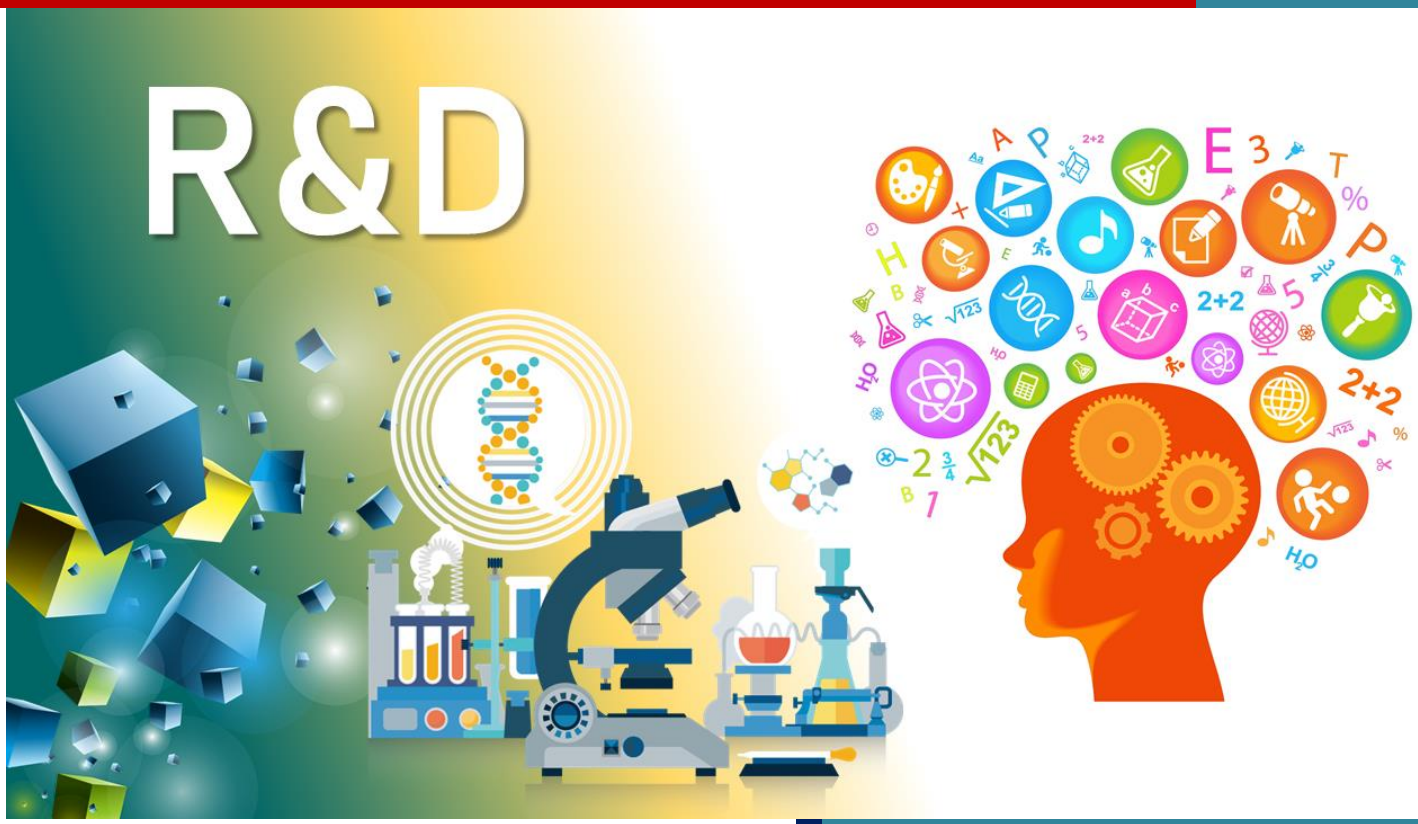
GALGOTIAS UNIVERSITY

Module # 1 Mandate # 2
Research & Innovation



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PURPOSE: This Mandate sets the framework for the development and implementation of research and innovation activities at the **Galgotias University and** aims to nurture research culture and enhance innovation quotient in the University by promoting Research and development in the frontier areas of Science, Engineering and Humanities. It also encourages the Undergraduate, Postgraduate and Doctoral candidates and faculties to undertake the research in newly emerging frontier areas of Engineering and Non-Engineering including multidisciplinary fields. This will enhance the general research capability of budding researchers and stakeholders by way of participating in indexed Conferences, Seminars, Workshops, Project Competition, etc. and shall result in tangible Research outcomes.

The mandate shall foster conducive milieu for interdisciplinary research practices generating & consequential and meaningful outcomes for the Nation in general and the region in particular. The mandate shall promote creation of a favorable environment to create centers of excellences for Research and Development and for dissemination of knowledge and its relevant application Regionally, Nationally and Globally. This shall also lead to an improved Innovation and Research quotient of Faculty and Students through Inter/Multi/Trans disciplinary Research Groups ultimately shall lead to establish Internationally Research driven University.

Chapter 1: Research

1.1. Introduction:

This mandate is developed to facilitate the Deans and Faculty to carry out full-fledged research activity for the university through students/research scholars/self so as to meet the mentioned research targets. **Output of Research based on Ranking and accreditation agencies.**

The output of research shall be as follows but not limited to

- 3P's: Publications, Patents and projects (funded)
    - Quarterly Target based efforts of faculty in 3P's
    - Faculty wise publications per semester
    - Faculty wise Patents per semester
    - Faculty wise projects per semester

- Involving Students in outcome-based Research and innovation
    - **Aligning academic courses like project/internships/skilling etc. into outcome-based work resulting in patents and publications**
    - Students publications
    - Students innovation awards

- No of Ph.D. produced
- No of Ph.D. faculties in the university
- No of PhD scholars registered under each faculty
- No of research fellowships per faculties
- Faculty and students research awards
- Startups
- Product development
- MOUs
- Collaborative research with industry / International organizations
- Joint Ph.D. with industry / international researchers
- Joint consultancy
- Joint grants with institutions of national and international research
- Increase in citations of WoS and Scopus
- Increase of H index and i10 ratio of each faculty
- Grants
- Faculty as resource person
- Research and Innovation Awards for University

The document is developed for defining the processes, targets and opportunities for students, faculties and research scholars.

1.2. Code of conduct:

- The targets shall be set for each year for the university and hence subsequently set for the schools and every individual faculty. The portal/platform shall be developed to monitor the research progress of each and every faculty in the campus and if improvements are not found within ending respective quarters then warning letters shall be issued. Receiving such three letters the staff may be subject to administrative action

- The annual targets shall be decided for each school which shall be further divided into semester wise and which shall be monitored every month.
- Faculty will be categorized into Research/Teaching faculty taking into account their three-year research contribution and the targets achieved.
- All Faculty will publish their papers with the affiliations of *"Galgotias University"* and must follow Do's and Don'ts of publication as mentioned in the section below.
- Each professor of the university shall publish at least three SCI/SCOPUS Indexed journal papers per semester.
- Each Associate Professor/ Assistant Professor of the university shall publish at least two SCI/SCOPUS Indexed journal papers per semester.
- In addition to the above, the faculty shall publish 3 number of short papers/conference papers/editorials/ monograms/book chapters which are indexed in Scopus /WoS
- If faculty shall publish any paper/file any patent / apply for any award/apply for any research fund /consultancy without any GU affiliation or without the appropriate channel of the university while in service shall be treated as violation of code of conduct and liable for administrative action.
- If its joint paper along with other faculty of the GU then the weightage shall be 0.5 and if three faculties shall write the publication then weightage shall be either alone or with one more researcher. Publication with four faculties is not acceptable.
- Faculty has to make sure at least one paper per year out of the targets given to him/her has to be in the journals of Q1/Q2/Q3 list.
- All faculties to ensure that if they are guiding UG students, then 100% UG student's projects under each faculty should lead to Publications / Patent / Product as per **Appendix 1.1.**
- All faculties should ensure that if they are guiding PG students, then 100% PG student's projects shall lead to one publication/case studies as an outcome of their PG project.
- Every Professor must bring one consultancy worth 1 lakh per year
- Every Professor and Associate Professor and Dean and Associate Dean of the school shall have active Consultancy Projects worth a total fund amount of Rs.10 Lakhs per school per semester etc. (for a school wherein total faculties are under 25 and for higher faculty members it shall be 30 Lacs)
- All faculties of the department must be involved in at least one consultancy project/ Corporate training
- Every school shall establish at least one Center of Excellence which is of interdisciplinary nature involving minimum 2 Industries and 1 International organization and few Ph.D. students and PG and UG students leading to minimum 4 publications per year one start-up and 2 consultancy assignments and one grant.
- Each Ph.D. supervisor along with his/her Ph.D. student must apply for funding every year
- Every faculty not having a Ph.D. degree shall identify the area and supervisor within 3 months of release of this document and register within 3 months of release of this mandate for Ph.D. either in GU or outside GU.
- Every faculty having Ph.D. degree shall guide at least four Ph.D. scholars and 50% must be of GU.

- Every Professor and Associate professor shall organize two STTP/FDP of minimum along 2 weeks per year with external Government/ Non-Government funding and create one lakh revenue as per the format shown in **Appendix 1.7.**
- Every Faculty must be a resource person for a minimum of two STTP/ FDP/ MDP preferably outside GU.
- Minimum 10 International researchers should be involved in active research for schools having more than 1000 students and all engineering schools.
- Four journals (Medical / Business/ Legal / Engineering Sciences) should start having two/three schools taking the collective lead. Every issue shall not have more than 10 papers and out of which maximum 5 papers from GU and 2 must be from outside India.
- Efforts to be taken to make GU journals Scopus indexed.
- Every professor and Associate Professor and all doctorate faculties of GU must apply for funding not less than 10 lacs every year.
- One active funding project for each divisional research group exceeding a total fund amount of Rs. 50 Lakhs per school per semester,
- New research programs like Integrated Ph.D. degree and Post-Doc fellowship needs to be introduced immediately.
- All teaching faculty should complete/ register Ph.D by 2021.
- Every faculty having Ph.D. degree shall guide at least one Ph.D. scholar.
- Every school shall identify minimum 5 experts from international and 5 at National level not below professor and 5 industries CTO/CEO/MD and having experience 10 years in the same field with the same caliber as an expert bank which shall be approved by UCRD and whose expertise shall be availed for Ph.D./ setting up guidelines, project evaluation/ PG and Ph.D. examination, mentoring for Center of Excellence
- Dean of the school shall be answerable to partial or full non-achievement of targets set for a semester and year overall schools.
- Faculty shall be answerable to partial or full non-achievement of targets of refereed peer-reviewed journal publications patents, Funded projects, conference paper publications, and book chapters/ books.
- The eligible supervisors shall be answerable to partial or full non-achievement of targets set for Ph.D. Guidance completion per year and on-going Ph.D. guidance.
- Major research in the university shall be undertaken by the divisional research as defined in the lateral part of the document.
- Research funds from funding agencies shall be utilized for the purpose for which it is being released in the stipulated time.

- Each research grant fund shall be maintained in a separate account until the completion of the project by the Dean/SRC/URC.
    - One copy of the applied fund must be submitted to UCRD and VC office
    - Each Ph.D. supervisor along with his/her Ph.D. student must apply for funding every year
    - The URC shall strictly monitor the activities and progress of the funded project. Any malpractice or unsatisfactory activities shall be dealt seriously with by URC.

- The Dean-Research/URC shall publish the policy for academic integrity and the code of academic integrity shall be available on the university website
- No paper in the University shall be published until checked for plagiarism and after having 90% unique contents only it shall be sent for publication.
- Every project report at all level (UG / PG / Ph.D.), every internship report, every book, book chapter, patent draft, every assignment, presentation, research papers, monographs, the design must be checked through i-authenticate
- Every school shall establish at least one Center of Excellence which is of interdisciplinary nature.
    - Each Centre of Excellence of the university must apply for funding and shall result in spiralling out one or more UG, PG and Ph.Ds.
    - It must involve minimum 2 industries and 1 international organization and few Ph.D. students and PG and UG students leading to a minimum of 4 publications per year one starts up and 2 consultancy assignments and one grant.

- The Dean/SRC shall sign at least five MoU for collaborative activities for research and faculty exchange for teaching and research, with other elite institutions within the country or abroad and execute the required activities as according to the MoU, every semester as per the format shown in **Appendix 1.8.**
- Research Methodology workshop must be conducted for every undergraduate program of minimum of 3 credits as per annexure A
    - It shall include patent drafting, research paper drafting and literature review as key components of a minimum of 40 hours.
    - The ETE shall be in terms of research proposal or research paper.
    - Target should be for projects and exams should reflect the Scopus papers, book chapters and patents per year as papers are output and for the output to be there shall be a process which is in terms of project.
    - Every year there shall be an internship/ project. Internships through NGO may lead to good projects and data which can be compiled in terms of paper.

