / Prizes and recognitions received by teachers at university, state, national and international level:

S.No.	Name of Faculty	Details
1.	Dr. G. Baskar	1. Associate editor of Frontier publications Switzerland 2. Reviewer of Systems Microbiology and biomanufacturing journal 3. Peer review certificate in Preparative Biochemistry and Biotechnology 4. Selected as the Top 2% Scientists in the world – 2022 by The Stanford university, USA and Elsevier BV 5. Post Doctoral Research in AI & ML Techniques in Bioprocess Optimization in Noroff University College, Norway
2.	Dr. M. Chamundeeswari	1. Third Prize in Oral presentation in Recent Innovations in Biotechnology, AVIT, Paiyanoor 2. Second prize in Oral presentation in Recent Innovations in Biotechnology, AVIT, Paiyanoor 3. Certificate of Review in Agronomy Research 4. 1st prize of cash award Rs. 3Lakhs in a Hackathon entitled as "Envirosolvers" on 31/05/2023 organised by "The Tamilnadu Pollution Control Board, Guindy, Chennai.
3.	Dr. C. Karthik	1. Certificate of Excellence in Reviewing in Microbiology Research Journal International 2. Certificate of excellence in reviewing from the Asian Journal of Research in botany 3. Certificate of excellence in reviewing from the Asian Journal of Research in biochemistry 4. Certificate of excellence in reviewing from the International journal of biochemistry research and review
4.	Ms.S.Yuwvaranni, Ms. B. Sangeetha and Dr. M. Chamundeeswari	1. Best paper award in Recent Innovations in Biotechnology, AVIT, Paiyanoor
5.	Ms. K.R. Preethy	1. Second prize in Oral presentation in Recent Innovations in Biotechnology, AVIT, Paiyanoor

## 6. Awards and Prizes received by students at university, state, national and international level:

S. No.	Name of the student	Name of the award/Medal	National / International
1.	Darwin Shyam	3 <sup>rd</sup> prize in Poster Presentation	National
2.	Leroy k	1 <sup>st</sup> prize in Poster Presentation	National
3.	Adeline Juanita C	3 <sup>rd</sup> prize in Poster Presentation	National
4.	Binil G Savio	1 <sup>st</sup> prize in Poster Presentation	National
5.	Deno Petrecia P	3 <sup>rd</sup> prize in Poster Presentation	National
6.	Hariharan	3 <sup>rd</sup> prize in Poster Presentation	National
7.	Nathiya S	2 <sup>nd</sup> in Paper Presentation	National
8.	Catherin Jeni J	2 <sup>nd</sup> in Paper Presentation	National
9.	Nivedha V	2 <sup>nd</sup> in Paper Presentation	National
10.	Madhu Varsha S A	2 <sup>nd</sup> in Paper Presentation	National
11.	Ammu Chandhini A	3 <sup>rd</sup> prize in Poster Presentation	National
12.	Adelin Juanita C	2 <sup>nd</sup> in Paper Presentation	National
13.	Aishwarya K	3 <sup>rd</sup> prize in Paper Presentation	National
14.	Deno petrrecia P	2 <sup>nd</sup> in Paper Presentation	National
15.	Adeline Juanita	2 <sup>nd</sup> in Paper Presentation	National
16.	Sharmila S	3 <sup>rd</sup> prize in Paper Presentation	National
17.	Sivaranjani G	3 <sup>rd</sup> prize in Paper Presentation	National
18.	Aishwarya K	3 <sup>rd</sup> prize in Paper Presentation	National
19.	Divya Praba S L	3 <sup>rd</sup> prize in Paper Presentation	National
20.	Hemavarshini K	3 <sup>rd</sup> prize in Paper Presentation	National

7. Details of Seminars/ Conferences/Workshops/FDP organized at state, national and international level and the source of funding with details:

Name of Seminar	Funding agency	No. of Participants	University/ State /National/ International	Dates
Biochemical conversion of biomass into a value added product	BRSI and ISTE	120	State	10.09.2022

8. Number of faculty who were awarded Ph.D and details: 01

Name : Dr. L. Antony Catherine Flora

PhD Title : Extraction Of Cellulose And Hemicellulose From Agro-Waste Residues And Evaluating Their Reinforcement Effect As Nanoparticles In Starch Films For Food Packaging Applications

Curricular Aspects:

- a) Does the department offer program with sufficient no. of electives options : YES
- b) While framing curriculum, is feed-back taken from stakeholder's viz. Students/Alumni/Parents/Employers considered? : YES
- c) Do you offer Bridge/Remedial courses/Value added courses : YES

