INSTITUTIONAL DEVELOPMENT PLAN (IDP 2022-2032)
FOR HIGHER EDUCATIONAL INSTITUTIONS IN GOA
As part of the implementation of National Education Policy-2020

1.	**Institutional Basic Information**	

1.1. Institutional Profile:

Name of the Institution	Goa University		
Head of the Institution	Prof. H. B. Menon		
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NAAC Accreditation Status	1st Cycle: 22/03/2001	Grade: Four star	2nd Cycle 08/03/2009	Grade: B
	3rd Cycle: 24/09/2014	Grade: A	4th Cycle 27/12/2022	Grade: B++
NIRF Ranking	2020-21: 96	2019-20: 81	2018-19: 93	2017-18: 68
UCG Recognition	2(f)	Yes	12 B	Yes
NBA accreditation			No	
Financial Status	Government		
Under National Education Policy (NEP 2020), would your institute prefer to be:	i. Constituent college of the State University ii. Autonomous degree granting College. iii. Part of Higher-educational institution (HEIs) cluster. NONE OF THE ABOVE IS APPLICABLE. Goa University would like to be a **Multidisciplinary Education and Research University (MERU)**.		

1.2. Institutional SWOC Analysis

Strengths:

Blessed by geography and culture, Goa University's picturesque and biodiverse campus of 400 acres is embedded in a society with deep maritime connections, historic Diaspora, international links and unique cultural identity. The University enjoys strategic partnerships with numerous prestigious international events in Goa.

Goa University is the only University in the State, and along with its 64 Affiliated Colleges, it fulfils its primary mission to provide relevant quality education at the tertiary level. The University has an exceptionally high percentage of women students (69.58%) and a large number of students from rural and marginal areas, most of whom are first-generation learners.

With an h-index of 76, the scientific output of Goa University is one of the highest in the country in per capita terms. The University's 2,084 research publications with 33,493 citations (WoS source) is remarkable achievement for such a small university and all research publications are available on its own institutional repository. Most faculty members have PhDs and over 44% of them are from Institutions outside Goa. A large number of UGC-FRP, DST-INSPIRE Faculty, post-doctoral fellows and Research Associates have also joined Goa University.

Under the choice-based credit system (CBCS), students can opt for 15% credits from outside their discipline. University has successfully implemented NEP-2020 for the general education at post graduate level from academic year 2022-23 and undergraduate from 2023-24 enabling adequate options to students. Amalgamation of erstwhile Departments and establishment of Schools system has boosted interdisciplinary and multidisciplinary academic interactions in line with NEP 2020. Goa University fosters strong International and National partnerships through about 53 MoUs and collaborative publications with more than 145 institutes. Social outreach is achieved through the Visiting Research Professor Programme (VRPP), Swachh Bharat Student Internship (SBSI) and a course on Community Development and Rural Engagement through five villages adopted by the University and 65 by its Affiliated Colleges. A strong linguistic core includes advanced study of Konkani, Hindi, Marathi, English, French and Portuguese and proficiency programmes in Spanish and Japanese.

The University has established a high-end infrastructure in its Materials Characterization Laboratory (MCL) in which sophisticated equipment are available for material characterization researchers in Goa and around. With government support, the University has filled many of the vacant faculty positions and the university is one of the best in India with a faculty to student ratio of 1:9. Goa University is in the process of establishing a Research Park with a Bio-incubator, a Health incubator and an IT incubator. These facilities at the University campus with support of Government will be functional very soon. University has also established Institution's Innovation Council for developing innovation and entrepreneurship ecosystem. Goa University has a state-of-the-art studio in Directorate of Digital Learning & Initiatives that develops e-content to upgrade GER by providing education to rural sectors in line with NEP 2020. Goa University was identified as National Resource Centre for Marine Science under the Ministry of Human Resource Development (MHRD). All the courses and general refresher Courses in Marine Science have been recorded by the Directorate of

Digital Learning and Initiatives (DDLI) and successfully offered on Swayam Platform. Since the commissioning of the solar plant in August 2020, the total units generated is 1803.5 MWh and total amount saved is Rs.87,13,836/- E-governance and automation of examinations has been successfully implemented.

Weaknesses:

The biggest weakness of Goa University is its location in a small state with a population of around 15 lakhs, resulting in a small catchment area with a limited base of students. Therefore, Goa University has always been perceived as a small university, which has impacted negatively on its perception and rankings. Though approximately 20000 students are completing secondary school, only about 4500 students apply for seats at the University. This weakness can be converted into an opportunity by looking beyond the borders of the state and the country.

There are also some important branches of knowledge that are missing from Goa University. The establishment of new Schools, School of Sanskrit, Philosophy and Indic Studies (SSPIS) and Manohar Parrikar School of Law, Governance and Public Policy (MPSLGPP) – has brought a number of new disciplines (Sanskrit and Indic Studies, Law, Public Administration, Tribal Studies, Disability Studies, Social Work) into the University. Few other disciplines like Engineering, Ayurveda, Physical Education will soon form a part of Manohar Parrikar School of Law, Governance and Public Policy and School of Sanskrit, Philosophy and Indic Studies. Nevertheless, some important disciplines from the technology domain, visual arts, architecture and design, fishery, Artificial Intelligence and Data Science are still missing from Goa University.

Opportunities:

Focusing our expertise in key areas linked to Goa's geographic location to provide unique opportunities for research and studies on natural resources, biodiversity, marine and maritime studies as well as linguistic and cultural diversity.

Securing a competitive position in a knowledge-based world by establishing four University Laboratories for (i) Materials Characterization, (ii) Supercomputing, Data Analytics and Simulation, and (iii) Multimedia and Digital Humanities.

Setting long term goals for the University through the setting up of Research Park, enhancing research publications, research projects, consultancy projects, industry-academia linkage, creating opportunities for foreign students and attracting faculty diverse expertise through central funding.