- Dean shall ensure that all faculty members are members of one or more Professional bodies of National/ International repute.
- Research Groups must be formed for each of the schools ensuring each faculty of the school to be part of at least one of the groups. Details are mentioned in 1.4.4. The research groups formed in 2020 are enclosed in the annexure.

1.3. University Center for Research and Development

UCRD shall frame the university research calendar for accomplishing research goals (long term and short-term goals). At the university level, University Center Research development (UCRD) shall be established which comprises VC as Chair, Dean PG & Ph.D., Chief research coordinator, Dean research experts from various schools, selected on an annual basis as per the following composition

The Research advisory board comprising of experts from international and national organizations shall provide inputs on world-class practices and aligning roadmap for accomplishing the Vision of the university

The Committee

1. Vice-Chancellor (*Ex-officio* and Chairman)
2. Pro-Vice-Chancellor (*Ex-officio*)
3. UCRD Team as per organization chart as in 1.1 (*Ex-officio*)
4. Dean PG/ Ph.D. program- (*Ex-officio*)
5. Dean Academics (*Ex-officio*)
6. Deans of Schools (Chairpersons of SRCs)- (*Ex-officio*)
7. Two external Research Experts from reputed research labs/institutions (nominated by VC) appointed as per RAC norms of UGC
8. Registrar of the university

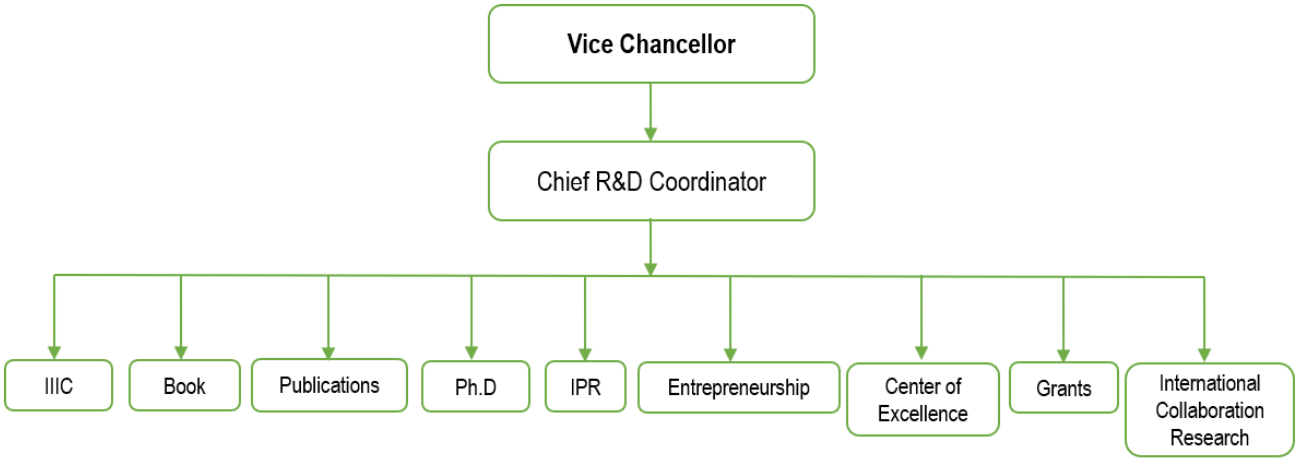

Figure 1: Organizational Structure of Research

Roles and Responsibilities

1. The University Center of Research and Development Team shall coordinate between various verticals under R and D of the university and schools
2. UCRD shall frame the university research calendar for accomplishing research targets. Setting up targets v/s achievements of school performance month-wise and presenting before VC and senior management
3. Develop, monitor and review policies relating to the University's research activities, including research and research training, internationalization and international reputation, and their management
4. To establish School Research Committees (SRCs) and monitor the research activities at the levels of schools
5. To oversee research and research activities of the University via strategic policy and management decisions taken within the URC and through the activities of its School Research committees (SRCs)

6. Guide, monitor, review and endorse the activities of its Sub-committees such as School Research Committees (SRCs),
7. To Ensure appropriate interaction on research issues, as well as the dissemination of information and advice to the Academic Council
8. To set the ordinances and regulations for UG/ PG Projects and Research students in the light of UGC guidelines through the Research Advisory Committee.
9. Defined the calendar for Project Review of UG and PG of all programs of all semesters to understand the status of the progress of the paper preparation by students.
10. Shall develop processes and activities based on the advice of Research Advisory Board (RAB)
11. Search for grant and collaboration opportunities shall be shared with every faculty in the university and the Deans have to ensure that a maximum number of proposals are submitted and opportunities are grabbed.
12. Ensure the availed grants are actually implemented in the university and yearly reports are filled and sent to the agencies
13. Shall ensure full funds are released and if not shall ensure reminders are sent to the agencies
14. Annual reports are available from all PI and necessary reminders/ guidelines/ instructions and letters are issued if it's not trained as per guidelines
15. Review, on an annual basis, submissions for formation and/or continuation of University Research Strengths and advise on funding allocations to, and the status of, all URC-funded research groups.
16. Publishing annual intellectual capital report by compilation of all research activities schoolwide and also at central level of all research coordinators who are working at university level
17. Provide leadership and advice on mechanisms to improve monitoring, benchmarking and reporting of the University's research performance.
18. Hold one event every fortnight as outreach activity to two events annually to facilitate the exchange and dissemination of information concerning cutting age technology or research front from international/national bank of experts not below one having 3000 plus citations for research and research training issues for the broader research community
19. Organize visits by eminent researchers to interact with the faculty and students.
20. Organize national and international conferences with the participation of eminent scientists/technologists in specialized/emerging areas.
21. Develop plans and coordinate efforts of departments of Schools, to obtain recognition for their research activities by national, international agencies such as UGC, DST, ICSSR, ICHR, ICPR etc.
22. Ensure code of conduct is strictly followed and schools and students are given a helping hand.
23. R&D fund allocation and creation of R & D facilities
24. R&D promotion activities for Faculty and students such as participating in International Conferences, Seminars, Workshops, etc.

25. To promote and keeping track of research publications in Scopus Indexed Conferences and Journals
26. Encouraging Research Proposal for external funding agencies by faculty and doctoral students.
27. To increase the Research MOU's of Galgotias University.
28. To conduct Publishing awareness programs continuously throughout the year to create a Research environment.
29. Encourage and ensure every school has one Center for Excellence.
30. Research Target setting for university and schools and follow-up process.
31. To provide supporting infrastructure & resources like space, facilities, Patent filing, funding, data handling & other for various research categories
32. To ensure that each faculty publishes at least one patent every year.
33. To ensure that PG/UG students publish one patent with Research Group members.
34. To provide Incentives in terms of monetary benefits, Promotions/awards and Relaxation in OD/Attendance for Faculty and students.
35. To Provide a Best Research faculty award and best outgoing Research student award during every convocation based on their research outcomes like Papers/Book chapters published and funded projects received.
36. To integrate teaching and research
37. Collaboration with publishing houses for edited books and authored books publication by GU faculties.
38. UCRD holds the responsibility of conducting Ethical Research and Innovation. UCRD shall issue every semester guideline to all the faculty members and students about Do's and Don'ts of the publications.
39. UCRD must maintain the record of the Publications of the schools central including status Communicated/Accepted/Published/Indexed as per the format.
40. Following are the **Do's and Don'ts** which we must follow while submitting Research papers:

    a. The affiliation used should be as "<NAME>, <DESIGNATION Professor/Associate Professor/Assistant Professor/Research Scholar/PG student/UG student>, Galgotias University, India
    b. All Research Papers need to be checked for Similarity Index using Licensed iThenticate of GU and to be communicated to Conferences/Journals with maximum of 10% similarity only.
    c. After submitting the Manuscripts to the journal/Conferences, Details needs to be updated with School Research Coordinators for Data updating, who in turn will fill the respective Google sheet of UCRD.
    d. The first author must be from Galgotias University if the publication task is being taken care of by Galgotias University through UCRD.
    e. The first author must be the person who has contributed the most and not in the order of seniority.
    f. The faculty who are from Galgotias University and doing Ph.D from outside, must mention in their research paper 'GU affiliation'.

g. In case of paper on the students work (Ph.D/ PG / UG) then work published on the same shall have their name as first author.
h. Maximum four authors can be there in any publications, in case of more authors permission from the Dean, UCRD office must be sought.
i. University prefers Interdisciplinary research.

41. UCRD collects the Data of Research Publications which is Communicated/ Accepted/ Published/ Indexed. For the same the format is mentioned in the Data of Research Publication Progress Status format.

Meetings and Quorum

- The University Center for Research and Development shall meet every week once in a year the quorum for meetings shall be 2/3rd of members.
- The draft Minutes of the Committee shall be circulated to the VC and Honorable Chancellor, as soon as possible for noting and/or discussion/decision as necessary.
- *URC will be constituted once, based on the performance every two year be reconstituted.*

Authority and Accountability

The Committee may investigate any matter falling within its terms of reference, calling on whatever resources and information it considers necessary to do so under closely under Vice Chancellor

- The Committee regulates the functioning of SRCs but in consultations and under intimation of higher ups.

Performance Evaluation

The Committee shall, monthly review its own performance and its terms of reference and shall report its conclusions and recommend any changes it considers necessary to the Vice Chancellor.

1.3.1. Sub process – Budget Definition	
Key Objectives	◆ Decide annual budget allocation for the R&D activities ◆ Decide the leads for the annual budget allocation
Key Inputs	◆ The total amount of funds available with the university for R&D related activities ◆ The R&D budget utilization details for the previous year

Process description	
Key Activities	**Description**

1. Requirement Gathering	1.1. The annual R&D budget definition exercise should start as per the budget guidelines taken from the Research targets and Research planning.
	1.2. The bottom up budget approach should be adopted for allocating the annual R&D budget
	1.3. The School Deans should invite the budget requirements from the faculty. The faculties should analyze the annual requirements and prepare an interim budget, this can be based on ● Previous year's budget ● Previous year's budget utilization report ● Expected projects ● Planned improvement in the R&D facility
	1.4. The budget heads should be defined for ● Conferences ● Journals ● Technical training/Research Training ● Specialized R&D items ● Patent filing ● Software ● Honorarium for RRC / RPC members (Research recognition committee / Research promotion committee) ● Expenditure for conducting registration / progress seminars of PG and PhD
2. Budget Submission & Review	2.1. The School should review the budget proposals submitted by the faculties
	2.2. In case of any discrepancy the school can refer the budget back to the faculties for changes. The faculties should re-submit the revised proposal within 2 days
	2.3. The final budget should be reviewed and signed by the Dean of School and submitted to Vice Chancellor for final approval
	2.4. The Dean R&D should review the budget and can seek clarifications before approval
	2.5. Any changes in the budget should happen with mutual discussion of Vice Chancellor, Deans, Finance committee and concerned faculty within 7 days
	2.6. The final approval for the budget should be sought from the Governing Body. The Governing Body/ Finance Committee can seek clarifications from Vice Chancellor before approval

3. Budget Intimation	3.1. The budget approved for Research & Development should be circulated by the Vice Chancellor
	3.2. The budget should be circulated to the Chief Research coordinator, Dean PG & Research, School Research coordinators and the School Deans.
4. Cross Utilization Approval	4.1. The prepared budget would have money allocated under various heads. There is a possibility that the budget allocated to a head would not be utilized. The cross utilization of budget should be permitted
	4.2. The cross utilization of budget should only be permitted within the department
	4.3. In case the re-allocation is less than 10% of the donor, approval from the Dean is required
	4.4. In case the reallocation is between 10% and 20% of the donor head, approval from Vice Chancellor is required
	4.5. In case the reallocation is greater than 20% of the donor, approval from the Vice Chancellor is required
	4.6. The School should prepare a record of all such cross utilization and send a copy to VC for filling the details of the cross utilization of the fund
5. Utilization Report	5.1. At the end of the year the budget utilization report should be prepared in order to assess the fund status
	5.2. The utilization report of the R&D budget should be prepared by the R&D cell, with inputs from all the departments
	5.3. The utilization should be assessed on the basis of ◆ Utilization of the total R&D Fund ◆ Utilization of fund within the department ◆ Utilization of fund under respective heads ◆ Any cross utilization of fund ◆ Fund performance as compared to the previous year
	5.4. In case of deviation in the School budget is more than 30%, a written explanation should be submitted to the Vice Chancellor by the Dean of the school.