**Remedial classes:**

**ODD SEM**

S. No	Class	Subject	No of hrs Remedial Lecture	No of days	No of Student present
1.	II Year (III Semester)	MA1301 Transforms and Partial Differential Equations	7	5	2
2.		BT 1301 Process Calculations	6	5	0
3.		BT 1302 Basic Industrial Biotechnology	5	5	0
4.		BT 1303 Microbiology	5	5	1
5.		BT 1304 Biochemistry – I	5	5	0
6.		BT 1305 Molecular Biology	5	5	1
7.	III Year (V Semester)	BT8501 - Mass Transfer Operation	6	5	2
8.		BT8502- Analytical Methods & Instrumentation	5	5	1
9.		BT8503 - Protein Engineering	5	5	2
10.		BT8591 - Bioprocess Engineering	5	5	1
11.		BT8003 - Principles of Food Processing	5	5	1
12.		OAI551 – Environment & Agriculture	5	5	1
	IV Year (VII Semester)	GE 8077 Total Quality Management	5	5	1
		BT 8018 Plant Biotechnology	5	5	1
14.		BT8751 Downstream Processing	5	5	1
15.		BT8791 Immunology	5	5	1
16.		BT8023 Tissue Engineering	5	5	1



**EVEN SEM**

S. No	Class	Subject	No of hrs Remedial Lecture	No of days	No of Student present
1.	II Year (IV Semester)	MA 1452 Applied Probability and Statistics	7	5	8
2.		BT 1401 Biochemistry – II	5	5	4
3.		BT 1402 Enzyme Engineering	5	5	4
4.		BT 1403 Fluid Mechanics and Heat transfer Operations	6	5	4
5.		BT 1404 Bioprocess Principles	5	5	3
6.		BT 1405 Applied Thermodynamics for Biotechnologists	6	5	4
7.	III Year (VI Semester)	BT8651 – Bioinformatics	5	5	2
8.		BT8601 - Genetic Engineering	5	5	1
9.		BT8691 - Applied Chemical Reaction Engineering	6	5	3
10.		BT8005 - Animal Biotechnology	5	5	4
11.		BT8009 - Biopharmaceutical Technology	5	5	4
12.		BT8014 - Lifestyle Diseases	5	5	2

**Value added Courses:**

S. No.	Title	Agency/ Resource Person	Date & Duration	No of Students
1	Animal handling and drug admiration	Expert team from C L Baid Metha College of Pharmacy	16.06.2022	9
2	Advancement in Drug designing	Makeintern & Ecell IIT KGP/ Dr. Suriya Pratap Singh	18.01.2022 to 23.01.2022	58

9. What is the method for conducting internal evaluation?

Internal Assessment	Syllabus	Part-A	Part-B	Part-C	Total
Model Exam-I (08.00 am to 11.00 am)	Unit-I & Unit-II	10 X 2 = 20 marks	13 x 5 = 65 marks	1 x 15 = 15 marks	100 marks
Model Exam –II (08.00 am to 11.00 am)	Unit-III & Unit-IV				
Model Exam -III (08.00 am to 11.00 am)	All Five Units				

10. Teacher Performance:

a) **Whether the performance of the teacher assessed by the students? If yes, are the feedback reports analysed and suggestions communicated to teachers?**

Yes, feedback reports were analyzed and suggestions communicated to respective teachers



**b) Whether suggestion boxes are kept in the department to get suggestions from students on infrastructural facilities available in the department?**

Yes, Available

**c) Do teachers submit Self-Appraisal Reports? Are these reports appraised by HOD and forwarded to the Principal with comments?**

Yes, the duly filled Self-Appraisal forms were collected and forwarded to principal with comments

11. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

S.No.	Guest Lectures	Industrial Visit	FDP	Workshop
1.	Alumni Connect 2022 on 3.9.22. Ms.Nivetha AR, Product Executive and Mr.Kumar N, Alumni of 2017-2021 Batch Addressed Biotech students regarding the opportunities of PG course in UK and Interview tips for placement in Life Cell International	V Semester -Modern (madras) bakers, on 18 <sup>th</sup> of August,2022	-	-
2.	Alumni Connect 2022 on 10.9.22. Mr Sem Abit, Program Coordinator, Pulsus Health Tech, Alumni of 2017-2021 Batch addressed Biotech students regarding the importance of on campus placement and advised on how to crack interview Pulsus Healthtech	III Semester students Modern (madras) bakers, on 26 <sup>th</sup> of August,2022	-	-
3.	Alumni Connect 2022 on 21.9.22. 6 Alumnis of 2017-2021 Batch Addressed III and IV year Biotech students regarding the opportunities of PG course in UK. US, Canada and Australia Universities.	VII Semester students - Modern (madras) bakers, on 19 <sup>th</sup> of September, 2022	-	-

