INSTITUTIONAL DEVELOPMENT PLAN

2023-24 to 2028-29

N S S College, Rajakumari
Kulapparachal P O
Idukki Dt. 685 619
E-mail: nssrajakumari@yahoo.com
Website: www.nsscrky.ac.in

CONTENTS

1. Introduction

N S S College, Rajakumari was established in the year 1995 under the efficient management of The Nair Service Society, Changanassery, one of the largest educational agencies in Kerala state. The college is Government aided college and is affiliated to Mahatma Gandhi University, Kottayam. The college is located in the high ranges of Rajakumari village of Udumbanchola Taluk, Idukki district. The campus spreads around 19 Acres of land donated and purchased by Nair Service Society from various good hearted local people. The college started as a degree college which offers job-oriented 3 year/ 6 semester degree programmes. During the year 2003, a new course on Commerce (Model II) with Computer Application specialization has also been added. In the year 2014, the college was elevated to the status of a Post Graduate College by starting a Course in M. Sc. (Electronics), the first ever aided Post Graduate course in Electronics in the state of Kerala. In the same year another course in Commerce (Model I) with Co-operation as specialization was also started. A research centre under the auspices of PG Department is also started during the year 2022 which is also affiliated to Mahatma Gandhi University. Since its inception on 11th September, 1995, N S S College, Rajakumari has been playing a major role in the upliftment of the socio-economic scenario of this region. The vision of the college is to impart free technical education mostly to financially weaker sections of the society. The courses offered aim to mould young aspirants to excel in the field of electronics, computer hardware/software and business/commerce. The institution has its own view to equip the students to meet the demands of the current global competitions. The effective curricular and co-curricular activities transform the stakeholders of this institution to meet the requirement of industry and real world situations. During the past 28 years of valuable educational service, this institution has created many software and hardware experts, self-employed entrepreneurs, government servants, NGO activists etc... The college has got four departments, viz. Computer Applications, Business Administration, Electronics and Commerce which offers full time 3 year/6 semester new generation courses- BCA, BBA, BSc Electronics, BCom with Computer Applications, BCom with Co-operation and MSc Electronics. The PG Department is elevated as a research department by offering Ph.D in Electronics and Allied Areas in Computer Science under the auspices of Mahatma Gandhi University during the year 2022-23 which is the unique research centre of its kind in an affiliated college in the state.

2. Vision

To uplift the socio-economic backwardness of this area by providing job-oriented education in new generation programmes like Electronics, Computer hardware and Software, Business administration and Commerce and to equip the stakeholders competent and hardworking to survive the challenges in the present competitive world.

Mission

1. To mould the stakeholders of the various programmes to excel in their fields
2. To give opportunity for community and extension activities and hence to create awareness of the real world situations
3. To nurture the inbuilt capability of every student through curricular and non-curricular activities
4. To facilitate the stakeholder expertise in solving practical as well as real world situations through well-equipped laboratories and in-house projects
5. To convert the laboratories into active research centers.

3. Institutional Profile

1. Name of the College: NSS College, Rajakumari
2. District: Idukki
3. Affiliating University: Mahatma Gandhi University, Kottayam
4. Aided/State Government College: Government Aided
5. Rural/Urban: Rural
6. Details of Campus: Permanent Campus
7. Name of the Principal: Dr Suresh Kumar E B
8. AISHE Code: C – 11688
9. Year Of Establishment: 10-03-1995
10. Accreditation Details: Accredited by NAAC at B+ Level with CGPA 2.7 – 1st Cycle(valid till 15-09-2021)
11. Total No. of UG Programmes Offered: 5
12. Total No. of PG Programmes Offered: 1
13. Total No. of Teaching Faculty: 34
14. Total No. of Non-Teaching Faculty: 9(recruited) + 2 (sanctioned by management)
15. Total No. of Students: 638
16. Total Campus Area: 18 Acres
17. Total No. of Labs: 2 Computer Labs and 2 Electronic Labs