Leveraging Goa's unique cosmopolitan ambience to attract international students by (i) extension of University's Study India Programme, originally designed for Nihon University, Japan to other universities abroad; (ii) effective marketing of our academic programmes in neighboring countries; (iii) student exchange and collaborative programmes with a transfer of credits; and (iv) international accreditation for our professional programmes.

Optimising the Digital Learning Initiative (DDLI) of the University (that has enabled the teaching/learning process during the pandemic) and designing and contributing courses to the

SWAYAM platform through our state of-the-art recording and editing facilities available in DDLI.

Providing life-long learning, re-skilling and continuing education opportunities to people of all ages through Certificate and Diploma Courses in various disciplines, using technology in blended teaching-learning mode and flexible timing options.

Expanding the Visiting Research Professorship Programme beyond the ten existing Chairs (funded by a range of government, foreign and private sources) in Social Sciences, Humanities, Visual and Performing Arts, Indo-Portuguese Studies, Nalanda Studies and Wildlife Studies, to also include the pure and applied sciences.

Strengthening our existing reliable alumni network, both local and international, to enhance collaboration and placement opportunities.

Enhancing interactions with local employers in the private, non-profit, and public sectors for student placements.

Integrating the affiliated Colleges into the University as Constituent Colleges, as mandated by National Education Policy 2020, to create a multi-campus University spread across all of Goa.

Challenges:

Goa University is closely identified with our beautiful state. This co-branding is a blessing but also the most significant challenge to our image and reputation. Since its inception, Goa University has struggled to be seen as a site of serious scientific endeavour, in contrast to the global image of Goa as a place of fun and frolic. Enhancing the reputation of the University internationally would require significant growth in student strength from across the globe. Having recruited young and enthusiastic faculty, this challenge will be met by re-orienting academic programmes to global standards and expanding and upgrading our infrastructure. A major challenge before Goa University is alignment with the broader objectives laid down by National Education Policy 2020, especially the transformation of Affiliated Colleges into Constituent Colleges. Integrating Human and Social Sciences with STEM is an ongoing challenge. Goa Business School has launched a M.Sc. (Integrated) in Data Science. School of Earth, Ocean and Atmospheric Sciences is offering a multidisciplinary M.Sc./M.A. in Environmental Science open to students of all disciplines. Our challenge is to replicate these innovative programmes in other knowledge/skill areas, independent of structural reorganization.

Creating an ecosystem for blended learning, overcoming the socio-economic and digital divides, and providing for adult education and lifelong learning are interlinked challenges that rely heavily on our Directorate of Digital Learning and Initiatives (DDLI), which has already produced a SWAYAM course under National Resource Centre (NRC) in Marine Science and also recordings for DISHTAVO (online lecture recordings for UG students). Integrating vocational skills into mainstream programmes is another challenge, which can be achieved by modifying existing rules and provisions, bringing in innovative solutions, and changing the mindset of all the stakeholders. Assuming responsibility for the talent and career development of our students and providing entrepreneurial opportunities to transform research into products would require a vibrant enabling environment in our IT and Bio-incubators. Finally, the entry of private universities into Goa along

with existing national institutions will create an environment of peer competition for students and faculty.

2.	**Institutional Development Plan** (*for at-least next 10 years*)	

2.1. Vision

"To prepare gernerations to thrive in a rapidly changing world, equipping them with the knowledge, skills and mindset needed to navigate through emerging trends and contribute to the betterment of the society"

2.2. Mission

"To effectively and efficiently impart fundamental, appropriate and socio-economically relevant knowledge at the tertiary level of education to those seeking depth of understanding, employment and entrepreneurship - driven technical competence in their chosen areas of study"

2.3. Goals and Objectives

Specific objectives and expected results in terms of "Institutional strengthening and improvement"

In a higher education ecosystem, teaching-learning and research have been the major activities. However, in light of the implementation of NEP-2020 from the academic year 2022-23, Goa University is envisioning to become a multidisciplinary HEI with holistic teaching-learning, research and community engagement.

Being the only University of the state, Goa University caters to the higher education of the local students by offering quality academic programmes in need-based and emerging areas. A policy strictly based on merit is followed for admitting local students. All the admissions are through an online transparent process. About 10% of the total allotted seats are filled on All-India basis. University has 15% of seats over and above the allotted number of seats reserved as supernumerary seats for overseas students. Presently, the campus strength of international students is about 1.18%. University has a Study India Programme with Nihon University, Japan, since 2003. In 2022 University signed MoU with Bangabandhu Sheikh Mujibur Rahman Maritime University. The University plans to increase the strength of international students to 10% of its allotted number in 5 years and maintain it at 10% for the rest of the years. To achieve this target, University plans to tie up with the Education Corporation of India Limited (EdCIL) to advertise/campaign in South Asian Countries. Active campaign will also be pursued in Nordic countries through Nordic Centre, New Delhi. University has signed an agreement with Science Po de Lyon for student and faculty exchange.

To promote quality research among faculty and students, the University is strengthening its research capabilities by recruiting high-quality faculty, developing research as well as infrastructural facilities, besides networking with reputed institutions and academic bodies. This will enable students to fuse technology with modern and traditional knowledge. A trajectory in this direction will be drawn by offering PG programmes in Indic knowledge studies, particularly Sanskrit and Ayurveda, from the School of Sanskrit, Philosophy and Indic knowledge studies.

The University plans to float several certificates and PG diploma courses in skill development/entrepreneurship. Training programmes to encourage young faculty members to take up R&D and consultancy projects from different government and non-government funding agencies, file patents and protect IPR will be conducted. 60% of the University faculty are less than 40 years of age and they will be motivated to take up the projects providing solutions to local problems in addition to their domain area of research. In this direction, they will be encouraged to take up more applied research along with fundamental research.

In order to achieve the above, the following specific objectives have been formulated.