	5.5. The budget for the next subsequent year should be prepared based on the budget utilization of previous year

Key Outputs	◆ **R&D fund utilization report** ◆ **Fund cross utilization report** ◆ **Utilization deviation from previous year**
	◆ **% Utilization of R&D budget** ◆ **% Utilization of budget School-wise / Head Wise**

1.3.2. ***Sub process – Research Proposals (Internal proposals)***	
Key Objectives	◆ Provide funding to the faculty and students to register for conference, journals and paper presentations, book chapter contribution, workshop, seminar, projects and external funding
Key Inputs	◆ List of proposals from the faculty / students

Process description	
Key Activities	**Description**
1. Proposal Submission	1.1. Standard format for the submission of proposal should be available on website, R&D cell and R&D coordinators
	1.2. Students and faculties should apply directly for attending the conference and publishing of research papers in international journals
	1.3. In case the paper is selected or the person is confirmed for attending the conference, a proposal should be submitted for necessary financial and other support. The support can be in terms of ◆ Sponsorship to pay for the registration fees ◆ Sponsorship for journal printing charges ◆ Any leave required from the University to attend the conference

	1.4. The proposal should be submitted in a prescribed format to the School R&D coordinator and School Dean. The standard format for application is available on the website / R&D cell / Departments and the applications should only be submitted in the standard format. The following details should be present in the proposal ◆ Budget ◆ Acceptance letter ◆ Conference / Journal name ◆ Application in DST / AICTE format for conferences to be held abroad ◆ Topic of Study ◆ Impact factor of the journal ◆ Location of travel, if required ◆ Conference / Journal website details ◆ Communication from Journal/ Organizing committee ◆ Copy of the paper/ presentation
	1.5. The University should pay extra incentive for selection of paper in a reputed journal with impact factor
	1.6. The students should be given leave to participate in the technical festivals of premier engineering university s
	1.7. The expense for attending the conference would also be paid by the institute based on the criteria mentioned in 2.2
2. Proposal Evaluation	2.1. The submitted proposals should be scrutinized before providing funding. R&D norms should be referred for scrutiny of the proposals
	2.2. The R&D cell under the guidance of the Vice Chancellor should scrutinize the submitted proposals. The proposals should be scrutinized on the basis of ◆ R&D Norms ◆ Impact factor for the journal ◆ Recognition of the conference ◆ Speakers at the conferences ◆ Viewership of the journals
	2.3. The proposals approved from the side of R & D cell, should be forwarded to the Vice Chancellor for final approval

	2.4. In case of a conference at an international location, the approval from the Chairman is required. Also, the concerned faculty should submit the proposal to AICTE / DST for the travel grant
3. Monitoring	3.1. The records of the paper published in journals should be filed with the R&D cell. The following fields should be required to file the details: ◆ Name of the faculty/student ◆ Department ◆ Journal ◆ Impact Factor ◆ Topic of the paper ◆ Date/ Volume of publication ◆ Paper publication fee paid
	3.2. The records for conferences should be filed with the R&D cell. The following fields should be required to file the details: ◆ Field of the conference ◆ Location ◆ Eminent speakers at the conference ◆ Trip expenses incurred for the faculty to attend conference
	3.3. The R&D cell should collect the required information from the department. Each school has an R&D coordinator who coordinates the activities of the R&D cell with the department
	3.4. The publication should be tracked continuously and the performance should be compared with the previous year. The publication copy of the book / paper should be made available in the university library by R&D cell for future references. The proceeding copy should be available in School library
	3.5. The published copy of the book / paper should be made available in the university library for further reference. It should also be available with the school library. The concerned faculty / student should deliver a short presentation in the department

Key Outputs	◆ List of paper publication in journals ◆ List of faculties attended conferences

	◆ Number of papers published in journals with Impact Factor ◆ Number of faculties attending international conferences

1.3.3. ***Sub process – Organizing Conferences***	
Key Objectives	◆ To organize the conference in Schools in collaboration with Other Schools / outside organizations ◆ Enhancing internal and external collaboration
Key Inputs	◆ Conference proposal ◆ Identification of inhouse team (General Chair, Organizing Chair, Finance Chair, Publication Chair) ◆ External advisory committee

Process description	
Key Activities	**Description**
1. Proposal Submission	1.1. Standard format for the submission of conference proposal should be available with UCRD, deans and R&D coordinators
	1.2. Every School should propose either single or in collaboration with other school in the University as per the code of conduct.
	1.3. Grants for organizing conference should be applied to funding agencies
	1.4. A circular by UCRD must be floated to all deans for applying to indexing agency. The proposal should be submitted by schools in a prescribed format to the UCRD. The following details should be present in the proposal ◆ Budget ◆ Advisory Board ◆ Inhouse committee ◆ Acceptance letter from collaborators ◆ Conference / Journal name ◆ Indexing Agency Name ◆ Application in DST / AICTE format for conferences ◆ Website

2. Proposal Evaluation	2.1. The submitted proposals should be scrutinized before sending to outside funding agency. Only the quality proposals should be approved.
	2.2. The UCRD under intimation to the Vice Chancellor should scrutinize the submitted proposals. The proposals should be scrutinized on the basis of ◆ R&D Norms ◆ Quality Speakers ◆ Quality Reviewing Process ◆ Advisory Board ◆ Indexing agency
	2.3. The proposals approved from the side of UCRD, should be forwarded to the Vice Chancellor for final approval
	2.4. After approval from indexing agency, the UCRD should closely monitor the progress on weekly basis till the conference is hosted and till settlement of bills and expenses and submission of report.
3. Quality Check	3.1. The papers received must be scrutinized for quality content ◆ Unique contents 90% and more ◆ The Papers should be aligned with the theme of the conference ◆ More external papers should be encouraged

Key Outputs	◆ List of paper publications ◆ List of faculties attended conferences ◆ List of Expert Speakers ◆ Extended papers for publication in journals ◆ Report of Conference ◆ Soft and hard copy of all documents, paper copy, plagiarism report, expenses bills, committee list, participant list, email, mobile no. and other details

1.3.4. Sub process – R&D Norms Amendments	
Key Objectives	◆ **To amend the R&D norms as per requirements**
Key Inputs	◆ **Existing R&D norms**

	◆ **Requirements for amendments**

Process description	
Key Activities	**Description**
1. Inputs	1.1. The R&D norms should be modified as and when required but not more than once in a year with intention to improve the quality of research
	1.2. There should be no constraints on the extent to which the R&D norms can be modified. However, the attempt should be to improve the quality of research
	1.3. The inputs to the amendments can be given by ◆ Dean of the school ◆ R & D cell ◆ R&D Coordinators ◆ Vice Chancellor ◆ National Advisory Board ◆ External Experts ◆ Other concerned stakeholders
2. Final Approval	2.1. The amendments should be approved by the Governing Body through the Academic Council
	2.2. Once approved, the new R&D norms should come into effect
	2.3. The revised points should be added as a separate section and a reference date should be given for the change
	2.4. Copy of the revised R&D norms should be circulated to all the departments, faculties by the R&D cell

Key Outputs	◆ **Revised R&D norms** ◆ **List of changes into R&D Norms**
	◆ **Number of times the amendment is made in the norms in a year**

1.3.5. Sub process – Intellectual Capital	
Key Objectives	◆ Manage the papers/research material

	◆ Provide papers / research material to the faculty and students
Key Inputs	◆ Published papers ◆ Research material documented by faculty/students

Process description	
Key Activities	**Description**
1. Knowledge Base Creation	1.1. The papers published in the journals should be freely shared with the faculty/students in the university
	1.2. The University should have common pool of papers available on the knowledge sharing database
	1.3. The knowledge sharing database should be online and available on the University intranet
	1.4. The database should have school wise / subject wise segregation of the papers and research materials
	1.5. The students & faculties should have permission to view and download the papers / research materials as required
	1.6. The log of all the downloads should be maintained for future reference
2. Material Collection	2.1. The papers published in the journals should be collected by the R&D cell from the school R&D coordinators
	2.2. The research material by the faculty should be submitted to the school R&D coordinators
	2.3. The papers should be submitted in hard copy as well as soft copy
	2.4. The database for the following should be created with the R&D Cell ◆ Database of publications of faculty and UG / PG students ◆ Database of the project funded externally by AICTE / DST / Any other agency
3. Material Updation	3.1. The papers / research materials should be put in the database for everyone to access
	3.2. The database should be available on the intranet for anybody to access the papers / research material

	3.3. The hard copy should be filed separately with the R&D cell and a different file should be present for every department

Key Outputs	◆ School wise / subject wise database of the papers/research material
	◆ % papers / research material accessed by the faculty/students ◆ Number of clicks on the database in a given time frame

1.3.6. Sub process – External Collaboration	
Key Objectives	◆ Collaborate with industry / R&D labs for consulting assignments
Key Inputs	◆ Capabilities and skill sets of the faculties in the university

Process description	
Key Activities	**Description**
1. Getting Projects	1.1. The faculty can take consulting assignments from industry based on the capability and available skill set
	1.2. The faculties can directly approach the companies or vice versa for getting the consulting assignments from the industry
	1.3. The faculty should keep the head of the school in loop and keep him informed about the progress of discussion
	1.4. The modalities related to project should be mentioned in the MoU ◆ Timelines for the project ◆ Scope of the project ◆ Cost of the project ◆ Facilities required from the university ◆ Faculty in-charge for the project ◆ Interim review dates
	1.5. **The** MoU **should be signed by the representative of the company, faculty in-charge, Dean of the School and Vice Chancellor of the university**

2. Facility Arrangement	2.1. The facilities required for the project should be mentioned in the MoU for the consulting assignment (Refer 1.5)
	2.2. The Head of the School along with the faculty should ensure that the requisite facilities are provided for the project
3. Review & Completion	3.1. The project work should be reviewed at interim dates as decided in the MoU
	3.2. The Head of the Department, senior faculties of the school and faculty in-charge should be present for the review work
	3.3. The interim report/final report should be submitted on the due date
	3.4. The dates for the review and submission can be changed on approval of the client
4. Revenue Split	4.1. The revenue earned from the project should be received in the name of the university
	4.2. A faculty fund should be created separately for each of the project and the rights to use the fund should vest with the faculty in charge of the project
	4.3. The faculty fund can be used by the faculty for conference and other research work requirements. It should be completely at the disposal of the faculty in-charge
	4.4. The revenue generated through the project should be distributed in a way ◆ 50% for the University for usage of the University Facilities. ◆ 40% for the faculty fund ◆ 10% for the administrative staff

Key Outputs	◆ Project Deliverables
	◆ Project completion as per schedule

1.3.7. Sub process – Preparation of R&D Brochure

Key Objectives	◆ **Publish R&D brochure**
Key Inputs	◆ **List of contents for the R&D brochure**

Process description	
Key Activities	**Description**
1. Preparation of R&D Brochure	1.1. The R&D cell should publish a Research & Development (R&D) brochure by October first week every year.
	1.2. The data regarding publications, Government funded projects including sponsored projects, consultancy projects; faculty as resources and details of reviewer, editor, session chair, and keynote speaker is to be maintained by the school R&D coordinator.
	1.3. Apart from this, departments conducting PG / PhD programs shall maintain the data regarding students registered for PhD, list of supervisors, 1-page summary of PG /PhD students.
	1.4. The above information should be submitted by each Research coordinator to the R&D cell by July end every year
	1.5. R&D cell would review the data submitted by all the departments and synchronize it properly in the form of brochure to be published
	1.6. R&D cell should obtain budget approval for printing the R&D brochure
	1.7. R&D brochure should be circulated to all departments and other stakeholders

Key Outputs	◆ R&D brochure
	◆ Turnaround time for printing the R&D brochure

1.4. School Research Committee (SRC)

The Dean of each school shall be responsible for managing the research activities in collaboration with Division Chairs and School Research Committee (SRC) which comprises at most 10 members with Ph.D. with proven research accomplishments including Dean.

1.4.1. The Committee

Total number of members to be restricted to 10.

