Evaluative Report

Department of Computer Science

1. Name of the Department & its year of establishment:

Department of Computer Science was established in the year 2012.

2. Names of Programmes / Courses offered: (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

The program currently offered is Bachelor of Science (B. Sc.) in

Computer Science

3. Annual/ semester/choice based credit system:

The department follows semester based credit system.

4. Participation of the department in the courses offered by other Departments

Sl no	Name	Departments involved
1.	Languages	Hindi/Malayalam
2.	Maths	Maths
3.	Electronics	Electronics
4.	English	English

NAME OF THE SUBJECT COURSES OFFERED BY

Semester1	• MTS1C01 Mathematics I • ELE1C01 Electronics Devices • Hindi: Prose and one act plays • Malayalam: 'Malayala Bhashayum Sahithyavum I' • English: Litmosphere • English: Functional Grammar and communication in English
Semester2	• MTS2C02 Mathematics II • ELE2C02 Electronic Circuits • ELE2B04 Electronic Devices and Circuit Lab • Hindi: Poetry and Short stories • Malayalam: 'Malayala Bhashayum Sahithyavum II' • English: Readings on Kerala • English: Readings from the Fringes
Semester3	• MTS3C03 Mathematics III • ELE3C03 Digital electronics
Semester4	• MTS4C04 Mathematics IV • ELE4C04 Communication Electronics • ELE4B07 Digital and Communication Lab
Semester5	• E-Commerce
Complementary Paper offered to other Department	
Semester1	• CSC1C01 Computer Fundamentals
Semester2	• CSC2C02 Fundamentals of system software, Networks and DBMS
Semester3	• CSC3C03 Problem solving using C
Semester4	• CSC4C04 Data structure using C • CSC4C05 C and Data structure (Programming lab)
Semester5	• Introduction to computers and office automation • Computer application in business
Semester6	• Office automation tools

5. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Numbers of teaching posts sanctioned and filled are as follows:

Post	Sanctioned	Filled
Assistant Professors	3	3
Computer Programmer	2	2

6. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	No of years of experience	Mode
ANIT SEBI	MSc, MPhil	Assistant Professor	5.5	Temporary
SHALIBA M	MCA	Assistant Professor	4.5	Temporary
SHILPA S	MSc	Assistant Professor	2	Temporary
SANGEETHA VASUDEVAN	MCA	Computer Programmer	15	Permanent
TINTOMON P A	MSc, MPhil	Computer Programmer	7	Temporary

Faculty Details of last 5 year

YEAR	NAME

2018-19	• MINU AUGUSTIN • GREESHMA N • VRINDHA
2019-20	• GREESHMA • ARUNDAS • ALBI RAJU
2020-21	• PRIYANKA • ARUNA • ALBI RAJU
2021-22	• PRIYANKA • ARUNA • KISHORE
2022-23	• ANIT SEBI • SHALIBA M • SHILPA S

7. Programme-wise Student Teacher Ratio – 8:1

8. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. – NIL

9. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received – NIL

10. Publications:

Number of papers published in peer reviewed journals (National/International) – 9

Monographs – NIL

Chapter(s) in Books –4

PAPER PUBLICATION DETAILS
Anit Sebi

SL. NO	PAPER TITLE	PUBLICATION
1	An ACO based approach using MANET	International Journal of Modern Trends in Engineering and Science 2017
2	Vehicle act a node and saving the lifetime of power using Ad Hoc network based on ACO approach	The International Journal of Analytical and Experimental Modal analysis 2022
3	Routing Techniques for Channel Allocation of Mobile Ad Hoc Networks	The International Journal of Analytical and Experimental Modal analysis 2023
4	An Ad Hoc Routing Algorithm Based on Hybrid Particle Swarm Optimization and Genetic Algorithm	GIS Science Journal 2023
5	Effective Resource Allocation Achieved by MGPSO for cost Optimization in cloud computing	The International Journal of Analytical and Experimental Modal analysis 2023
6	An Ad Hoc routing algorithm used to Ambulance Track based on HPSO and GA	GIS Science Journal 2023
Shaliba M		
1	Vehicle act a node and saving the lifetime of power using Ad Hoc network based on ACO approach	The International Journal of Analytical and Experimental Modal analysis 2022
2	Effective Resource Allocation Achieved by MGPSO for cost Optimization in cloud computing	The International Journal of Analytical and Experimental Modal analysis 2023
Shilpa S		
1	An Ad Hoc routing algorithm used to Ambulance Track based on HPSO and GA	GIS Science Journal 2023