1) To transform Goa University into Multidisciplinary Education and Research University (MERU).
2) To strengthen research and innovation ecosystem on the campus, a Research Park is in pipeline, which will house Bio-incubator, health incubator and IT incubators.
3) To start new academic programmes in tune with the emerging areas and stakeholders' demands. In that direction technology, Ayurveda and sports programmes will be offered.

4) To establish new Centers of excellence.

5) To expand VRPP chairs in the new areas especially in Climate sciences.

6) To promote Teaching and Research Collaborations with Global Universities/institutions figuring in the most reputed global rankings. Dual degrees and sandwich model degrees will be offered.

7) To advance the development of local language for the people of the west coast of India, a Bhasha Bhavan will be established.

8) To create MOOCs, on SWAYAM and other Online Platforms.

9) University has already implemented NEP-2020 which facilitate to augment GER to 50% based on online curriculum at PG level. The new 80 credit course structure focusses on research dissertation/ internship in the second year. In addition, it has scope of taking large number of elective courses from within the discipline as well from other disciplines. University has also registered for Academic Bank of Credit which gives an option for student to earn a part of their credits from any other institution in the country or from those approved online courses. In addition, this will also facilitate students to obtain certificate/diplomas/degree from a University. From the academic year 2023-24, NEP-2020 course structure is implemented at the Under-graduate level for General Education stream. The Ph.D. programme is also restructured as per the UGC guidelines.

2.4. Executive Summary

Summary of how each of the objectives will be addressed. This section must have clear plans for implementation and execution of your proposed IDP.

1) *To transform Goa University into Multidisciplinary Education and Research University (MERU).*

   To transform Goa University into Multidisciplinary Education and Research University (MERU), the erstwhile departments of the University were amalgamated into various Schools based on their functional similarities. To provide a holistic and multidisciplinary teaching-learning environment, University is planning new programmes in technical education at the Undergraduate and Post-graduate levels on campus. Since science, research, innovation and technology are the need of the hour, the technological degrees on campus would help the young minds to interact with leading scientific researchers across various disciplines of GU.

   Many of the faculty members are PhD guides and University is encouraging them to supervise PhD students, to increase the research output of Goa University. As NAAC/NIRF looks for only quality journals, University is encouraging faculty to publish in reputed journals. The workshops and seminars are regularly conducted to make awareness among faculty to publish in quality journals. University has already started Research Incentive Scheme (RIF) in which faculty publishing in Scopus /WoS journals in quartile Q1-Q4 of Scimago are given monetary incentives which can be used for upgrading the research capacity by attending International Conferences. Over the years, University Schools/Disciplines have attracted funding from DST-FIST, DAE-BRNS, UGC-SAP, RUSA, DBT, ICSSR, DST-Goa Govt. etc. University faculty have been successful in getting funded projects from DST-SERB, UGC, CSIR, DAE, ISRO, MoES, DBT, NRB, ICSSR, BRNS, and foreign funding agencies. The early career faculties have received startup grants from UGC and SERB. The external cash flow to senior faculties are in the order of crores of rupees. University has already created Research Development and Resource Mobilization (RDRM) Cell which is fully functional and provides training to the young faculty on research project writing and related research matters of the University. A parallel IPR cell to encourage IPR activities for students and faculties and has a target to file minimum 10 patents/IPRs in next 5 years.

   University is in process of formulating guidelines for the recruitment of Professor of practice. An ordinance to invite Honorary Professors is already in place.

2) *To strengthen research capability on the campus, a Research Park is planned.*

   To strengthen the research capability on university campus, a research and innovation ecosystem will be created on campus by establishing a Research Park which comprises of Bio-incubator, Health incubator and IT incubator. At the research park, an atmosphere will be created for students of technological degrees having the entrepreneurial ability to interact with industry personnel. Care will be taken to integrate the research work (internship/ research) carried out by the student at the research park as a part of the curriculum requirement to enable the student to get his/her degree. This will not only help the student to complete the

degree successfully but also encourage to develop a startup. Along with incubation leading to scientific and technological startup, ideas on sociological incubation will also be encouraged.

Once the research park is established, facilities will be kept open for faculty and general public having innovative ideas. A portal will be opened on university website to submit any proposal for incubation. All such proposals will be assessed by an expert committee. The selected proposals will be allowed to incubate in the research park. If any proposal needs financial assistance, the same will be forwarded to the concerned Department of Govt of India. Efforts will also be made for financial assistance from Goa State Research foundation.

Focus will also be on expanding into new cutting edge and socially and industrially relevant areas of research like Bioprospecting from Western Ghats, Marine Ecosystems and Extreme Environments, Agro Electronics and Biomedical Instrumentation, IoT, Smart Sensors, 5G, MIMO Technology, Optical Computing, Tourism, Refugee Studies, Cognitive Science, Tribal Studies, Maritime Studies, History and Archaeology, etc. under the umbrella of Research Park. This will inculcate ideas so as to encourage startups.

3) *To start new academic programmes in tune with the emerging areas and stake holders' demands.*

Implementation of NEP 2020 will be taken in spirit to complete the goals and objectives of the policy as required by State and Central Government. During last two-years University has taken several initiatives for the implementation of NEP-2020. University has amalgamated erstwhile departments into Schools. Currently, ten schools are formed:

    i)   Biological Sciences & Biotechnology

    ii)   Chemical Sciences,

    iii)   D.D. Kosambi School of Social Sciences and Behavioural Studies

    iv)   Earth, Ocean and Atmospheric Sciences

    v)   Goa Business School

    vi)   International and Area Studies

    vii)   Manohar Parrikar School of Law, Governance & Public Policy

    viii)   Physical and Applied Sciences

    ix)   Sanskrit, Philosophy and Indic Studies

    x)   Shenoi Goembab School of Languages and Literature

In addition to the existing programmes in the above-mentioned Schools, University has started/approved/plan to begin the following new programmes.