1. Dean of the School (Chairman)
2. Professor and Associate Professors (maximum of *four members* to be chosen from various domains of research areas including Ph.D coordinator of the School) to be nominated by Dean and approved by VC
3. *All members must have Ph. D. Degree*

1.4.2. Roles and Responsibilities

1. To organize and oversee the progress of research activities to take steps to enhance the research capability of the school.
   i. By motivating the faculty and research scholars towards research activities
   ii. By enabling them to understand about research opportunities and its relevance in teaching and university activities.
2. To monitor and review the research activity in ensuring ethics, benchmarking the quality of research activity and its impact to promote excellence and development of research within the school.
3. To organize advanced research training to promote interdisciplinary research and collaborate with reputed national and international research institutions and labs
4. To maintain all data related to school and update time to time in the central database every Saturday without fail
5. To submit an annual report on research activity of the school to Dean Research & UCRD
6. To initiate, review and monitor the research activities relating to the Research scholars (PG and Ph.D) of the school in its totality such as
   a) Admission and Selection process of Research students
   b) Allotment of Ph.D guides to the selected research students based on their eligibility and research area based on their presentations/interviews for the full quorum of SRC
   c) To recommend Doctoral Committee (DC) for each candidate
   d) To approve the proposed research plan of the candidate as approved by DC
   e) To schedule and convene DC meetings and preparing minutes of meetings and to circulate
   f) to ensure the DC committee is monitoring progress
   g) issue letters to supervisors and candidates where in there is no progress and no outcome
   h) To approve the long abstract of the thesis on its completion and the final title of the thesis.
   i) to recommend the panel for the candidate
   j) To take necessary action required towards the recommendations of DC. and thus, play a role required for the operationalization of the Ph.D. program subject to the overall

supervision and guidance of the URC and submit the reports in the prescribed format **(Annexure-2)** consisting of minutes, executive summary with highlights) to URC.

7. To initiate, review and monitor the research activities relating to the faculty members of the school in its totality such as Establishment of research clusters, units to promote both national and international funding opportunities
8. To promote interdisciplinary research through the activities to enhance relationships and working with Research Committees of other Schools within the University by organizing FDPs, Workshops, Conferences etc.
9. To undertake the activities to develop external relationships with funding agencies of both national and international, with other Universities and Research Institutions.
10. To Communicate and publish the successes and outputs of School Research activities with Dean-Research update on school website
11. Exploring the possibilities of consultancy and meeting the targets assigned by UCRD
12. ensures everyone in the school follows the code of conduct
13. Monitor progress of the Center of Excellence and make those self-relevant.
14. Encouraging faculty (Staff) to apply and work towards patents, designs and copyrights and meet the target assigned by UCRD
15. Conducting Research Methodology workshop for staff and students every student and monitor the output
16. Responsible for publications of the UG PG students and of faculties of respective school
17. Shall be responsible for academic integrity of the school and shall maintain all records of plagiarism check for all articles and projects and papers
18. R&D promotion activities for Faculty and students such as participating in conferences, seminars, workshops, etc.
19. Encouraging Research Proposal for external funding agencies by faculty and doctoral students by mobilizing call for funding amongst all and conducting workshop on writing good research proposal
20. To increase the Research MOU's of concerned schools of the University.
21. The Dean/SRC shall provide in-house research exposure to students and facilitate them to carry out research-based projects using Research Based Learning (RBL).
22. The Dean/SRC of each school shall prepare, maintain and update the list of funding agencies relevant to the school both disciplinary and interdisciplinary.
23. The Dean/SRC shall use iThenticate (Turnitin) software or similar quality software to check for plagiarism of all research publications and technical reports.
24. The Dean/SRC shall ensure that at least one corporate training program given by the school to the industry/agency every month
25. The Dean/SRC shall sign at least one MoU for collaborative activities for research and faculty exchange for teaching and research, with other elite institutions within the country or abroad and execute the required activities as according to the MoU, every semester.
26. Minimum five collaborative events with industry
27. Minimum five collaborative events with social organization
28. The Dean/SRC shall ensure that UG students and PG students are aware of the good research process of writing papers, book chapters and patents. There should be at least 1 workshop

and 1 lecture conducted by the internal faculty and external experts during free hours about recent research and paper writing.

29. School shall organize every fortnight one research talk
30. The complete research profile at the end of each semester for each faculty shall be prepared and signed by the Dean of School to be submitted in the target sheet and to SRC and also to be updated from time to time on ERP as per the format given in **Appendix 1.1.**
31. Under each discipline and department, there shall be an exhaustive list of such topics or areas, which can be called a bank of research areas. It shall be utilized for the following research activities and is appreciated if the topic is chosen from this Bank:
    a. The Bank can be made available to the research scholars who may use it for their doctoral thesis.
    b. Similarly, the faculty shall also avail the Bank for identifying the subject for their research projects.
    c. Even for industry sponsored projects or for collaboration with other institutions, the Bank shall be utilized.

1.4.3. Training for writing Good funding Research proposal and Publications

Generally, faculties are eager to conduct research, but because of the lack of expertise to write a research proposal or having insufficient research skills, they are unable to channelize their efforts effectively. Hence, in many cases, a research proposal is rejected by a funding agency. Even for publication of papers because of the lack of knowledge about how to write a paper and under which format it should be submitted, sometimes the papers are not accepted. Therefore, the University shall organize rigorous training programmes for researchers given below.

1. How to write research proposal
2. How to write research paper
3. Networking
4. Seminars/Workshops with National 7 International agencies.

1.4.4. Research Group Formations

1. Research area identification.
    - Preference
    - Grouping
2. Each faculty to be part of one group.

- The Dean/SRC shall identify divisional research groups under each division and submit the entire list of divisional research groups in the school to URC at the beginning of each academic year.

- UCRD shall be identifying the strategic research groups where each group will have a chair (see the organizational structure of GU research as shown in **Figure 1)** at the beginning of each academic year. Each strategic research group shall concentrate on a particular research area of interdisciplinary nature.
- Faculties having the same research interest shall join the group might be interdisciplinary in nature. The research groups must be interdisciplinary and should not change frequently. Every faculty must be part of one of the research groups.
- The projects guided by respective faculty must fall under the area of the research group he or she is attached.
- Research group activity shall be every week in respective schools
- Every Research group should have at least 4 members. All members of the research group collectively must publish at least 10 research papers and file 2 patents every semester

1.4.5. Collaborative Research Projects:

The University-Industry Interaction is the demand of the day. If we want to contribute to the society at large, the University has to closely work with industries and different organizations. For that, the University shall plan the following activities:

i. Industry Sponsored Research Project: An organization can sponsor a project and the experts of the institution concerned can conduct research on this project for which the financial support will come from the organization. As a result, if any patent is registered, then there shall be a sharing of income coming out of the patent among the industry, researcher and University.
   This will lead to three kinds of benefit:
   a. The researcher will get exposures to the concerned area of research;
   b. The industry will get solutions to its problem; and,
   c. The researcher, University and Industry can earn money and at the end, the society ultimately will benefit.

ii. Interdisciplinary Research: The interdisciplinary research is a must nowadays. No department, institution, researcher or a scholar can address a research problem in which more than one discipline is involved and unless they get together and conduct interdisciplinary research no fruitful findings can be arrived at. Therefore, the University has decided to have exercise in interdisciplinary research activities for which the following steps will be taken:
   a. Identify the interdisciplinary area.
   b. Identify the different experts from concerned disciplines who can work together.
   c. Study the requirement of the infrastructure to conduct the concerned interdisciplinary research.
   d. Explore possibilities to find resources for such interdisciplinary research.

1.4.6. Collaborative International Research

Collaborative international research is essential to facilitate mutual learning and expertise sharing. The University plans to have the MoUs with prominent research institutions abroad, for conducting research jointly in the areas of common interest. For this purpose, a Task Force shall be constituted that will constantly explore the possibilities of having such collaborative or joint research in terms of thrust areas, decide the modus operandi of conducting such research and attend to other relevant aspects.

1.4.7. Meetings and Quorum

- The Research Committee shall meet four times in a year (twice per semester) or more frequently if the business requiring its attention should so dictate.
- ***Mandatory four meetings per year must be planned every Saturday every month***
- The quorum for meetings shall be 2/3rd of members.
- The Committee may also invite Dean of other schools, or other person to attend any meeting(s) of the Committee, as it may from time to time consider desirable, to assist the Committee in the attainment of its objectives.
- In addition, SRC may invite two student members (one from early research career students and one from senior research career student for the meeting to discuss the agenda items that may need student inputs.
- The draft Minutes of the Research Committee shall be circulated to the UCRD and VC with action taken report of previous meeting amongst authorities of the university same day
- SRC will be reconstituted once in two years tenure shall be same as RAC

1.4.8. Authority and Accountability

- The Committee shall operate under delegated authority from the URC.
- The Committee may investigate any matter falling within its terms of reference, calling on whatever resources and information it considers necessary to do so.
- The Committee is authorized to seek any information it requires from any employee of School to enable it to discharge its responsibilities and shall have made available to it on a timely basis all information requested from any employee in a clear and well-organized manner.

1.4.9. Performance Evaluation

The Research Committee shall, review its own performance every month and its terms of reference and shall report its conclusions and recommend any changes it considers necessary to the UCRD

1.4.10. Checklist:

- The Dean/SRC shall submit the details of the research performance of each faculty as according to the **Appendix 1.1.**

- The details of funded projects, projects submitted for funding, active consultancy projects, and patents filed per semester submitted by the Dean/SRC/Chair of strategic research group to Dean-Research/URC, as according **to Appendices 1.2, 1.3, 1.4, 1.5 and 1.6.**

Annexure – 1: Format for SRC Meeting Notice (Agenda of Meeting)

MEETING NOTICE

SCHOOL RESEARCH COMMITTEE

Name of the School	
Minutes of	First/Second/Third/Fourth Meeting
Date & Time	
Venue	

AGENDA ITEMS

Item No.		**Description**
1		Introduction of SRC members & Welcome address by the Chairman
2		ATR To confirm the minutes of the previous *minutes* meeting.
3	a	
	b	
	c	

School Ph.D Coordinator

Dean (Chairman-SRC)

Annexure – 2: Format for SRC Minutes of Meeting

SCHOOL RESEARCH COMMITTEE

MINUTES OF MEETING

Name of the School	
Minutes of	First/Second/Third/Fourth Meeting
Date & Time	
Venue	

1.0	Executive Summary (150 to 300 words)
2.0	Concluding Remarks (in bullets)
	✔ Highlight 1 ✔ Highlight 2 ✔ Highlight 3 ✔ Highlight 4

3.0	**Agenda item wise Notes and Resolutions**
Item No. 1	
Notes	
Resolution(s)	
Item No.2	
Notes	
Resolution(s)	
Vote of Thanks	

School Ph.D Coordinator Dean (Chairman-SRC)

Annexure- 3: Format for the approval of School Research Committee

FORMAT FOR THE APPROVAL OF SRC

School of _____

Date :

To,
The Vice-Chancellor
Subject: Approval for Reconstitution of School Research Committee

Dear Sir,

We request you to kindly approve the following constituted members of the School Research Committee (SRC) for the School of _____

SN	Name of Member	Designation	Category
1			Ex-officio and Chairperson
2			Ph D/PG Coordinator of the School
3			SRC Member
4			SRC Member
5			SRC Member
6			SRC Member
7			SRC Member
8			SRC Member
9			SRC Member
10			SRC Member

***Reasons for reconstitution**:* _____

Thanking you,

Yours sincerely,
Forwarded

(Chair Person, SRC) (Dean-Research) (Name:)

(Name:)

Approved / Not Approved: _____ VC

Format for Performance of the faculty publications School wise and Semester wise.