4. SWOC Analysis

Institutional Strength

- Included in the RUSA 2.0 project under Infrastructure Development for Colleges scheme since 2019. Highly qualified dedicated faculty members. Out of 33 full time members on the faculty, there are 8 PhDs, 5 MTechs, 5 MPhils, 4 doing PhD and 3 research guide. Most of the teachers have been working since the inception of the college.
- Teachers are actively involved in the design of the curriculum through university bodies like board of studies, academic council, expert committee members in the university, board of examiners etc.
- There were ample research publications by the faculty in the peer-reviewed international journals during the last five years.
- Teachers play active role as reviewer in the international journals
- Skill development courses are conducted in all the departments to add the skill other than syllabus and curriculum.
- College is a centre for Additional Skill Acquisition Programme (ASAP) of Higher Education Department of Government of Kerala. ASAP conducts skill development courses in Commerce, Electronics and Computer Science areas.
- Skill development centre –LeTin- under the auspices of PG Department of Electronics in association with Lutron Technologies, Kochi is established during 2019 to train the students in establishing LED bulb based entrepreneurship.
- MoU with industry and other institutions for skill development and academic exchanges.
- Placement cell organises annual recruitment drive in co-ordination with several companies in and around the state as well as with Additional Skill Development Programme (ASAP) of Higher Education Department of Government of Kerala.
- Frequent Alumni interactions.
- College is part of DIGICOL LMS of Kerala State Higher Education Council of Government of Kerala. Almost 80% of students are enjoying free education.
- The transition rate of the students of all classes is very high and the overall result of the recent years is well above 80 %.
- NCC Army Wing with 105 student strength under 33(K)Bn NCC
- Full-fledged 2 units of 200 members National Service Scheme (NSS) unit. For the past years, on behalf of NSS unit, several extension activities were arranged to support the underprivileged class of the society.

- Gymnasium/fitness centre to keep the fitness standard of campus community.
- Students outshined in various sports and games in the University as well as in the state level.
- Women cell conduct frequent seminars, training programmes and debates in co-ordination with various local bodies.
- Departments are involved extension activities linked with the community service by imparting knowledge and awareness programmes conducted in and off the campus.
- Class level parent-teacher-student in-house meetings are conducted at least twice in a year.

Institutional Weakness

- Students with poor communication skills is the main weakness pointed out by all the faculties.
- Timely allotment of funds from agencies hampers the laboratory facility with equipment and computers. Sufficient supporting staffs are not available in the laboratory.
- Syllabus need to be revised once in three years to meet the technological demand.
- A stadium with modern facilities for sports and games is not available for work outs and training young sports talents.
- As this college is situated in the remoteness of high-ranges of Idukki district, due to lack of funds and resources, conduct of seminars and conferences of national importance is a tedious task.
- Students lack communication skill and were not able to place in the reputed institution even with very high technical knowledge

Institutional Opportunity

- Opportunities for students opting for every programme are diverse.
- Students can select hardware, software and entrepreneurship as their career based on the skills achieved.
- New PG courses may be started.
- Service of the college alumnus can be utilised for placements.
- Post graduation in premier institutes is not a dream but a reality for many of our alumni.
- Research collaboration with industry and premier institutions

Institutional Challenge

- Competition from well—equipped self-financed institutions poses threats to degree programmes of this kind.
- Delay in sanctioning the funds hampered the conduct of seminars, execution of research projects, maintenance of the laboratories etc..
- Outdated syllabi which need to be revised once in every 3 years at par with the industrial requirement.

5. Strategic Objectives (2023-28)

1. To become a hub for a rural based premier institution which focuses on Teaching, Learning, Research and Entrepreneurship by 2028.
2. Enhance excellence in Scholarship, Research, and Social committment.
3. Diversify and provide ample educational and professional training/opportunities for the majority of the first-generation learners from the community.
4. To create a sustainable, world-class, infrastructure that creates an effective learning. environment with equal importance given to discovering, conserving and propagating indigenous knowledge systems, history and traditional practices, especially in the field of agriculture and small-scale industries.
5. To provide support for agricultural needs of this area in terms of technology driven farming, Agri-based software support, Agri-based product marketing.

6. Strategic Goals

1. To provide state-of the-art facilities in Machine Learning, LLMs, IoT, Robotics, Client-Server Solutions, Business Intelligence Solutions, Software driven Marketing models.
2. To be accredited with a score not less than A.
3. Improving the enrollment percentage by 2025.
4. Implementation of OBE in all programmes
5. College LMS on DIGICOL need to be introduced to all the courses taught. Teaching, learning and evaluation to be migrated transformed in to the blended mode.
6. Develop the institution as a centre of excellence in Skill development, research, knowledge creation and dissemination.
7. More incubation centres need to be established to innovate the ecosystem. Provision of seed

money for start-ups and entrepreneurships need to be discovered.