    a) On-going Programmes:-

        i)   M.Sc. in Data Science (2021)

        ii)   M.Sc. in Environmental Sciences (2021)

      iii)   M.Sc. in Physics (Computational Physics) (2022)

      iv)   Master of Social Work (MSW) (2022)

      v)   M.Sc. in Artificial Intelligence (2023)

      vi)   M.Sc. in Data Science (2023)

      vii)   Master of Law (LLM) (2023)

b) Approved Programmes:-

      i)   M.Sc. in Physics (Biophysics) (2024)

      ii)   M.Sc. in Remote Sensing and GIS (2024)

      iii)   M.Sc. in Atmospheric Sciences (2024)

c) Planned Programmes:-

      i)   Integrated programme in Bioengineering (2025)

      ii)   PG Diploma in Analytical Techniques and Journalism

      iii)   Integrated M.Sc. and M.A. programme in disciplines like Chemistry, Statistics, Economics, International Relations, Linguistics and phonetics, etc.

These new programmes will add basket of elective courses which will be made available to students across the disciplines / schools.

In order to accommodate the above-mentioned as well as some more academic programmes, new buildings and laboratory infrastructure are being built on campus and the same are listed below.

    i)   Manohar Parrikar School of Law, Governance & Public Policy

    ii)   School of Physical & Applied Sciences

    iii)   School of Earth, Ocean & Atmospheric Sciences

    iv)   Biochemistry Building

    v)   Biochemistry Research laboratory

    vi)   Analytical Chemistry Research laboratory

    vii)   Directorate of Digital Learning Initiatives

    viii)   School of International & Area Studies

    ix)   Remote Sensing and Ocean Modelling

Once these new programmes start, there will be need for the faculty and students' residential facilities on campus. Presently the University has one hostel each for men and women students. With the student population set to increase more than twice in the first five years and eventually be more than 12000 over next 15 years, new hostels will have to be built for the students. With the increase in

student numbers, number of faculty members will also increase and housing facilities for them needs to be created as well.

4) *To establish new Centers of excellence.*

The research focus of schools will be on strengthening core areas leading to establishment of full-fledged research Centres capable of carrying out cutting edge research in frontier areas. Over the next ten years, University plans to start following new Research Centres.

    i)   Centre for multifunctional Bio-inspired materials for energy and environmental research with the existing Materials Characterization laboratory as its fulcrum and with a focus on research and development of new energy storage materials and understanding functional properties of these materials.

    ii)   Centre for Computational Science to handle the computational needs of natural language processing, handling big data and informatics, materials design and computational physics will be setup around the proposed supercomputing facility.

    iii)   Centre of excellence in study of Western Ghats and Marine Coastal ecosystems with a special emphasis on Ecosystem services and Bio-prospecting.

    iv)   Research Park for Incubation and Startups consisting of Bio-incubator, Health incubator and IT incubator.

    v)   Centre for Excellence in Sustainable Development Goals.

    vi)   Inter-institutional Centre for Humanities and Cultural Studies.

    vii)   Interdisciplinary Centre of Excellence for translation/comparative literature/heritage studies /cinema studies. The translation cell with multimedia facilities will focus on translating literary works and technical documents from one Indian language to other as well as into foreign languages and from foreign to Indian languages especially Konkani and Marathi.

    viii)   Centre of excellence in Remote Sensing and aerosol for climate change studies.

Besides new Centres, University is also exploring setting up of an 'Astronomical Observatory' on the campus for research and educational purposes.

5) *Expanding VRPP Chairs in the new areas.*

The University plans to expand the Visiting Research Professorship Programme (VRPP) to include the Pure and Applied Sciences to add to the existing list of ten Chairs funded by various Government/Foreign/Private sources in the discipline of Social Sciences, Humanities, Visual and Performing Arts, Indo-Portuguese Studies, Nalanda Studies, Wildlife Studies and Leadership and Governance. With the support from Govt. of Goa, University plans to create a Chair in Climate Change Studies.

6) *To promote Teaching and Research Collaborations with Global Universities/institutions figuring in the most reputed global rankings*

University Schools are actively trying to have Teaching and Research collaborations with Global Universities/Institutions figuring in the most reputed global rankings. The following are the list of initiatives taken in that direction.

I) Goa University has a memorandum of understanding (MoU) with University of Porto, University of Aveiro and University of Algarve, Portugal which has resulted in joint research projects, exchange of students and faculty members. University has also signed an MoU with University of South Carolina, USA, Bangabandhu Sheikh Mujibur Rahman Maritime University, Dhaka.

II) Faculty members have active research collaborations with several foreign and Indian universities like Cornell University, USA, Paris Sciences et Letters (PSL) Research University, Paris, Osaka University, Université Grenoble Alpes, Indian Institute of Science, Bengaluru, Indian National Centre for Ocean Information Services (INCOIS), Space Physics Laboratory (SPL) of VSSC, ISRO, etc. Efforts are being made to formalize these collaborations. Goa University faculty members have collaborated with their counterparts in 248 institutions which is evidenced from publications in Web of Science database.

III) It is also proposed to invite foreign faculty under different programmes leading to research collaborations and faculty and student Exchange.

IV) International faculty members of repute are being / will be invited under VRPP programme. Two of our visiting research professors have been decorated with international awards, viz., Leontief Prize 2016 for Prof. Amit Bhaduri and Tyler Prize for Prof. Madhav Gadgil during their tenure at Goa University. University plans to expand the VRP programme by inviting more chairs from Foreign Universities or agencies.

University will be signing an MoU with a German Institute for getting training in Numerical Modelling of Coastal Water Ecosystem, MoU with ISRO and a Chair Professor in Climate Studies is in pipeline.

Goa University is one of the few Universities that has a current networking programme in teaching. Currently it is the only state university in India which is a partner of Indo-French Tutor Programme with the Institut Français and a partnership programme for Invited Faculty in Portuguese with Instituto Camoes.