BOOK CHAPTER DETAILS

Sl no	**Author Name**	**Book name**	**Chapter name**
1	Anit Sebi	GENERATIVE AI AND FUTURE OF EDUCATION IN A NUT SHELL ISBN: 978-93-6039-019-8	GENERATIVE AI AND FUTURE OF EDUCATION: TRANSFORMING, LEARNING IN THE DIGITAL AGE
		SAFEGUARDING DATA IN THE DIGITAL AGE : UNVEILING THE NEXT WAVE OF SECURITY THREADS	EMERGING TRENDS IN INFORMATION TECHNOLOGY

		ISBN: 978-81-965283-7-9	
2	Shaliba M	GENERATIVE AI AND FUTURE OF EDUCATION IN A NUT SHELL ISBN: 978-93-6039-019-8	INTELLIGENT TUTORING SYSTEM AI
3	Shilpa S	GENERATIVE AI AND FUTURE OF EDUCATION IN A NUT SHELL ISBN: 978-93-6039-019-8	AUGMENTED REALITY AND AI IN EDUCATION

11. Faculty recharging strategies

- The faculty is encouraged to attend FDPs/ STTPs / Seminars / Workshops/ Conferences on upcoming trends and areas.
- The faculty is encouraged to publish research papers in peer reviewed, indexed journals and conferences.

12. Student projects

- **Percentage of students who have done in-house projects including social activities-** 35% (in the last five years)
- **Percentage of students doing projects in collaboration with industries / institutes** - 65% (in the last five years)

13. Student profile course-wise:

YEAR	NO OF STUDENTS ADMITTED	MALE	FEMALE	MALE FEMALE RATIO	PASS PERCENTAGE
2016-19	24	12	12	1:1	67
2017-20	33	22	11	2:1	61
2018-21	31	12	19	12:19	94
2019-22	32	17	16	17:16	75
2020-23	43	19	24	19:24	63

Academic Toppers

YEAR	REGISTER NO. AND NAME
2018-19	● URAQSCS024 - VIBITHA V ● URAQSCS003- ASWANI PRABHA M ● URAQSCS016 - ADHITHYA D
2019-20	● URARSCS007 - NAMITHA JENU ● URARSCS014 - SHAHANA H ● URARSCS012 - ROHINI M
2020-21	● URASSCS006 - DIVYA M ● URASSCS029- RAJEEV B ● URASSCS024 - FASIL K M
2021-22	● URATSCS004 - JISILA S ● URATSCS005 - NYSLY VIJI ● URATSCS015 - AYANA V
2022-23	● URAUSCS029 – NITHYA S ● URAUSCS022 – AMAYA MURALI ● URAUSCS007 – HIBA HINDIYA

14. Student progression (avg. of last 4 years)

Student progression Percentage against enrolled

- UG to PG - 40
- PG to M.Phil - NA
- Campus selection - 60
- Other than campus recruitment - Data not available
- Entrepreneurs -Data not available

15. Diversity of staff

Percentage of faculty who are graduates
Of the same parent university 5

16. Present details about infrastructural facilities

a) Library – Common library has 100 above books.

b) Internet facilities for staff and students – 20 Desktops and 4 Laptops are connected with 20Mbps.

c) Total number of class rooms – There are 3 classrooms allotted to the department.

17. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

- The faculty members as part of BOS and Academic Council provide the feedback in meetings as well as on e-mails.
- The department uses this feedback to change the courses and their curriculum.
- The institute has become autonomous recently, i.e. from the academic year 2016-17.
- The department has planned to collect faculty feedback on curriculum as well as teaching-learning-evaluation.

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

- At the end of every semester, students give feedback of faculty members for their courses. This feedback is analysed.
- The Director and Head of Department discuss the feedback with each faculty member. Through this discussion, the strengths and areas of improvement are conveyed to each faculty member.
- The Head of Department reviews areas of improvements and suggestions are given to the faculty members. Every faculty member has copy of his/ her feedback. The students give the feedback on curriculum and it is used to make modifications is required.

c. Alumni and employers on the programme and what is the response of the department to the same?

- The alumnae are members of Internal Quality Assurance Cell (IQAC), BOS, etc. In these meetings they share feedback on program. The college also collects informal feedback from alumnae at annual alumnae meet. These feedbacks are shared by the Department Head in the meetings with the Director and help in the development of department.