8. Provide research consultancy and infrastructural facility within the campus – promoting industry-academic linkages and activities.
9. Consultancy services to create financial autonomy and fund generation.
10. Create programmes that strive towards honing the research aptitude of learner and create holistic individuals – nurturing leadership qualities through various programmes/activities/finishing schools.
11. Augmenting the overall campus infrastructure and other facilities with state-of-the-art technology.
12. IDP to be prepared for becoming RUSA 3.0 beneficiery.
13. Strengthening Alumni engagements for placement, training and infrastructure development of the college.
14. Strengthening IQAC and its activities for leading the institution into the future.

7. Adoption of NEP in achieving Strategic Goals

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:

- College offers programmes in Computer Science, Electronics, Business Administration and Commerce which are of Job-oriented status have several courses of interdisciplinary and multidisciplinary structure.
- All the programmes were in the CBCSS pattern and offers elective and open courses that gives flexibility to learners for choosing multidisciplinary and interdisciplinary courses from other departments.
- Several add-on certificates offered by departments conducted by all departments aims to give skill development and capacity enhancement for the learners.
- During the current year a research centre in Electronics and Allied areas in Computer Applications on behalf of PG Department of Electronics and Computer Applications under Mahatma Gandhi University, Kottayam is planned which will deal with interdisciplinary research in Electronics and Computer Science.

2. Academic bank of credits (ABC):

- College will be a part of this endeavour of National Academic Depository of the Government, with the directions from UGC and affiliating university from the academic year 2024-25 onwards.

3. Skill development:

- More skill development centres in addition to Electronics and Computer Applications need to be started.
- Industry based linkage to train the students to equip with the standards.
- Add on courses to give opportunity to learn and graduate in the skill development

4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):

- Cultural and literary courses on behalf of MOOC has to be introduced to students.
- Proposal need to be given to affiliating university to conduct online courses which will complement the IKS.

5. Focus on Outcome based education (OBE):

- .All the 6 programmes being offered as outcomes-based education (OBE) which are designed keeping in mind the regional and global requirements.
- POs, COs are to be mapped and to be available in the Website. The course strength needs to be displayed so that students can opt the required course.
- Comprehensive continuous evaluations should be done through several aspects. Question bank for each course needs to be prepared and made available in the college website.
- Attainment of outcome needs to be informed the students in all semesters. By the academic year 2024-25 with the introduction of FYUGP, OBE will be implemented in its full features.

6. Distance education/online education:

- Enhance the usage of DIGICOL to all teachers.
- Teaching-learning-evaluation need to be carried in the blended mode
- Digital resources like DSpace, NLIST, Digital Library has to be enhanced

8. Proposed Action Plan and Methodology

1. **Implementation of National Higher Education Qualifications Framework (NHEQF)**
   a. Revising and aligning their curriculum to the defined levels and learning outcomes specified in the framework
   b. Facilitating credit transfer and accumulation mechanisms, allowing students to seamlessly transfer credits between institutions and accumulate them towards obtaining higher qualifications.

2. **Open and Distance Learning (ODL) and online programs:**
    a. Engage in the creation of digital course content
    b. Leverage multimedia and interactive elements to facilitate effective online learning experiences for a diverse and geographically dispersed student population.
    c. These programmes would involve activities to enhance student engagement, including discussion forums, virtual classrooms, and interactive assignments, ensuring active participation and collaborative learning experiences among students regardless of their physical location.

3. **Facilitating the introduction and access to the Online ERP portal (Samarth Portal):**

a. This would be done by conducting user training sessions for faculty members to familiarize them with the platform
b. The platform would facilitate the college administration with its features such as the online information dashboard, timetable management, examination allotment schedule, evaluation tools, and other academic activities.

4. **Strengthening of the Internal Quality Assurance Cell (IQAC):**

a. Development and implementation of robust evaluation methodology and processes
b. Ensuring that the IQAC plays a central role in designing and monitoring assessment methods that align with accreditation standards and contribute to continuous improvement in academic and administrative quality.
c. Activities include organizing workshops, training sessions, and capacity-building programs for members of the IQAC, equipping them with the necessary skills and knowledge to effectively evaluate and enhance the quality of academic and administrative processes within the institution in alignment with the National Assessment and Accreditation Council (NAAC).