I. Research Publications

S. No.	Name of the School	Category	Contributions from			Sub Total	% with respect to target	Per Faculty Publication for the semester
			Faculty	Ph D Scholars	UG/PG Students			
1		SCI						
		SCOPUS Indexed						
		UGC Care						
Total								
n		SCI						
		SCOPUS Indexed						
		UGC Care						
Total								
Total University Publications		SCI						
		SCOPUS Indexed						
		UGC Care						
Total								

II. Funded Research

SN	Name of the School	Type of Funding Body	Level of Funding body (N/IN)	Name of the Funding Body	Sanctioned for the Period of	Sanctioned Amount (Lakhs)	Received Amount (Lakhs)	% with respect to target
1		Sponsored Research						
		Industrial Projects						
		Students Internship Projects						
Total (in Lakhs)								
Total No. of Assignments								
n		Sponsored Research						
		Industrial Projects						
		Consultancy						
Total (in Lakhs)								
Total No. of Assignments								
Total University Funded Projects		Sponsored Research						
		Industrial Projects						
		Consultancy						
Total (in Lakhs)								
Total No. of Assignments								

III. Consultancy

Every project internship must lead to consultancy and standard documents to be as per annexure must be signed by the concerned industry

S. No.	Name of the School	Type of Consultancy	Level of Funding body (N/IN)	Name of the Organizing	Project Period	Consultancy Amount (Lakhs)	Received Amount (Lakhs)	% with respect to target
1		Expertise						
		Facilities						
		Problem Solving						
Total (in Lakhs)								
Total No. of Assignments								
n		Expertise						
		Facilities						
		Problem Solving						
Total (in Lakhs)								
Total No. of Assignments								
Total University Consultancy		Expertise						
		Facilities						
		Problem Solving						
Total (in Lakhs)								
Total No. of Assignments								

IV. Patents/ Designs/ Copyrights/ Authored Books/ Edited Books and Book Chapters

S. No.	Name of the School	Level	Patents	Designs	Copyrights	Authored Books	Edited Books	Book Chapters
			Number	Number	Number	Number	Number	Number
1		National						
		International						
Total								
n		National						
		International						
Total								
Total University Patents/ Books/Book Chapters published		National						
		International						
Total								

V. Summary Outcomes of GU Research

S. No.	Name of the School	Category	Contributions from			Sub Total	% with respect to target	Per Faculty Publication for the semester
			Faculty	Ph D Scholars	UG/PG Students			
1		SCI						
		SCOPUS Indexed						
		UGC Care						
Total								

SN	Name of the School	Type of Funding Body	Level of Funding body (N/IN)	Name of the Funding Body	Sanctioned for the Period of	Sanctioned Amount (Lakhs)	Received Amount (Lakhs)	% with respect to target
1		Sponsored Research						
		Industrial Projects						
		Students Internship Projects						
Total (in Lakhs)								
Total No. of Assignments								

S. No.	Name of the School	Type of Consultancy	Level of Funding body (N/IN)	Name of the Organizing	Project Period	Consultancy Amount (Lakhs)	Received Amount (Lakhs)	% with respect to target
		Expertise						
		Facilities						

		Problem Solving						
Total (in Lakhs)								
Total No. of Assignments								

S. No.	Name of the School	Level	Patents	Designs	Copyrights	Authored Books	Edited Books	Book Chapters
			Number	Number	Number	Number	Number	Number
1		National						
		International						
Total								

VI. Summary

Funding agencies funded Research Projects		**Total**
Completed Research Projects	**#Projects Completed**	
	Total Grant	
Ongoing Research Projects	**#Projects Ongoing**	
	Total Grant	
Sanctioned Research Projects	**#Projects Sanctioned**	
	Total Grant	
Institute funded Research Projects		
Completed Minor Research Projects	**#Projects Completed**	
	Total Grant	
Ongoing Minor Research Projects	**#Projects Ongoing**	
	Total Grant	
Sanctioned Minor Research Projects	**#Projects Sanctioned**	
	Total Grant	
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		

Books Published	
Book Chapters Published	
Papers in Conference Proceedings	
Patents	
Patents Published	
Patents Filed	
Cases Published / Copyrights Received	
Cases	
Copyrights	
Doctoral Research	
Ph.D. Degree Awarded	
Current Ph.D. Students	
Current Ph.D. Guides	
Research Awards	
Research Awards Received by the Faculty Members	
Faculty Members who Received Financial Support from External Funding Agencies and University for Attending International Conferences	
Conferences / Seminars / Research Talks	
International / National Conferences Organized by the Institutes	
Seminars / Workshops / Training Programmes Organized by the Institutes	

1.5. Funded Projects

1.5.1 Sub Process – External Project Funding	
Key Objectives	▪ Every year the Dean/SRC shall have a target of submitting funding proposals worth minimum 2 Cr every year and minimum 1 Cr every semester. ▪ The Dean/SRC shall have at least one active funding project for each divisional group exceeding a total fund amount of Rs. 30 Lakhs per school per year and Rs. 20 Lakhs per year through interdisciplinary research projects, using the format shown in Appendix 1.2 ▪ The Dean-Research and UCRD shall have at least one active funding project for each strategic research group exceeding a total amount of Rs. 150 Lakhs per semester, using the format shown in **Appendix 1.3.**
Key Inputs	▪ To gather funding support for external funding

Process Description	
Key Activities	**Description**
1. Project Submission	1.1 The various agencies of government publish advertisements in the newspaper / website for the funding of projects. The format for the proposal submission is published along with advertisement
	1.2 The UCRD should gather the complete information on the project funding by the government as and when it is published. The information related to this could be ◆ The Project topic ◆ Scope of the project ◆ Expected deliverable ◆ Funding required This list shall be updated at least once in six months and reported to URC. The complete list of all funding agencies shall be maintained and updated each academic year by each Dean/SRC and also with UCRD
	1.3 The Dean/SRC of each school shall prepare, maintain and update the list of funding agencies relevant to the school to which no funding proposals had been sent, the list of funding agencies to which funding proposals had been sent but not yet approved, and the list of funding agencies from which active funding projects are being carried out.
	1.4 The Chairs of strategic research group shall identify the funding agencies supporting interdisciplinary research and submit the list to Dean-Research and URC. They can also get a list from UCRD.
	1.5 The circular should be prepared by the R&D cell and sent to Deans
	1.6 Deans should forward the circular to the faculty and students

	1.7 The faculty and students should be asked to submit the proposal at least 2 weeks before the final due date to the UCRD in the format as prescribed by the external funding agency
	1.8 The faculty should go through the AICTE / DTE / DST / UGC / CSIR guidelines and prepare the proposal accordingly.
	1.9 The project proposal should be submitted to the UCRD through SRC and the Vice Chancellor for forwarding. If required external expertise can be consulted prior to the submission
	1.10 The approved proposal should be submitted to the concerned government agency for the project funding
2. Approval / Rejection	2.1 The approval / rejection for the project comes to the Vice Chancellor
	2.2 The information on approval/ rejection should be forwarded to the concerned school by Vice Chancellor
	2.3 In case of proposal approval, the faculty is required to make a presentation to the government agency for funding (if required)
	2.4 The date for the presentation is mentioned in the letter received from the funding agency
	2.5 Once the proposal is approved from the funding agency, the required facilities should be provided by the university
	2.6 The faculty should submit the complete details of the requirements to the R&D cell. These requirements should contain the following details: ◆ Duration of the project ◆ Lab required for the projects ◆ Expected amount of expenditure to be incurred for using university facility ◆ Manpower requirements
	2.7 The required details should be submitted to the Vice Chancellor for final approval
	2.8 The required facilities should be arranged for the faculty to execute the project with Vice Chancellor ’s approval
	2.9 The Dean shall reduce the teaching load of principal investigator by 3 hours per week /co-investigator 2 hours per week in order to complete the funded project by deadline.
3. Review	3.1 The funding agency requires continuous monitoring on the execution of the project. A progress report should be submitted at defined time intervals to the funding agency

	3.2 The internal reviews should be conducted before the progress report can be submitted to the agency by the committee headed by R&D cell, Dean of Concerned School and one subject matter expert from the respective school.
	3.3 For internal review the deviations for the following heads should be taken into consideration ◆ Budget ◆ Project duration /schedule ◆ Scope of the project ◆ Deliverables
	3.4 The review report is sent to the external funding agency for further review
	3.5 The audit for the project should be performed during required time intervals (as defined by the agency) in order to keep a check on the defined duration / schedule and budget utilization of the project
	3.6 The audit report should also be submitted to the funding agency
	3.7 The R&D cell should recommend the incentive beneficiary (staff / faculty) reports through approval of the Vice Chancellor to accounts based on the grants availed during that financial year with reference to the R&D norms as applicable. For process around incentive payment, refer to "Miscellaneous Staff Payment" in "Finance & Accounts"
4.	5. The faculty members of the group which brings a funded research grant of not less than Rs. 10 Lakhs shall be given an incentive of a lump sum of 2.5% of sanctioned fund at the beginning and 2.5% of sanctioned fund at the completion of project by GU

Key Outputs	◆ List of projects approved for the external funding ◆ Utilization report for the project
KPIs	◆ % proposal approval by the funding agency ◆ Amount of funding received by the university from the government agency ◆ % Utilization of the funding ◆ Project completion as per the schedule

In addition to the above policies, UCRD Team along with VC has privilege to enhance and modify the policies and issues the order as and when required.

1.6. Consultancy Projects:

Develop and establish consultancy policy for

- The Dean/SRC shall make a list of all potential industries for consultancy and submit to the Dean-Research/URC at the beginning of the academic year. All core industries of the school shall be included in the list.
- The dean of the school must visit all industries related to his school in the NCR every year in the beginning of the financial year - April and explore possibilities of collaborations and consultancy / corporate turning opportunities available.
- The Chairs of the strategic research group shall list all potential industries of interdisciplinary nature for consultancy and submit to Dean-Research/URC at the beginning of the academic year.
- The Dean/SRC shall ensure that all professors and associate professors should have active consultancy projects with industries exceeding a total amount of Rs. 20 Lakhs per semester, using the format shown in **Appendix 1.4**.
- The Dean-Research/URC shall ensure that at least one active consultancy project per strategic research group is being carried out with industries exceeding a total amount of Rs. 30 Lakhs per semester, using the format shown in **Appendix 1.5.**
- The faculty member(s) having consultancy grant of not less than Rs. 2 Lakhs, shall be given an incentive of as according to the consultancy policy of GU.
- The school shall support the faculty doing consultancy by providing on-duty leave when the faculty is required to go to the industry to provide consultancy, on prior permission from Dean/SRC/URC. It is expected that the concerned faculty must submit photo and MoM of the meeting after visiting concerned industry same day and ATR within next 7 days

- Encouraging the faculty to utilize their expertise for consultancy services. The consultancy works can be categorized as:
    - Software consultancy.
    - Research based consultancy.
    - Industrial consultancy
    - Collaborative consultancy
    - Extension activities
    - Human resource development.
    - Testing
    - Any other suitable domain/area

In addition to the above policies, the Head of the institution has privilege to enhance and modify the policies and issues the order as and when required.

Consultancy Norms

The College shall extend expertise of faculty and R&D facilities to the outside agencies for providing solutions. The revenue generated out of consultancy shall be distributed among the concerned faculty and the supporting staff along with the share of the college as may be

approved by the GB/BOM from time to time. The tentative distribution of the revenue generated out of consultancy shall be as given below.

The University	**50 %**
VC/PVC/Registrar/ Dean Planning	**2%**
Dean/ H.O.D.	**2%**
School consultancy in charge/ one who brought the Consultancy	**2%**
Faculty	**40 %**
Lab Assistant	**0.5 %**
Accountant/ CA	**0.5%**
UCRD Team / SRC	**3%**

1.7. Establishment of IPR and Innovation cell

It is the initiative by GALGOTIAS UNIVERSITY, GREATER NOIDA in administering intellectual property rights, to encourage and assist faculty members, staff, Undergraduate, Postgraduate students, Ph.D. Research Scholars and others associated with respect to their discoveries and inventions in a manner that is equitable to all parties involved.

The University recognizes the need for and desirability of encouraging the broad utilization of the results of research by scholars and acknowledges the importance of the patent system in bringing innovative research findings to practical application. The innovative research findings often give rise to patentable inventions even though the research was conducted for the primary purpose of gaining new knowledge. The faculty members, staff, Undergraduate, Postgraduate students, Ph.D. Research Scholars and others associated can contact GALGOTIAS UNIVERSITY, GREATER NOIDA patent cell for initiating the patent filing process as per the procedure mentioned in this document for their projects/inventions, etc.

Initiatives to enhance Patent Filing Activity with GALGOTIAS UNIVERSITY, GREATER NOIDA-UP

1. **GU Innovator of the Month Award**
   a. To promote research and innovation amongst Undergraduate, Postgraduate and in general in higher education, GALGOTIAS UNIVERSITY, GREATER NOIDA-UP has constituted **"GU Innovator of the Month Award**" for students of GALGOTIAS UNIVERSITY & respective schools.
   b. Awards shall be common for UG and PG

   c. A working implementation of either a concept, a process or a product idea with potential to commercialize, idea considered for the award.

d. The projects judged on criteria such as:
   - Applications to society/National thrust area
   - Utility and scope in today's context
   - Commercial viability
   - Innovation/improvement in existing process
   - Patentability

e. The evaluation carried out in two levels:
   Ø **Level I:** School level evaluation is done by a team of experts under the Dean of the concerned school. Three best projects in each area mentioned above are identified and forwarded for participation at University level. The students should clearly highlight the innovative aspects of their projects during this evaluation.
   The details of projects selected at college level should be submitted to a team of experts constituted at University Level along with all the projects participated at college level along with evaluation process and judgment sheet duly signed by judges and principal.
   Ø **Level II:** The team identifies the best innovative projects in each category for giving the award.

f. The award comprises of a certificate and cash prize (Rs. 2000/- at school level maximum limited to 5 every month in addition to project expenses

2. **Curricular Reforms**
   Enhanced Industry Participation through involvement of Industry in following aspects was motivated:
   - Curriculum Design
     - Every BOS and Focus Group has Industry Representation.
   - Content Delivery
     - Specialized topics and units are being covered by Industry People.
     - STTP and Workshop are being jointly organized.
   - Mandatory Internships, Industry Visits and Guest Lectures
     - Part of TAE; ensuring participation of all the students.