University has Study India and Study Japan programmes with Nihon University, Japan. Discussions are underway to establish student exchange programmes with leading Universities of the world.

With the establishment of Indian Institute of Technology (IIT) and National Institute of Technology (NIT) in Goa, University, will seek possibilities to establish joint teaching and research programmes.

The School of International and Area Studies have developed collaborations with Heidelberg University, Germany, Kajima Institute of Peace, Japan and ISDP, Sweden. School is also in the process of having collaboration with Korea Foundation. The School of Earth, Ocean and

Atmospheric Sciences will develop research and academic collaboration with the University in Transania and Qatar.

7) *Promotion and development of local language*

GU has taken up an initiative to strengthen regional language as one of its objectives. In this respect, many activities have been taken up to help Konkani speaking people spread across the western coast of India. NEP-2020 also encourages teaching and research in regional and local languages. To achieve these objectives, study Centres of Konkani will be established one each at Kochi and Mangalore, which will function as extended campuses of GU. Online or Flipped Konkani classes will be offered to help the students to perform better in competitive examinations such as GPSC/UPSC. To improve Konkani literature and to expand academic activities in this discipline, a Konkani Journal, figuring in UGC/CARE list will be started.

With formation of Schools, the boundaries for cross cutting research are open. The faculty from languages can use the domain knowledge and translate the Science research with science faculty for the benefit of local community.

8) *To create MOOCs, SWAYAM courses and also create 'Online Platform' for hosting University online courses.*

Goa University has completed few MOOCs with the help of Directorates of Higher Education and is in the process of developing few more. University has created Directorate of Digital Learning initiatives which has undertaken several initiatives to create online teaching – learning content. University will soon have its online portal where all the video recordings of the many of the elective/ skill based/ value added courses will be available. DDLI is training faculties to create online courses for its students as well as to host MOOCs on SWAYAM and other such platforms.

Community Engagement

University actively participates in outreach and extension activities and for this purpose Directorate of Unnat Bharat Abhiyan and Directorate of Extramural studies are created. University have adopted five villages under UBA Scheme and will adopt more villages in Goa with a concept of transcending research. In Marcaim village University successfully implemented Marine farming project by which villagers are benefited.

2.5. Developing Motivated and Energized Faculty *Action Plan*	
Short Term	• Create a stress-free environment in which teachers can work on research new ideas: such as faculty bonding programmes, promotion of forums for exchange and sharing of research ideas and other activities to encourage recreation for teachers. • Enhance Seed money scheme by providing 1 lakh rupees for research to the entry level Assistant Professors. • Extend the Research incentive scheme to UGC care listed journals. • Encourage faculty members to participate in national & international conferences using RIF scheme. • Recognize young faculty members for publishing in high impact journals by way of an award or citation. • Sign new MoUs with international HEIs for exchange of faculty and students for research. • Encourage collaborations with researchers in top 500 Universities in the world. • Encourage faculty to use 30% of overheads for research infrastructure. • Organize Orientation/ short/refresher/FDP/FIP programmes for faculty. • Conduct Team building and leadership workshops for faculty. • Encourage non-PhD faculties to register for PhD in good institutions. • Improve WiFi and LAN internet connectivity in all buildings. • Encourage interdisciplinary research projects. • Inspire faculty members to take up local research problems in Goa state. • Encourage faculty to participate in workshops, conferences, summer/ winter school at national and international level for short term duration.
Mid Term	• Encourage faculty to apply for post-doctoral positions abroad in top 500 Universities. • Achieve the target of 90 % faculty with PhD. • Promote faculty to present papers in international conferences. • Encourage faculty to play vital administrative processes. • Provide uninterrupted power supply to the entire campus 24 x 7.

	• Encourage faculty to set-up specialize research centers based on expertise. • Along with the seed money provided for research, encourage and mentor faculty members to write research projects, as well as collectively tap support under FIST, SAP, for establishing new laboratories and augment the available research infrastructure. • Internationalizing the University to encourage diversity in students/faculty through international MoUs.
Long Term	• Encourage faculty to establish themselves as among the leading experts in their area with their globally recognized research and publications. • Allow faculty to tie-up with industry for consultancy and foreign Universities for research. • Inspire faculty to publish in high impact factor journals. • Expand infrastructural and recreational facilities on campus.

2.6. Teaching, Learning and Education Technology

Action plan:

- *Implementation of Outcome Based Education (OBE)*

Short Term	University has recently restructured the syllabus of all its Master's programmes emphasizing outcome-based education. On a short-term basis, to elevate knowledge of the students to the current state-of-the-art, required bridge courses will be offered through online mode to the students. It is planned to upgrade all the classrooms to smart classrooms and enhance the learning experience of the students. In this regard, flipped classroom methods will also be practiced.
Mid Term	The current course structure facilitates introduction of multidisciplinary courses, choosing courses from national e-content platforms like SWAYAM, and skill courses. University plans to increase interaction with industrial experts by involving them in syllabus framing, delivering expert lectures, conducting short-term courses to enhance the skill set of the students. At the medium-term level, emphasis will be on integrating Social Sciences with STEM, offering interdisciplinary and multidisciplinary programmes through its various Schools on campus.
Long Term	Over the next ten years, the University proposes to create facilities to reach out to all knowledge seekers. It is planned to take classroom teaching direct to homes to enable continuous and lifelong learning.