6. **Infrastructure Development:**

a. With the aid of central funds like RUSA 3.0, construct new academic blocks equipped with modern classrooms, lecture halls, and seminar rooms to accommodate the growing student population.
b. Build state-of-the-art laboratories and research facilities to support cutting-edge research and practical learning experiences.
c. Develop dedicated spaces for administrative offices to streamline institutional operations.
d. Renovate existing classrooms to incorporate modern teaching aids, ergonomic furniture, and

advanced audio-visual equipment.

e. Library need to be relocated and upgraded to a new library block. Enhance the library infrastructure, including digitalization of resources, expansion of study spaces, and improvement of shelving and seating arrangements.
f. Designing and implementing an inclusive campus infrastructure plan that incorporates specially-abled (friendly) features, such as ramps, elevators, and accessible pathways, to facilitate seamless mobility for students with disabilities.
g. Green Building Practices: Implement sustainable construction practices, including the use of eco-friendly materials and energy-efficient systems.
h. Explore the integration of renewable energy sources such as solar panels to reduce the institute's carbon footprint.

7. Maintenance of infrastructure:

a. Regular technical maintenance of smart classrooms, computer labs, and Wi-Fi facilities, ensuring that all equipment, software, and networking infrastructure are functioning optimally.
b. Providing timely technical support to address any issues or challenges faced by students and faculty members while using smart classroom technologies, computer lab resources, or Wi- Fi connectivity.
c. Implementing a routine maintenance schedule for washroom facilities to ensure cleanliness, hygiene, and functionality.

8. Faculty Training & Recognition:

a. Conduct a thorough need-based assessment to identify the specific areas of professional development required by the teaching faculty. FDPs in association with affiliated university and other agencies to be devised.
b. Provide hands-on training on creating digital content, conducting virtual classes, and utilizing educational apps.
c. Conducting training programs for educators to enhance their proficiency in utilizing smart classroom technologies, making the most of computer lab resources, and maximizing the benefits of Wi-Fi facilities.
d. Offering workshops or tutorials on effective use of educational software, interactive whiteboards, computer applications, and ensuring awareness of Wi-Fi security protocols and best practices.

e. Recognize and celebrate the achievements of teachers who have demonstrated commitment to professional development.
f. Encourage continuous professional development and the application of acquired skills in the classroom.
g. Organise Research Methodology Workshops on advanced research methodologies, data analysis, and interpretation to enhance the overall research skills of the academic community.
h. Training to office and supporting staff on office procedures, establishment, fund utilization, PFMS needs to be arranged in every year.

9. Curriculum Designing:

a. Since teachers are actively involved in the design of curriculum, the syllabus needs to be revised in every 3 years.
b. New courses (Add-On / Certificate courses) to be introduced to enhance the skill development of the students.
c. Identify experienced and qualified trainers with expertise in the selected training areas.
d. Consider a mix of internal faculty members and external experts to provide diverse perspectives and insights.

10. ICT – Outcome Based Education:

a. Select a user-friendly and interactive online learning platform that supports various multimedia formats, discussions, and assessments.
b. Provide access to resources, training modules, and a discussion forum for ongoing interaction and collaboration.
c. Develop customized training modules for different subject areas and academic levels, ensuring that the content is relevant to the diverse needs of the teaching faculty.
d. Include practical examples, case studies, and hands-on activities to facilitate effective learning.
e. Focus on innovative pedagogical techniques that promote student engagement, critical thinking, and collaborative learning.
f. Offer modules on effectively integrating technology into teaching practices, including the use of online tools, learning management systems, and multimedia resources.
g. Provide more significance to learning sustainable traditional knowledge systems employed in agriculture, society building, ancient art and craftsmanship, textile industry, tourism and conservation of ecosystem.

h. Emphasise on creating a platform exclusively for the study and evolution of regional and oriental languages and the propagation and study of classical languages like Sanskrit and Tamil.

i. Provide learners an opportunity to study and understand ancient history and the preservation of cultural practices thereby enriching the rich diversity of the locale.

11. Development of STEM (Science, Technology, Engineering, and Mathematics) courses:

a. Designing and developing a comprehensive curriculum for STEM courses that integrates hands-on experiments, real-world applications, and interdisciplinary approaches to foster a holistic understanding of STEM subjects.

b. Ensure alignment with industry needs and emerging technologies.

c. Keeping the curriculum dynamic and relevant to prepare students for the evolving landscape of STEM careers.

d. Establish a feedback mechanism for participants to share their thoughts on the training program and suggest areas for improvement.

e. Conduct evaluations to assess the overall effectiveness of the online training and identify areas for refinement.