3. **Promotion of Research and Development**
   The Research and Development activities which may lead to patent filing are encouraged by providing the following:
   - Seed Money for R&D.
   - Collaborative Research.
   - Evaluation of Research by Industry People.
   - Organization of Joint Conferences with Industry
   - Many Research Scholars are working on industry-based problems with

- STTP in collaboration with Industries
- MoU's with many industries for training and research collaboration.

4. **Initiatives for IPR**

- Patent Attorney for assisting patent filing activities
- Financial and technical support for patent filing activities
- Cash incentives for filing and grant of patent.
- Faculty sponsored to attend Training programmes on IPR at NIIPM
- Training programmes organized for students (UG, PG students and Ph.D. Scholars) by GALGOTIAS UNIVERSITY, GREATER NOIDA through 'Research Methodology Workshops'

1.8. Entrepreneurship Development

- Entrepreneurship Development Cell in place at Institute.
- Entrepreneurship Development' subject part of curriculum to learn the need of Entrepreneurship, Identification of Business opportunities. Mechanisms of Product selection, Technology Assistance for Entrepreneurs, Technical and Commercial aspects of SSI Unit, Preparation of Project Report, Govt. Schemes and assistance, etc.
- Subjects on Project Management, Finance Management as Open Electives by MBA Department
- Promotion of Technology based Entrepreneurship through Best Innovation Awards with Prizes.
- EDP organized in collaboration with MCED with the core objective of providing self-employment to the students.
- Organization of 'GU -idea' Business Plan Competition Event

7. **Support for**
    i. Mini, minor and Major projects are introduced.
    ii. Project selection is through active industry participation.
    iii. Multidisciplinary projects are encouraged. Industry is being involved in evaluation of Projects and Seminars of UG/PG/Ph.D. students.
    iv. All project expenses (upto Rs. 1 Lac) related to fabrication of set up, testing, etc. borne by Institute

Target: to be amongst top 5 in the year 2021 and top 3 amongst the listing in the Indian patent office annual report in the year 2022

1. Establishment of IPR cell and Patent Support	1.1 There shall be IPR cell at the university under UCRD led by incharge IPR cell
	1.2 The project in-charges /coordinators of the schools shall work under Patent In charge of the university
	1.3 Patent Attorney should be appointed by the University as per the rate contract based on management / governing body for helping university students and staff for following ◆ Prior art search ◆ Patent Drafting ◆ Filing the patent with appropriate patent office and request for examination ◆ Examination and Publication of Patents ◆ Grant or Sealing of Patents with respect to oppositions ◆ Routine follow-up with patent authorities ◆ Informing applicants of actions required for maintenance of the application status
	1.4 There shall be in-house portal for the submission of idea and best idea should be rewarded every month
	1.5 The Dean/SRC shall ensure that at least two patents are published/awarded from each divisional research group every semester.
	1.6 The expenses involved in filing the patents and getting published shall be borne by the GU as according to the GU patent policy.
	1.7 The 100% expenditure on patents must be by university. place of invention must be university and inventor's affiliation must be university name and if found not to be considered as violation of code of conduct
	1.8 The policy and format must be circulated by an email to all stakeholders. The norms related to financial support to file patent should be widely circulated among all stakeholders. The faculty members and students interested in filling the patent applications should approach the patent cell through guide and respective SRC
	1.9 Detailed proposal in the desired format given by Patent Cell Office, India should be submitted to the UCRD
	1.10 The patent data must be maintained as per the annexures
2. Increasing Patent	2.1 IPR in-charge along with school coordinators and deans of the school should take measures to increase the patent awareness among the students and faculties at university

Awareness	2.2 School Dean shall ensure one day workshop on patent awareness at every class must be conducted. SRC committee shall ensure every semester workshop for IPR must be organized for every Undergraduate/ postgraduate program division must be organized and students should be encouraged to write patent proposals and prior art search in the odd semester beginning of the session (within a fortnight)
	2.3 Approval on the proposal is taken from IPR and Vice Chancellor within 15 days.
	2.4 Concerned faculty / students should be notified about the status of the proposal within 30 days of submission of the proposal
	2.5 SRC through IPR cell should forward the approved proposal to the Patent Cell Office India through Patent Attorney. The concerned faculty / student should be in continuous touch with the Patent Cell Office for the status
3. Review of Projects	3.1 The project / research work undertaken by Undergraduate and postgraduate students should be assessed by respective school committees. The supervisor must write it shall lead to patent/ publication / product.
	3.2 The Review committee should also have one member from the IPR cell (central team)
	3.3 In case the project / research work has potential to become a patent, the IPR cell should provide guidance on the formalities to file for a patent
	3.4 the R&D cell to estimate the potential of the work to become a patent
	3.5 The R&D cell should maintain the records of all the project work filed for patents along with expenditures and dates of publication and examination
	3.6 The innovation gallery to be established which should have information about all patents and prototype of the projects
4. Various stages for filing patent applications:	4.1 Submission of draft of patent application to GALGOTIAS UNIVERSITY, GREATER NOIDA IPR -Cell through Dean of concerned school. The draft can be submitted round the year, however, the meeting for scrutiny of applications will take place every Friday. 4.2 Each patent application should comprise the students and guide as inventors. 4.3 Scrutiny of applications based on quality of application. 4.4 Prior Art Search for the invention. 4.5 Draft modification in accordance with guidelines from Patent Attorney and Patent Office and submit it to GALGOTIAS UNIVERSITY, GREATER NOIDA Patent Cell. 4.6 Filing of patent application with appropriate patent office.

	4.7 After filing the application for the grant of patent, a request for examination is required to be made by the applicant or by a third party and thereafter it is taken up for examination by the Patent office. 4.8 Usually, the First Examination Report is issued and the applicant is given an opportunity to correct the deficiencies in order to meet the objections raised in the said report. 4.9 The applicant must comply with the requirements within the prescribed time otherwise his application would be treated as deemed to have been abandoned. 4.10 hen all the requirements are met, the patent is granted and notified in the Patent office Journal. 4.11 However, before the grant of patent and after the publication of application, any person can make a representation for pre-grant opposition.
5. Application Proforma	5.1 Full name, nationality and address of applicant(s): GALGOTIAS UNIVERSITY, GREATER NOIDA- UTTAR PRADESH, INDIA 5.2 Full name, nationality and address of inventor(s): Students and faculty 5.3 Title of the invention: it must describe your invention in one sentence or few words. 5.4 Technical field of the invention: ex. which stream of Engineering or Non-Engineering science or technology your invention is related to. 5.5 Prior art: what is the existing technology available in the field relating to your invention and disadvantages in that technology which are overcome by your invention. 5.6 Object: Reason and advantages of your invention over existing technology must be mentioned. 5.7 Synopsis: similar to the synopsis written for journals and scientific articles. 5.8 Brief description of drawings (if any): if any figures are given to describe the invention only numerals must be used on it and what numerals denote must be described here. Ex figure 1 denotes "----- where 1 shows ----, 2 shows---- etc. 5.9 Detail description of the invention: describe in detail about the invention under this heading 5.10Best method of performance of the invention: preferably in one to two paragraphs mentioning the process in which invention is performed by giving example. 5.11CLAIMS: mention specific and novel features of your invention which you need to protect. 5.12Abstract: basic idea about your invention in one paragraph 5.13Drawings
6. Do's and Don'ts for filing	6.1. For all applications for patent filing, it is mandatory that the list of Inventors should include names of all projectees/ group students, project/mini project guide necessarily.

patent applications	6.2. No press release or any such activity should be undertaken by the Inventors prior or after patent filing till grant of patent.
	6.3. For all patent applications filed GALGOTIAS UNIVERSITY, GREATER NOIDA will act as applicant and the faculty/students will act as Inventors.
	6.4. For all faculty members, staff, Undergraduate, Postgraduate students, Ph.D. Research Scholars and others who wish to file patent application through GALGOTIAS UNIVERSITY, GREATER NOIDA, the place of Research/project/mini project, etc should be GALGOTIAS UNIVERSITY, GREATER NOIDA mandatorily.
	6.5. The Inventors should submit undertakings mentioning above points to IPR Cell.

Key Outputs	▪ Records of project work filed for patents ▪ No of ideas from an individual (students/ faculties filed for patents)
KPIs	▪ Number of research work filed for patent by the university faculty/students ▪ % Patents ideas accepted ▪ No of patents filed/ published/granted year wise

In addition to the above policies, Head of the institution has privilege to enhance and modify the policies and issues the order as and when required

1.9. GU's Policy for funding Research

1. For reputed international conference paper presentation, a travel grant shall be approved by UCRD through the recommendation of Vice Chancellor (subject to condition of fulfilment of all documentation and conditions laid down by the UCRD)
2. 50% fees concession shall be given in the tuition fees towards Ph.D for in-house faculties who have completed one year minimum service at GU and shall be given only till the faculty is in full time employment
3. From the very beginning, the University encouraged young faculty to conduct research. Thus, it has opened a scheme for providing financial assistance to Minor Research Projects. According to this scheme, a faculty member prepares a Minor Research Project, which is submitted to a committee at School/University level and on the recommendations of this committee the University gives financial assistance to the faculty concerned. It is also mandatory to submit a quarterly progress report of such a Research Project to the UCRD for this purpose, every year the University earmarks financial budget for each school. Each school shall be given a seed grant of Rs. 1 Lakhs/year.

1.9.1. Sub process – Seed Funding	
Key Objectives	◆ **Provide seed funding to the faculty for R&D projects related to PG / Doctoral studies**
Key Inputs	◆ **Seed funding proposals**

Process description	
Key Activities	**Description**
1. Providing Seed Funding	1.1. Only the proposal submitted to external agencies like AICTE / UGC/DST etc should be eligible for seed funding
	1.2. The proposals submitted to the external agencies should be forwarded to the R&D cell
	1.3. The concerned faculty shall give a presentation before the committee comprising of Vice Chancellor, R&D cell members, Concerned School Dean and one subject expert outside of the university.
	1.4. During the presentation it is expected to give the details about the project, its utility to the industry & society, research outcome etc.
	1.5. The committee should give the remarks and accordingly the proposal shall be forwarded to the Chairman for final approval

Key Outputs	◆ List of submission for seed funding ◆ List of projects provided seed funding
KPIs	◆ List of projects accepted for seed funding

1.10. Awards & Recognition

The University would like to encourage quality research in different thrust areas. For this purpose, outstanding research contributions done by faculty, researcher, and research scholar shall be recognized. Therefore, the University shall prepare a scheme for providing incentive to researchers and scholars. The incentives are identified as under:

- Incentive in terms of money
- Incentive in terms of awards/prizes
- Incentive in terms of certificate or giving more weightage for the career advancement scheme, etc.

At the beginning of every year research awards will be distributed for all the faculties and students. The award will give after the details being collected from the Research coordinators of each school. The awards will be based on the incentive policy defined by the UCRD team approved by Vice Chancellor and endorsed by the Hon Chancellor. During December of every year, reports of publications (journals, conference, patent, chapter, and book) of faculty will be collected for the particular year and during January of next year awards will be given.