- *Enhancement of Students progress*

Short Term	University conducts an induction programme to all new students to acquaint them about various opportunities available. In addition, every student has a faculty mentor and these mentor-mentee meetings are a part of the academic timetable. It is proposed to use these meetings to orient the students on acquiring additional knowledge and skills through online courses available on SWAYAM. Additional emphasis will be given for invited lectures from academia, industry and civil servants to enable students widen their knowledge horizons.
Mid Term	Career counseling will be stressed upon at each discipline level to aid the students in making appropriate career choices. Regular online alumni – student interactions will be organized to build networking, tips for job interviews and career guidance. Regular training sessions will be conducted for the students for various competitive exams related to jobs and higher studies.
Long Term	Over the next ten years, using education technology, it is planned to make these training sessions available online. Over the next 5 to 10 years systems will be developed to understand the diverse

	needs and abilities of the students, identify their strengths and weaknesses or learning styles and provide them necessary educational content.

● *Multidisciplinary teaching*

Short Term	The University has already initiated implementation of NEP-2020 with a specific focus on multidisciplinary teaching and learning. These will be monitored for their effectiveness. University plans to introduce several integrated programmes in different disciplines in the coming two to five years.
Mid Term	Over the coming 5 years, efforts will be made to equip students with Life skills; Professional and vocational skills; Intellectual skills; Interpersonal skills. Students will be encouraged to take up industry internships to get experiential learning.
Long Term	Multidisciplinary programmes like the existing M.Sc./M.A. Environmental Science, will be introduced during the next 5 to 10 years.

● *MOOCs and ODL*

Short Term	University has already begun producing e-content for its students. Initially bridge courses, introductory laboratory courses as well as two credit courses are being recorded and made available via institutional LMS.
Mid Term	During the next two to five years, these courses will be offered to students from affiliated colleges. Certificate courses will also be offered through online mode. Faculty members will be encouraged to produce need-based courses.
Long Term	University is augmenting its present studio facilities with most modern equipment and softwares to provide state-of-the-art audio and video content creation facility to its stakeholders. Over the next 10 years, these facilities will be expanded to multiple studios, a film-mix theater, video and audio editing facilities to help in production of effective online content at the University and offer it via SWAYAM and other such platforms.

2.7. Research Development and Innovation

Action Plan

- **Augment Research Infrastructure**

Short Term	University will augment experimental facilities at the Material Characterization laboratory, Bio-Incubator with additional funds from various National funding agencies like NRF, DST-PURSE, SUPREME, SHRI, SATHI etc. and Industries, Schools and Disciplines will be encouraged to submit proposals for DST-FIST, UGC-SAP, Centre of Excellence etc. The current Param Shavak based computing facility will be expanded to meet the research and academic needs.
Mid Term	Over the next five years, a Centre for Marine Aquaculture will be setup to exploit edible product development. It is also proposed to setup laboratories exclusively meeting the analytical requirements of the local industries.
Long Term	On a long-term basis, University seeks to establish a research center in Green Energy products. To achieve this a Centre for Aerosol research will be set up.

- **Enhance Research Funding**

Short Term	University has always encouraged its faculty to take up funded research projects. To this end, seed money grants are also provided to all new faculty members. In the coming two years, University would like to emphasize on achieving, on an average, one R & D project or Consultancy per faculty over a three-year period. Efforts will be made to provide research funding support for the Multimedia and Language Laboratory.
Mid Term	The target of funded research projects and consultancy set for the first two years will be enhanced on an average to two R& D projects or Consultancies per faculty over three years. The focus will also be on acquiring a minimum of two interdisciplinary research projects with a total funding of Rs. 5 to 10 Crores. To aid in development of Indian languages and especially Konkani, efforts will be made to raise funds from Government and non-government agencies for a Bhasha Bhavan.

Long Term	Over the next 10 years, systematic efforts will be made to convert the existing research collaborations into institutional collaborations and successfully bid for International Projects from HORIZON, INDO-US, European Union and such other funding agencies.

- **Increase PhD Students enrolments**

Short Term	University will make efforts to double the enrolment of PhD students from the present number. With increased research projects, the number of full time PhD students on the campus will also increase. University will further provide teaching assistantships to other non-funded full time PhD students. Initially about 20 teaching assistantships per year will be provided.
Mid Term	University will fund 10 doctoral/ research positions for specific projects addressing local problems.
Long Term	University will build hostels especially for research scholars on campus. University will establish five Emeritus/Visiting Professor positions for academicians of international repute to mentor the young researchers on campus.

- **Increase Research Publications**

Short Term	Presently, the average number of publications per faculty per year in the UGC Care list and SCI journals is about one. Efforts will be made to increase this number to two. Research Incentives funds for faculties will be expanded to include UGC CARE listed journals. Seed Money Grants will be increased to Rs. 1.00 Lakh for newly recruited Assistant Professors.
Mid Term	Training and mentoring sessions for young faculty members especially from social sciences and languages will be organized to further increase the average number of publications per faculty per year in UGC Care List and SCI Journals to three.
Long Term	Emphasis will be given on establishing research collaborations within the University, state level institutions, national and international institutions to boost

	the average number of publications per faculty per year in UGC Care List and SCI Journals to about four.

- **Strengthen IP & Innovations**

Short Term	Organize a yearly state/national hackathon with thematic areas of STEM. Establish Research Park in University to encourage Start-up, Incubation and IP Licensing. Enact an IPR scheme to encourage protection of IP.
Mid Term	Target up to 5 incubations per year and hand hold them to license their products and prepare business plan.
Long Term	Organize National/International Hackathon with thematic areas of STEM.

- **Enhance Research Collaborations**

Short Term	Organize at least 5 International and National Conferences and up to 10 collaborations with International Universities.
Mid Term	Establish five joint doctoral positions with International Universities of repute (Top 500) for Doctoral students.
Long Term	Establish five Emeritus/Visiting Professor positions for international repute Academician for six months. Establish five Visiting Professor schemes for the University Academicians.