18. List the distinguished alumni of the department (maximum 10)

Following is list the distinguished alumnae of the department

Sl no	Name	Designation	Company name
1.	ASWIN S ESWAR	SOFTWARE ENGINEER	EDGAR E-FILE SOLUTIONS PVT LTD
2.	MOHAMMED ALTHAF	SYSTEMS ENGINEER	TATA CONSULTANCY SERVICES
3.	PAUL MATHEW	SPECIAL EDUCATION TEACHER	KIZHAKKENCHERRY GRAMA PANCHAYAT
4.	FASIL K M	ASSOCIATE SYSTEM ENGINEER	IBM
5.	NYSLY VIJI	SOFTWARE ENGINEER	TATA CONSULTANCY SERVICES
6.	KISHORE N	SOFTWARE DEVELOPER	NIYUKTA INFOTECH
7.	SABARINATH	FLUTTER DEVELOPER	FLYCATCH INFOTECHPVT LTD
8.	AMAYA MURALI	SOFTWARE ENGINEER	MIDNAY WEBWARE SOLUTIONS

19. List the teaching methods adopted by the faculty for different programme.

The department offers B. Sc. (UG) program in Computer Science. To make teaching learning process effective and interesting the faculty members in the department follow many methods. These are listed below.

1. The faculty members prepare presentations, list of reading material, web links as well as multimedia content if required.
2. The faculty members use methods like quizzes, tutorials, open book tests, group interactions, video content, etc. to improve understanding of the subjects.
3. The laboratory work plays significant role in development of an engineer. The faculty members use ICT, group and individual discussions for laboratory assignment.
4. The faculty members use various concepts such as zeroth assignment, programming workshops, use of debugging tools as some of the methods to develop programming skills.

20. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

The department has programme objectives as - prepare students for professional competence, to develop students' fundamental knowledge, to enrich students with engineering skills as well as to prepare students capable of self-learning.
The programme objectives are constantly met through
1. Revision of structure, theory subjects and their syllabi is monitored to make them consistent with programme objectives.
2. Laboratory assignments are revised regularly.
The department applies knowledge dimension of revised Bloom's
Taxonomy.
3. Tools and equipment for the laboratory courses revised or newly procured.
4. Faculty members are updated through FDPs, seminars and TEQIP programme.
5. The subject groups for theory courses and laboratory coursed are formed.
The learning outcomes are monitored via process of evaluation.
1. The faculty members are made aware of the development of evaluation strategies.
2. The evaluation strategy is used in continuous evaluation, in semester as well as end semester examinations.
3. The strategies are defined as per the general quality guidelines and requirements of the college.

21. Highlight the participation of students and faculty in extension activities.

The department faculty and students participate in various activities such as campus cleaning, educating school children, plastic waste and waste management organization programs, blood donation, health check-up programs, tree plantation under NSS.

22. Give details of "beyond syllabus scholarly activities" of the department.

- To develop research and professional attitude among students the department encourages and facilitates the students to participate in various co-curricular activities. The following is the list of activities:
- The students are made aware about IPR, Patents.
- The students are guided to write papers on projects and participate in project competitions.
- The students are motivated to attend various Workshops, Seminars and
- Professional body activities.
- The department organizes guest lectures, industrial tours to enhance the professional exposure of students.
- The students in our department are members of several clubs such as NSS, IEDC, ED, Standard club, Women Cell, Tourism Club, YIP etc.

23. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

1. Sincere and focused students.
2. Dedicated faculty members and good retention ratio.
3. Good placements from renowned companies.
4. Well equipped, well maintained laboratories with appropriate tools and resources for enhancing engineering skills.
5. The department has good culture, conducive for growth, good team work and decentralized processes.

Weaknesses:

1. Currently less number of faculty members with Ph.D. completed.
2. The contribution of faculty in research, funding and quality publications is less.
3. Currently, the collaboration with industry and universities from India and abroad is limited.
4. Consultancy activity is insignificant.

Opportunities:

1. To start post-graduation programmes.
2. Opportunity for enhancing the collaboration with industry and academia for projects, internships and research.
3. To provide recruitment training programmes in collaboration with different companies.
4. To collaborate with another colleges by signing MoU.

Challenges:

1. The department needs to maintain the pace with ever changing computer field.
2. Improving consultancy.
3. Bringing significant research funding from external national and international agencies.
4. A common challenge to engineering is our challenge too!

Considering changes like less attention span of students and increasing availability of alternate resources to students, department foresees a challenge.

24. Future plans of the department.

- To start post graduate programme.
- To increase collaborations with industry and universities from abroad.
- To increase the number of quality publications.
- To introduce active learning and to prepare faculty for the same.
- To create and use digital content.
- To encourage student internships.
- To develop faculty in leadership roles, technology and mentoring for research.
- To develop curriculum reflecting strong foundation, current trends and industry needs, problem solving skills and learning outcomes.