1.10.1. Sub process – Awards & Recognition	
Key Objectives	◆ **Provide incentive to faculties/students to perform research-oriented work** ◆ **To increase publication and visibility in international journals and conferences**
Key Inputs	◆ **The grants available with the university** ◆ **External grants secured** ◆ **List of papers published along with the impact factor of the journal** ◆ **List of the patents filed** ◆ **List of Consultancy assignment secured** ◆ **Citations of the faculties**

Process description

Key Activities	Description
1. Awards	1.1. The special awards / incentives should be available for ◆ PhD completed scholars ◆ Faculties doing projects under government grants ◆ Papers published in journals with high impact factor ◆ PhD guidance (Students from Galgotias University) ◆ High quality research
2. Incentives	2.1. Faculties involved in projects with external funding should be given extra incentives on the amount of grants.
	2.2. Cash rewards / incentives may be given to the faculty with publication in a journal of impact factor subject to the approval of a committee comprising of Vice Chancellor, UCRD and two visiting subject experts.
	2.3. Incentives may be given to the faculty under whom the candidates have completed PhD or to the faculties who have guided GU faculties for Doctoral Research (PhD) for the period of maximum three years
	2.4. For citation of papers under the affiliation of Galgotias University, an amount of INR 1000/10 citations will be awarded. The citations will be measured using Scopus; it should not include self-citations. Award amount to be shared if more than one author publishes the paper and in proportion for first author to last author. there shall not be more than 4 authors for a paper.
	2.5. Attending STTP/FDP in the category 'A' institutes of National Importance shall be provided with on duty + 100 % registration fee
	2.6. Grants received from External funding such as AICTE/ GoI etc. Faculty-5% on grants School Dean-2% on grants School Research Coordinator - 1% on grants Central Research Coordinator - 1% on grants VC/PVC - 1% on grants
	2.7. For Patent filing, Registration fees, University will take care. Filing the copyright - Registration fee (100%) Ph.D. Supervisor - On award of Ph.D. degree - Rs. 10000/-

	2.8. Convenor of conference in the university at International level indexed in Scopus - Any School - Rs. 10,000/-
	2.9. Authored Book/ Edited Book/Book Chapter with Scopus indexed - For Faculty - Rs. 5,000/ Rs. 8,000/ Rs. 2000/
	2.10. Seed money - Prior approval by management - Rs. 2.5 to 5 Lakh
	2.11. Funded Project - Category (in Lakhs) upto 10/20/30/30 and above Rs.2 5,000/ Rs. 50,000/ Rs. 70,000/ 10% of the principal amount

Key Outputs	◆ List of faculties eligible for extra incentive
	◆ Amount of money given as extra incentive ◆ Number of faculties getting felicitated

Level	**Awards/Amounts**	
	SCOPUS (Free)	**SCI/ SCIE** (free)
All UG courses	2000	5000
All PG Two year courses like M.Tech/ MCA / MSc / MBA	-	5000
Ph.D.	-	-
Faculty	-	5000

1.10.2. Incentivizing the Faculties and Students for winning Awards & Recognitions and for being Resource Person:

The information about the highly reputed National/ International Awards/ Recognition from Government and Non-Government Agencies and as Resource Person (Session Chair/ Keynote Speaker/ Advisory Board/ Board of industry) / Innovation / Research / Academic Excellence / Research / Entrepreneurship / Others if not covered under any of the above category has to be called from all faculties and students. After verification of the same following incentives shall be given:

1. The Top 2 faculties and top 2 Students from each school shall be rewarded quarterly
2. Every Achievement shall be on university website & provided with Certificate of Honor
4. Best 20 entries from university shall have Commendation, medal and monetary incentive at a University function annually and shall be placed in GU Prospectus and Newsletters.

1.10.3. Mandate *for Postgraduate Students/ PhD Scholar*

i. It is mandatory to undertake dissertation work pertaining to live industrial problems/cutting edge technologies.

ii. They are required to refer to minimum 5 journal/transaction papers for finalizing the topic for dissertation.
iii. Monthly progress seminars are conducted to assess the work.
iv. External experts are being called for the evaluation of the quality of the work during the year & at the time of topic selection.
v. Before submission of the final dissertation, students are required to publish one review and one implementation paper in a reputed international conference/journal indexed in Scopus/ SCI.
vi. The PG students project dissertation needs to have the following before the index.
    a. Details of the conference/Journal/Special call for papers
    b. The accepted paper
    c. The acceptance letters
    d. Plagiarism Report
vii. Above supports applicable for the conference listed in annexure 1 & 2 only
viii. 100% financial assistance for developing the experimental setups for the dissertation work.
ix. Plagiarism check for thesis/research paper before submission.

1.10.4. Rules for Getting Support for UG(Student)/PG(Student)/PhD (Scholar)/Faculty Members:

i. Participating students all have to submit an Application complete in all respect forwarded by departmental URC coordinators & Dean to URC cell In charge with following enclosures.

- Leaflet of conference/seminars showing Venue, date & Registration fee.
- Full paper/project report/concept note
- Original Tickets
- For ―On spot competitions‖ participation reports to be submitted.
- Certificate of Participation.
- Plagiarism report

All are encouraged to participate in hackathons, innovation contests, workshops, seminars, paper presentation and project competitions. Winners are provided with 100% financial assistance as regards registration fees and travelling expenses. Everyone needs to get prior permission to participate in the event to know the authenticity of the contest.

URC cell shall hold its meeting every week for discussions on the research proposals and further processing of those. Faculty members/ Student with any innovative idea, project; can interact with members of the URC cell after the meeting every week.

1.11. Research at Ph.D. Level

i) Students are encouraged to submit research proposals to external funding agencies on the topic of their research along with a guide.
ii) Financial assistance shall be provided for experimental work, purchase of books/equipment and publishing the research papers in journals and conferences.
iii) Students are required to submit six monthly progress reports and a future plan of work.
iv) Students shall be sent to IITs/NITs for their knowledge up-gradation.
v) Patent awareness program is regularly arranged
vi) Plagiarism check for thesis/research paper before submission.
vii) Before submission of the final dissertation, students are required to publish two papers in reputed international journal indexed in Scopus/ SCI
viii) The University shall further boost doctoral research. It shall also recognize the worthy R&D organizations for doctoral research and build bridges with them.
ix) The University shall continue to encourage faculty and research scholars to get funding for attending International conferences from external agencies so that the quality in research paper can be maintained. It shall urge research scholars to publish and patent their research work.

Key Activities	Description
1. RRC working	**1.1.** The PG scholars should submit the synopsis to the concerned PG coordinator as per the timelines in the academic calendar
	1.2. The RRC should be formed and should comprise of R&D Cell, Concerned School Dean, Vice Chancellor 's nominee and one external subject expert
	1.3. R&D cell should prepare a schedule of RRC meetings for all the PG courses within 1 month of the submission of synopsis. RRC meeting of each PG course is to be conducted as per the schedule for the concerned department
	1.4. Approval of synopsis or some changes as recommended by RRC are communicated to concerned School Head by R&D cell along with the dates
	1.5. In case of changes in the synopsis, concerned student should submit the revised synopsis duly signed by guide and forwarded through School Head by the date mentioned by R&D cell

	1.6. For assessment of the project refer to the "Evaluation Process of PG Student" in "Continuous Student Assessment" process document.
	1.7. For the final assessment, R&D cell should provide a panel of examiners in consultation with Head of School and Vice Chancellor to Controller of Examination for external evaluation of PG dissertation thesis
2. Research Promotion Committee	2.1. The Research Promotion Committee is formed by the R&D cell and should comprise of ◆ Dean R&D ◆ Concerned Head of Department ◆ Supervisors ◆ One external subject matter expert from reputed institutes
	2.2.The responsibility of the RPC should comprise of conducting pre-submission seminars for the PhD and ME by Research students, conducting pre-submission seminars and evaluating the students on it.

Key Outputs	◆ List of approved synopsis by RRC
KPIs	◆ % of synopsis approved by RRC

1.11.1. 10.14: Sub process – Quality Improvement Program (QIP)	
Key Objectives	◆ To improve the quality of faculty and education at the University
Key Inputs	◆ Guidelines for the QIP project by the government of India

Process description	
Key Activities	**Description**
1. QIP Application	1.1 It is a Government of India initiative. Under this the faculty of institute can pursue PG / PhD program at designated QIP centers with fellowship
	1.2 The Government of India comes out with advertisement and this should be circulated by R&D cell to all the faculty members

	1.3 The faculty members willing to apply for the program should fill the form and send it for approval to the Vice Chancellor
	1.4 Once approved from the Vice Chancellor, the faculty can submit the form to the QIP section of Government of India
2. QIP Centers	2.1 The prescribed format for applying as QIP center is available on the AICTE website
	2.2 The form can be downloaded and filled by the institute. It should be submitted to AICTE along with supporting documents and signature of Vice Chancellor.
	2.3 In case the QIP center is granted, the institute can advertise to invite applicants for QIP program at the institute and run the program as per AICTE guidelines for QIP centers

Key Outputs	◆ **List of faculties applying for QIP**
KPIs	◆ **Faculties selected for QIP program**

1.11.2. Sub process – Accreditations of Laboratories	
Key Objectives	▪ Enhance the reputation of the University by seeking for national & international accreditations of laboratories
Key Inputs	▪ Target List of National & International accreditations

PROCESS DESCRIPTION	
Key Activities	**Description**
1. Accreditations	1.1 The university should look for national and international accreditations of courses / institutes / laboratories to enhance the reputation
	1.2 Vice Chancellor should appoint a Quality Assurance Cell that can comprise of o Dean Academics o Dean Student Activities o Chief Coordinator, Training o Dean R&D o Head of concerned Departments o Lab incharges
	1.3 The target list of national and international accreditations should be decided at least 1 month before the commencement of the academic session.
	1.4 This target list should be formed once the requirements for the accreditations are studied in detail. Self evaluation report should be prepared to see the present status and any improvement required to achieve accreditations
	1.5 In case the facilities at the university are similar to that required for accreditations, the university can apply for accreditations by performing the required formalities
	1.6 University can also rope in a professional agency to guide university on getting accreditations
	1.7 The committee should under see the preparations required to be performed for the accreditation inspection
	1.8 Once the accreditation is granted the necessary professional fees can be paid to the accreditation agency.

	1.9 Constant monitoring should be done by the Accreditation committee to ensure that facilities in the university are at the level desired by the accreditation agency

Key Outputs	▪ List of national and international accreditations ▪ Requirement of facilities desired by the various accreditation agencies
KPIs	▪ Number of accreditations applied ▪ % Applications accepted for accreditation

10.10: SUB PROCESS – CONTINUING EDUCATION PROGRAMS (CEP)	
Key Objectives	▪ Conduct training programs for faculty, students and industry personnel
Key Inputs	▪ List of CEP to be conducted by the departments ▪ Distribution of revenue and incentive for the faculty

PROCESS DESCRIPTION	
Key Activities	**Description**
1. CEP Planning	1.1 Every school should plan to conduct a Continuing Education Program (CEP). The faculty members of the school should submit the CEP details to CEP In-charge and should comprise of: o Name of course o Tentative dates o Other related details
	1.2 Yearly CEP calendar is prepared by CEP In-charge and uploaded on website for inviting registrations. The interested participants can register online or fill the registration form manually at the institute.
	1.3 If the registered participants are greater than a threshold count (as decided by the Vice Chancellor), then only the CEP will take place. Otherwise it can be rescheduled
	1.4 The budget for the CEP should be prepared taking into consideration o Honorarium of the outside experts o Honorarium of in-house experts o Laboratory sessions o Other operational expenditure

	1.5 Once the registrations are above the threshold level, approval for the program is taken from Head of concerned department, CEP In-charge and Vice Chancellor at least a week before the commencement of the CEP. The approval is related to: o Budget (As per the guidelines laid down by the institute) o Registration fees per candidate o Information brochure / certificate o Duration o Other related details
2. CEP Conduction	2.1 The CEP is conducted as per approved timelines by the respective department
1. CEP Summary & Clearances	3.1 School should submit the CEP summary report to CEP In-charge within 3 days of completion of the CEP program
	3.2 The financial clearances related to expenses and advances etc should be taken from finance school within 3 days of completion of the CEP. The school through Head of School should take these clearances from CEP In-charge and Vice Chancellor. For submission and processing of finances for CEP refer “Miscellaneous Activities” in “Finance & Accounts” Process Documents

Key Outputs	▪ List of approved, conducted CEP ▪ List of attendees of CEP ▪ Expenses for the CEP
KPIs	▪ Number of registrations for CEP

Appendix 1.1

Faculty's Research Performance Report

Name of Faculty Member:
School:

If not a PhD, mention date of enrollment & Institute name:

Designation:
Whether PhD or Not: Yes / No
Expected Date of Completion:

S.No.	Performance Indicators	Annual Target			Target Points for the Year	Min Expected Level	Achievement 2018												Remarks
		Minimum	Acceptable	Exceeding			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Cumulative	
Publications																				
1	Papers in reputed journals	0	1	2		1/ semester														
2	Conference proceedings					2/ semester														
3	Books Chapters	1	2	3		1 in 1 year														
4	Books written	0	0.25	1		1 in 1 year														
Funded Grants / Projects																				
6	Research Grants Proposals submitted																			
	Numbers					1/ Semester														
	Value (Rs.)																			
7	Research Grants Received																			
	Numbers					1 in 1 year														
	Value (Rs.)																			
Consultancy																				
8	Funded Consultancy Proposals submitted																			
	Numbers					1/ Semester														
	Value (Rs.)																			
9	Funded Consultancy Assignments Received																			
	Numbers					1 in 1 year														
	Value (Rs.)																			
Patents																				
10	Number of Patents filed	1	1	2		1 in semester														
11	Number of Patents granted					1 in 1 year														
Supervision																				
12	Number of PhD Scholars supervising					> 1														
13	Number of Faculty Member completed					1/1year														