2.8. Industry-Academic Partnership

Action Plan

The aim will be to create mutual value through collaboration between Goa University and industry for nurturing research knowledge to emerging technologies that create impact in industrial and societal development. This will be achieved through the following action plan:

Short Term	• Include industry experts in the Board of Studies (BoS) in all Master's programmes. • Create Industry-Academic activities through DSPAR and DI3P. • Industry Internship for Faculties/ Students through MoU's with local industries for providing internship opportunities. • Conduct annual training/workshop for students for skill enhancement. • Encourage disciplines to give industrial research-oriented dissertation and field work. • Establish "Industry Relation Cell" to coordinate between School/ disciplines with the industries. • Extend laboratory space and equipment facilities for industries for conducting process and product developmental activities. • Encourage faculty members to take up industries supported research and development project. • Organize a discussion forum/ conclave/ seminar/ symposium on industrial/ translational research in collaboration with industries.
Mid Term	• Encourage incorporation of courses for enhancing industrial directed skills. Conduct exposure visit of students to industries. • Encourage people employed in industry to join for Ph.D. with industrial driven research problem. • Develop platform for provide solution to industrial problems through contractual based research. • Establish MoU's with industries for testing process and product in industrial setup.
Long Term	• Establish Konkani Cultural Museum through support of industries. • Develop state of the art facilities for Hospitality, Travel and Tourism programme. • Encourage faculty members to identify and develop the industrial and societal

	potential of their research.

2.9. Institution's Placement Plan for Students

University has formed the Directorate of Student's Placement and Alumni Relations. This directorate has been taking efforts to attract many companies for placements of outgoing students. Several students from various disciplines were placed in companies through such placement drives.

Action Plan

Short Term	Expand the placement activity to all the disciplines by sending placement brochures to reputed companies and through its well-placed distinguished alumni.
	Impart Life skills training to the students to improve their chances of employability.
	Organize Pre-placement talks/mock interviews to be organized to prepare students for interviews.
	Conduct Career guidance and competitive exam training/counseling (GPSC/UPSC/IAF/NET/SET etc.) for the students by inviting experts/Alumni.
	Seek Students feedback from the employer for improvement.
	Sign MoU with organization for life skills training to the students.
Mid Term	Promote Industry-Academia linkage to develop skill-based programs in the curriculum, to organize National/International conferences/workshops etc.
	Sign MoU/collaboration with organizations for students internship/ dissertation.
	Set up a robust Alumni Network for placements.
	Provide resources and support for job search including job portal, career fairs.
Long Term	Encourage research projects from R&D units of industries.
	Collaborate or sign MoU with organizations for student placement.
	Create an ecosystem that supports entrepreneurial endeavors and encourages students to pursue start-up ventures.

2.10. Achieving the Target for Accreditation

Action Plan

Short Term	- Implementation & review of NEP 2020. - Attainment of CO's, PSO's and PO's. - Increase PhD student strength on campus. - Increase in PhD Guides on campus. - Increase in research publications in Scopus/WoS. - Software for Plagiarism Software for dissertation thesis. - Workshops on project proposal preparations. - Submission of research project by faculty members. - Extending RIF to UGC care list journals in order to increase publications. - Conducting awareness programs on IPR. - Conducting 40 extension/outreach activities outside campus. - Conduct of Academic & Administrative Audit. - Increasing Renewable and Green initiatives. - Conduct of National level conference on Quality measures. - Conduct of workshop for IQAC/AISHE coordinators of Affiliated colleges. - Increase in number of certificate courses /value added courses/ diploma programmes/Online courses (MOOCS/SWAYAM/e-Pathshala/NPTEL etc. - Start of new interdisciplinary programmes. - Conference/workshop for Research students. - Inclusion of research ethics in the research methodology course work. - Redesigning University Website. - Increasing career counseling including e-counseling and guidance activities for competitive examinations (UPSC, NET/SET, GATE etc.). - Improvement placement numbers, encouraging students for higher education. - Implementation of 100% e-governance.
Mid Term	- Green Audit of the Campus. - Increase in number of certificate courses /value added courses/ diploma programmes/ MOOCs.

	• Setting up small theater, business lab & Moot court.
	• To bring the University in top 100 in NIRF rankings.
	• To prepare the University for NAAC assessment and accreditation 5th Cycle.
	• To improve the enrollment percentage of students.
	• Fill all sanction positions.
	• Start of new interdisciplinary and multidisciplinary teaching programmes.
	• Improving the percentage of teachers receiving national/ international fellowships for advanced studies/ research.
	• Increasing revenue generation through corporate training and other programmes.
	• Increasing the percentage of JRFs, SRFs among the enrolled PhD scholars in the institution
	• Improving research funding through government and non-government sources such as industry, corporate houses, international bodies for research project, Endowment Research Chairs.
	• Provide disabled friendly infrastructure in all new buildings.
	• Increasing collaborations with national and international organizations.
	• Improvement in Alumni engagements and contributions.
	• Improvement in Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies.
	• Improvement in Percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP).
	• Improvements in QS/India Today/Week Survey/THE rankings.
	• Formulating up to two best practices other than existing ones.
Long Term	• Improve number of Patents of Goa University.
	• Improve in number of Ph.Ds awarded per recognized guide.
	• Expansion of Research & teaching infrastructure.
	• Launching of new programmes.
	• Improvement of Research output.
	• Improvements in Citations & h- Index in Scopus/ Web of Science/PubMed.
	• Increasing consultancy projects.

	About 200 outreach/extension activity in community

2.11. Incubation and Start-up

Goa University is in a process of establishing a Research Park under which Bio-incubator, Health incubator and , IT incubator are being setup. A Section 8 Company is already registered.