12. Development of Incubation Centre:

a. Incubation center on behalf of all the departments to be established in association with industry.

b. Establish industry partnerships to offer real-world insights, practical training, and mentorship programs, thereby enhancing the skill development initiatives and fostering a culture of innovation.

c. Collaborate with industries and MSMEs to design skill-based courses that align with the current needs and trends in the job market, ensuring that the curriculum is industry-relevant and meets the skill requirements identified by the collaborating entities.

d. Incorporating input from industry experts in the development of course content, practical projects, and case studies to bridge the gap between academic learning and industry expectations, enhancing the employability of students undergoing skill-based training.

13. Well-Equipped Research Laboratories:

a. Allocating resources for the construction of research laboratories including IoT, ML, LLM, Robotics, Microwave, Antenna labs with modern cut-in technology.

b. Ensure the facilities meet international standards for safety, functionality, and state-of-the-

art equipment.

c. Invest in advanced research instruments and equipment in electronics, computer sciences and allied areas.

d. Design collaborative workspaces within the laboratories to encourage interdisciplinary research and knowledge exchange.

14. Upgrade Library:

a. Upgrade the existing library infrastructure to accommodate digital resources.

b. Provide high-speed dedicated internet connectivity and necessary hardware for accessing digital content.

c. Develop a centralized digital repository to store and organize academic publications, research papers, and scholarly works produced by the institution's faculty and researchers.

d. Secure subscriptions to a wide array of reputed national and international journals across diverse disciplines.

e. Ensure timely access to the latest research findings and publications.

f. Obtain access to comprehensive academic databases and repositories, enhancing the depth and breadth of available research materials.

15. Promotion of research:

a. Organise Research Methodology Workshops on advanced research methodologies, data analysis, and interpretation to enhance the overall research skills of the academic community.

b. Implement a system for regular audits and evaluations of the research laboratories and digital libraries to ensure they meet evolving research needs.

c. Establish a feedback mechanism to gather input from researchers and users, enabling continuous improvement and adaptation to emerging trends in research.

d. Encourage faculty to engage in industry-linked research projects.

e. Facilitate technology transfer and knowledge exchange between academia and industry.

16. Opportunities for students to do internships:

a. Facilitate industry-relevant internships for students to gain practical experience.

b. Collaborate with companies to offer summer internships and semester-long industry placements.

c. Organize mock interview sessions to prepare students for real-world job interviews. Provide guidance on resume building and cover letter writing.

d. Conduct workshops on soft skills, technical skills, and domain-specific skills.
e. Offer industry-recognized certification courses in collaboration with leading organizations.
f. Integrate training programs on emerging technologies and tools used in the industry.
g. Develop opportunities for students to do internships in ML, Chatbots, IoT, Robotics, CNCs etc.
h. Invite professionals from various industries to deliver guest lectures and share insights. Organize panel discussions with industry experts to bridge the gap between academia and industry.
i. Provide opportunities with government agencies, tech companies, and cyber security firms, CA firms for internship opportunities and practical training.
j. Emphasize project-based learning to give students hands-on experience in solving real-world problems. Encourage collaborative projects with industry partners.

17. Entrepreneurship programs and Placement:

a. Strengthen placement cells to streamline the process of connecting students with relevant industry opportunities.
b. Maintain a database of industry contacts for effective placement. Organize networking events, conferences, and industry conclaves to bring together academia and industry stakeholders.
c. Create platforms for students to interact with industry professionals through job fairs and networking sessions.
d. Introduce courses and support systems for fostering entrepreneurship and innovation. Provide resources for students to develop and launch their own startups.
e. Facilitate industry visits for students to understand real-world operations.

18. Institutional Security Facilities:

a. Install additional CCTVs or security cameras in key areas to enhance campus security.
b. Develop and communicate emergency evacuation plans for all buildings to ensure the safety of occupants during emergency situations.

19. Alumni Connect:

a. Upgrade Alumni Connect portal facilitates for the establishment and maintenance of an extensive network among former students, allowing them to connect with each other, share experiences, and build professional relationships.

20. Conclusion

The proposed Institutional Development Plan (2023–24 to 2028–29) outlines a strategic blueprint for the next five years, emphasizing organic growth through a focus on social inclusivity, diversity, and the integration of state-of-the-art pedagogical and technological advancements. By addressing these priorities, the institution aspires to guide both the academic and local community towards a progressive and sustainable future.

The outlined goals serve as a foundation for establishing a robust epistemic framework that ensures long-term benefits for the community. This plan reinforces the institution's pivotal role in promoting social upliftment and laying a firm groundwork for progress and forward-thinking evolution.

With this IDP as our guide, we reaffirm our commitment to fostering growth, innovation, and inclusivity, ensuring a lasting impact on both the institution and the broader community.