**B. ADMINISTRATIVE AUDIT**

12. Department-wise Student Teacher Ratio : 15.83:1

13. Number of teaching posts sanctioned, filled and vacant:

Number of Teachers	Sanctioned	Filled
12	12	12

14. Faculty profile with name, qualification, designation, experience, nature of appointment(confirmed/ probation/temporary):

S. No.	Name of the Full Time Faculty	Designation	Qualification	Total years of Experience (Years)
1.	Dr. G. Sreekumar	Professor	Ph.D.,	28 years
2.	Dr. S. Justin Packia Jacob	Associate Professor	Ph.D.,	19 years
3.	Dr. G. Baskar	Professor	Ph.D.,	21 years 2 months
4.	Dr. L.F.A Anandraj	Associate Professor	Ph.D.,	18 years
5.	Dr. M. Chamundeeswari	Associate Professor	Ph.D.,	19 years 6 months
6.	Dr. C. Karthik	Associate Professor	Ph.D.,	15 years
7.	Ms. S. Yuwvaranni	Assistant Professor	M.Tech.,	10 years 11 months
8.	Ms. K. R. Preethy	Assistant Professor	M.Tech.,	9 years
9.	Ms. B. Sangeetha	Assistant Professor	M.Tech.,	7 years
10.	Ms. D. G. Caroline	Assistant Professor	M.Tech.,	7 years
11.	Dr. L. Antony Catherine Flora	Assistant Professor	Ph.D.,	5 years 8 months
12.	Ms. R. Umamageshwari	Assistant Professor	M.Tech.,	11 months

15. Number of academic support staff (technical) and administrative staff sanctioned, filled and vacant:

S. No.	Posts	Sanctioned posts	Filled	Actual
1	Laboratory Assistant	3	3	3
2	Attender	2	2	2

16. No. of Students graduated UG & PG (Latest Year of Graduation):

UG/PG	Batch	Appeared	Passed	Pass %
UG	2019-2023	58	57	98.27
PG	2021-2023	9	7	77.77

17. Year-wise results of students at UG&PG:

UG/PG	Batch	Year of Study	Appeared	Passed	Pass %
UG	2021-2025	II (upto 3 <sup>rd</sup> Sem)	58	48	82.75%
UG	2020- 2024	III (upto 5 <sup>th</sup> Sem)	61	57	93.44
UG	2019 – 2023	IV (upto 7 <sup>th</sup> sem)	58	57	98.27
Overall Pass percentage			177	162	91.5

18. Student progression/ placement record: Number/ percentage of students proceeded for higher studies Number/percentage of students placed (*Latest year of Graduation*)

Academic year	No. of students placed	Student progression to higher studies
2019 – 2023	29	19

19. Present details of departmental infrastructural & other facilities:(in nos)

a) Central Library Books and Journals, etc, relevant to Department:

<b>Books</b>	<b>Titles: 13</b>
	<b>Vol: 32</b>
<b>Journals</b>	<b>National Print:07</b>
	<b>E Journals/Int.: 82</b>

b) Online (books, journals etc.) Subscribed

<b>National (Print)</b>	09
<b>E-Journals/International</b>	82

- c) Computers and Internet facilities for staff : Yes, Available  
 d) Total number of class rooms : 04  
 e) Class rooms with ICT facility : 01  
 f) Students' laboratory : Yes, Available  
 g) Research laboratories : Yes, Available  
 j) Any other facility LCDs : Yes,

20. Number of students cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give Category wise data.

Year	TNPSC/UPSC	GATE	Other Exams	Total
2019-2023	-	1	9 (IELTS)	10

21. Diversity of Faculty (based on M.E/M.Tech/M.S degree):


Total Number of Teaching Faculty:

Teaching faculty	Nos.	Percentage
From the affiliating university	6	50
From other universities within the State	6	50
From other States	-	-
From outside the country	-	-

#### Declaration by the Head of the Department

I am aware that the above information provided by the department will be validated by the AAA committee during the visit.

Auditor 1

  
 (Dr J. TRIVAZHAKAN)  
 HOD/mech

Auditor 2

  
 (G. Lakshmi)



Head of the Department  
 (Signature with seal)

Dr.G.SREEKUMAR M.Sc., M.Tech., Ph D  
 Professor & Head of the Department  
 Department of Biotechnology,  
 St.Joseph's College of Engineering  
 OMR Road, Chennai - 600 119. India