Action Plan

Short Term	• Conduct activities for faculty and students through Institution Innovation Council for various discipline. • Train faculty members to become Innovation Ambassador for conduct of activities and mentoring students from innovation to entrepreneurship. • Develop innovation, incubation and start-up ecosystem for nurturing budding entrepreneurs through implementing the National Innovation Startup Policy (2019) in Goa University. • Initiate Bio-incubator, Health Incubator and IT incubator with the help of DHE, Government of Goa to attract startups. • Establish MoUs with other incubators and industries as support system for Research Park. • Conduct 15 days' workshop in bio-entrepreneurship. • Strengthen disciplines to initiate at least one course in entrepreneurship at the level of School. • Conduct Challenges and Hackathon every year for identifying innovative solution and ideas for nurturing through incubation centres/School of Goa University. • Establish innovation repository through YUKTI platform. • Establish Technology Transfer Cell.
Mid Term	• Establish a Seed Fund to assist pre-incubation and incubation of innovators idea leading to startups through external funding. • Support start-ups in Bio-incubator, Health Incubator and IT incubator. • Develop MoUs for funding the start-ups and innovation research.
Long Term	• Expand Research Park as support system for translating knowledge-based research into innovative industrial processes and products.

2.12. Alumni Engagement/ Activities plan

Action Plan

Short Term	• Goa University alumni association will be strengthened. • The Chemistry discipline Faculty and Alumni Association is one of the chapters of Goa University Alumni which is actively engaged in Alumni events. Alumni chapters of other Schools will be formed. • Annual meet of distinguished alumni will be organized. • Scholarships/fellowship will be created through alumni association for needy and meritorious students. • Best Researcher Awards/symposium to be instituted to encourage research culture among the alumni teaching in colleges. • Organize Alumni interaction through workshop/lecture for career guidance and student placement.
Mid Term	• Efforts will be made to register the alumni associations of all Schools. • Short term courses and entrepreneurship development sessions by Alumni to promote Industry-Academia Collaborations. • Recognize and celebrate alumni achievements.
Long Term	• A Networking event will be organized to encourage connectivity between various batches of the Alumni and maintain connections to their educational institution. • Leverage financial resources through alumni and establish alumni funds for research scholarship, Incubation centers, new programmes etc. • Collaborations with Alumni on Research Projects for community development.

2.13. Basic Infrastructure Development plan

Action Plan

Short Term	- Completion of work of following buildings & infrastructure projects: - Manohar Parrikar School - Extension of Goa Business School to include Computer Science discipline - Biochemistry PG Laboratory - School of Physical & Applied Sciences - Bio-incubator block - Research Laboratory of Biochemistry - Research Laboratory of Analytical Chemistry - Establish High End Computing Facility. - Setup Smart classrooms for all Schools. - Upgrade and expand the IT infrastructure to meet evolving needs. - Take up green initiatives: Rain water harvesting, butterfly, botanical gardens, green fencing.
Mid Term	- Building for School of Earth, Ocean & Atmospheric Sciences. - Building of School of International & Area studies. - Fully functional IT & Health Incubators. - Building for Directorate of Digital Learning Initiatives (DDLI). - Bhasha Bhavan for Languages and Literature. - New Administration Building. - Cinema Theatre, Business Finance Laboratory, Moot Court. - Biogas Plant/processor. - New Hostels for women and men. - New Hostel for international students - Residential quarters for teaching and non-teaching employees.
Long Term	- Research laboratories for Biomedical instrumentation, Biometrics, Robotics and Artificial Intelligence. - Well-equipped Guest house for international students / guests.

	• Modern infrastructure for Sports. • Inter-institutional Centre for Humanities and Cultural Studies (ICHCS). • Building for School of Sanskrit, Philosophy and Indic Studies.

2.14. Skill Development of Non-teaching Staff

Action Plan

To enhance the skills of the non-teaching staff in the University, the following action plan will be implemented.

Short Term	Develop and implement training programs to address the identified skill gaps (communication skills, computer literacy, administrative tasks, customer service, first-aid).
	Encourage non-teaching staff to participate in workshops related to their roles and responsibilities.
	Recognize and Reward Progress: Acknowledge and reward non-teaching staff members who demonstrate improvement and exhibit enhanced skills.
Mid Term	Mentoring Program: Implement a mentoring program where experienced staff members can mentor and guide junior staff to foster skill development and knowledge sharing.
	Implement employee engagement initiatives such as team-building activities, recognition programs, and open communication channels to create a positive and supportive work environment that encourages skill enhancement.
	Cross-training and job Rotation: Offering cross-training opportunities and job rotations can expose non-teaching staff to different roles and functions within the organization. This helps broaden their skills set, increase their versatility and improve their overall understanding of organizational operations.
Long Term	Establish leadership development programs for non-teaching staff who show potential and interest in taking on managerial or leadership roles within the first 5 years.
	Encourage non-teaching staff to pursue relevant professional certifications in their respective fields to enhance their expertise and credibility over the course of 10 years.
	Develop a succession plan to ensure the continuity of skilled staff by identifying and grooming individuals for key positions in the long term.
	Foster a culture of continuous learning and skill development by providing access to online learning platforms, webinars, and other resources that can be utilized throughout the 10 years.
	Encourage non-teaching staff to collaborate and network with professionals from other institutions or organizations to gain exposure to different perspectives and best practices in their field.
	Online Learning Platform: Providing access to online learning platform or e-learning modules can enable non-teaching staff to acquire new skills at their

	own pace. These platforms can offer a wide range of courses and resources covering various subjects and skill areas, allowing staff members to choose the topics most relevant to their needs.

2.15.   Any Other Initiatives for the Student's and Institutional Growth

Short Term	In order to further attract international students to Goa University a plan is being formulated to offset the cost of tuition fees by providing scholarships and freeships to deserving students.
	Apprenticeship for Students through NGOs and CSR activities of Industries.
	Life Skill Development Programmes.
	30 Hrs. Skill based Certificate Courses.
	Augmenting transport facility for Students from nearby towns to Goa University in collaboration with Kadamba Transport Corporation.
	NSS unit on Goa University Campus.
Mid Term	Setting up of Movie and Theatre Club, Nature and Photography Club, Yoga, Meditation and Sports Club and GU Wizards Club.
Long Term	Establishing NCC unit on Goa University Campus.