Signature of Faculty Member
Faculty Name:
Date:

Signature of Dean
Name of Dean:
Date:

Appendix 1.2

Serial No.	Name of Divisional Research Group	Name of Principal Investigators/ Co-investigators	Name of Funding Agency (Govt./Non Govt.)	Starting Date of Funding project	End Date of Funding project	Amount of Funds	Signature of Dean/HOD
1	DRG - 1	PI : Co-PI-1: Co-PI-2:					
		PI: Co-PI1:					
		PI: Co-PI1:					
2	DRG - 2						
Total amount of Funds for the Academic Year							

Appendix 1.3

Serial No.	Name of Strategic Research Group	Name of Principal Investigators/ Co-investigators	Name of Funding Agency (Govt./Non Govt.)	Starting Date of Funding project	End Date of Funding project	Amount of Funds	Signature of Dean-Research
1	SRG - 1	PI : Co-PI-1: Co-PI-2:					
		PI: Co-PI1:					
		PI: Co-PI1:					
2	SRG - 2						
Total amount of Funds for the Academic Year							

Appendix 1.4

Serial No.	DRG	Name of Principal Consultant/ Co-Consultants	Name of Industry for Consultancy (Govt./Non Govt.)	Starting Date of Consultancy	End Date of Consultancy	Amount of Funds	Signature of Dean-Research
1	DRG - 1	PC : Co-C-1: Co-C-2:					
		PC: Co-C1:					
		PC: Co-C1:					
2	DRG - 2						
Total amount of Funds for the Academic Year							

Appendix 1.5

Serial No.	SRG	Name of Principal Consultant/ Co-Consultants	Name of Industry for Consultancy (Govt./Non Govt.)	Starting Date of Consultancy	End Date of Consultancy	Amount of Funds	Signature of Dean-Research
1	SRG - 1	PC : Co-C-1: Co-C-2:					
		PC: Co-C1:					
		PC: Co-C1:					
2	SRG - 2						
Total amount of Funds for the Academic Year							

Appendix 1.6

Serial No.	SRG/DRG	Name of Patent Inventors	Title of Patent	Date of Patent Filing	Date of Patent Publishing	Signature of Dean-Research
1	SRG - 1	Inventor 1 : Inventor 2:				
2	DRG - 1					
Total number of patents =						

Appendix 1.7

Serial Number	Title of Corporate Training	Name(s) of Faculty given corporate training	Industry/Agency went through corporate training	Number of Trainees	Revenue generated in Rupees	Signature of Dean-Research with Date
Total Revenue Generated =						

Appendix 1.8

Serial No.	Name of the Industry/ Agency/Academic Institutions signing MoU	Domain/Area of Activity	Start Date of MoU	End Date of MoU	Signature of Dean-Research with Date
1					
2					
3					
4					

Chapter 2: Center of Excellence

Aim: Establishing a Center of excellence in cutting age technologies which should have strong linkages with research organizations and minimum 2 to 5 industries. Minimum 5 undergraduate projects, 5 Post graduate projects and few Ph.Ds must work at the same and It should train and create manpower in the same domain for tomorrow. It must be interdisciplinary in nature to begin with breakout sessions and SWOC analysis should be done for the expertise available and cutting age technologies.

2.1. Introduction:

- A center of excellence using an industrial laboratory refers to a team and a shared facility that provides leadership, best practices, research, support and training for a focus area of research and development with advanced technologies provided by industry. This shall bring together faculty members from different disciplines, fast learner students and technical experts from industry and provide shared facilities. It should engage in capacity building for the enhancement of training, research and development. The CoE using industrial laboratories should focus on new and emerging technologies, should be multidisciplinary and should aim in developing technological skills of students for industry and creating entrepreneurship skills of students.
- The university must identify the professors who can take up responsibility to establish the CoE in the one of the cutting age technologies. The preference shall there shall be two In charges and both from different domains and disciplines.
- The center must be in the area of the thrust areas of the nation and needs of the industry
- The process can be initialized by professors or by School dean or as per instructions of higher up. The white paper including vision mission short goals and long term goals, industries working in the same domain, consent from the advisory board members from industries and international community not less than 6 must be there with at least 50 projects of various levels (undergraduate / postgraduate / Ph.D).

2.2. Salient Features of a Center of Excellence:

- The Centre of Excellence (CoE) is expected to be a collaborative activity between a team of high-quality researchers in the institution and researchers or research-users in several companies or organizations. In cases where the nature of research is related to production or improvement of public goods, collaboration may include appropriate public agencies.
- The Centre should focus on new and emerging technologies, multidisciplinary and translational research relevant to national development goals. Alternatively, The CoE shall promote key areas identified under the CoE guideline such as
  - Big Data,
  - Biomedical engineering/healthcare
  - Cloud Computing,
  - Internet of Things (IoT),
  - Machine Learning, Artificial Intelligence,

- Cyber Security,
- Clean-Tech,
- Edu-Tech,
- Agri-Tech,
- Healthcare
- Additive manufacturing
- drone technologies
- ARVR
- Smart Grid
- Satellite communications
- Design
- Robotics
- smart Structures
- energy, water, clean environment, smart materials
- and other areas of social or national importance.

2.3. Process of setting up CoE

This can be done by

1. **Spending from university fund for establishing the laboratories (The industry may not support by establishing lab but may support in all ways by expertise, projects internships, technical support and so on) CoE** need not be out of the industry lab only. The CoE may be established by university professors and have strong industry connect and from bank of experts from the school and partnering industry the consultancy grants assignments are availed and trained manpower for the future industries are created and projects are undertaken an International and national collaborations, strategic partnerships and networks should be utilized by CoE. For this purpose, at least two MoUs should be signed in pursuing long term relationships every year.
2. **Establishing lab under CSR fund of the industry**
3. **Establishing the lab in partnership with industry in certification trained manpower and intellectual property sharing**

- Each school shall set up at least one CoE using industrial laboratories by collaborating with advanced and emerging technologies-based industries.

- The CoE using industrial laboratories should prepare the format of the proposed budget as shown in **Appendix 2.1.**

- The CoE should scale up UG, PG and Ph.D. program enrollments in the identified areas. The format for recording the scaling up of these program enrollments over years is shown in **Appendix 2.2.**
- The CoE shall be self-sustainable in long run but in initial period, should be funded by the university and industry initially and staffed for full time operation with dedicated resources, such that new projects shall be carried out

- COE should have Skilled staff
  - Recruitment of subject matter and development experts
  - Part-time consultants
  - Adjunct Faculty

- The CoE should undertake following but not limited to
  - Guide UG projects
  - Guide PG projects
  - Guide PhD with industry associate
  - Organize one conference per year in the area sign 5 MoU with the industries working in the same domain set up advisory board having experts from industry and international academia in the same domain. COE shall have advisory board upto 6-10 industry persons from R and D organizations
  - Organize summit minimum one in each semester offer 5 internships per month
  - Organize 365 days training to corporates, and university staff and students to train and create the manpower in the cutting age technology along with industry partners and students' team shall work on industrial problems and consultancy assignments
  - COE using industrial laboratories should attract funding from various agencies and consultancies such that it shall be self-sustaining after initial support from university.
  - CoE should have at least five funded projects in the focus areas in a year from government /non-government agencies with collaboration from industry.
  - CoE should also provide at least five consultancies in a year to industries based on the developed expertise of team members.
  - To have strong technical expertise, technical positions shall be advertised with the job description and such hired technical experts should be given well defined roles.
  - COE shall train round the year training to the faculties and students in the various areas allied with the COE and performance of them to be assessed as per enclosed format
  - Develop training modules, provide training and certification. The capacity building should be carried out by training eligible faculty and fast learning students in a continuous and sustained manner.
  - Conduct research activities such as modeling and development of new trending technology or its deployment in association with industry.
  - Keep track of ongoing projects along with a record of knowledge building, such as new methodologies and leading innovations developed in various technical domains.
  - A project progress review committee shall be set up which should review and keep a record of the project activities as shown in Appendix 2.5 and submit a report to VC, every month.
  - Improvement in research and development facilities such as Procurement of equipment, hardware and software from industry, Procurement of components and subsystems from industry

- Testing and prototype development
- Target for CoE is defined in code of conduct of the university

2.4. Organizational structure of CoE using Industrial Lab

The CoE shall have a Center Head and depending on the number of identified technical domains, a number of Division Heads corresponding to each domain, shall work and coordinate the activities of CoE. Under each division, there will be members who jointly participate in training, research and development in the focus area of CoE. A Center Head (CH) shall be appointed by the university, who shall be a senior and experienced faculty member who will oversee the activities of CoE using an industrial laboratory.

2.5. Roles and Responsibilities of Center Head/Division Heads of the CoE using industrial laboratory

1. CH must develop the organizational structure of Center of Excellence by identifying the important domains, the functions of the division heads and members.
2. Must do sufficient ground work through discussion with all division heads and members and prepare the survey before taking up the agenda points with Industry for different meetings.
3. In the formation state, the center head must specify the thrust areas of R & D and prepare the list of resources required to establish the laboratory with industrial equipment and hardware and software components with the proposed budget shown in Appendix 2.1, by collaborating with industry.
4. CH must maintain the list of the persons involved in collaboration from industry and their roles & responsibilities.
5. CH shall initiate meeting with Industry and ensure the preparation of minutes of meeting which shall contain the action points and deadlines at least once in a month.
6. CH should conduct meetings with division heads and members to update the status of progress and make the minutes of meetings once in two weeks.
7. CH must monitor and maintain the progress of tasks of the center in association with division heads and must update VC and management at least once in a month.
8. CH should consolidate the progress report of the center and give/present reports to VC and others at least once in two months.
9. CH should prepare the schedule of visit of R & D experts from Industry to the center of excellence at GU and prepare the minutes of outcomes of each visit.
10. CH along with division heads, should make industry resource persons to get involved in the design and development, and document their contribution
11. CH should clearly state the outcomes/deliverables of the center and display it
12. CH should make sure that the progress of R&D to be displayed in the center and to be updated at least once in two weeks.
13. CH should set up and receive feedback from the project progress review committee every four months as per the format shown in Appendix 2.5
14. CH should maintain a list of funding projects submitted and stage of review process as per the format shown in Appendix 2.6. This should be updated once in three months.
15. DH should monitor the work progress of each member in the center

16. DH should keep track of latest research trends and industry development in the areas of R & D
17. DH should give special presentation on the research trends in the areas of interest
18. Every Saturday the CoE team must meet and read out latest projects and publications for 6 hours minimum

2.6. Roles and Responsibilities of members of CoE using Industrial Laboratory

The CoE using industry laboratory comprises center head, division heads and members who are faculty members from GU, fast learner students and experts from Industry. A faculty member whose research area falls in line with the theme of center of excellence should be a member of the center. A regular Ph.D scholar working in the focus area of CoE, should also be a member of a center with the approval of VC. Any fast learner student who has knowledge and skills in the focus area of CoE should also be a member of CoE. The main functions of the members are given below.

1. Members shall carry out the R & D activities in the center.
2. Members should acquire the skill on software and equipment for research and development purposes. They should take up the training program given by industry professionals to get trained in the use of the latest equipment.
3. Members who are GU faculty should propose and organize training programs for academicians and industry people.
4. Members who are GU faculty should enroll GU students in the R & D activities
5. Members should develop projects. At least fifteen projects should be completed in CoE every year.

2.7. Role of Industry

1. Students who do projects with CoE using industrial laboratories shall do project work in the industry to have real life work experience and understand the current industry trend.
2. Industry shall give the list of projects along with titles.
3. Industry should ensure that the good quality projects are given to students and students must understand the project as a whole although they shall be given a part of the major project.
4. At least 50% of GU students shall be absorbed by the industry on their successful completion of the project.
5. GU students who do internship with industry shall be given stipend by the industry.
6. There shall be coordination between the guide from Industry and guide at GU to assess the progress of the students efficiently.
7. The criteria for eligibility of students and selection process for students to do projects shall be given by industry and the eligible students shall be selected by the industry at GU campus.
8. GU shall give NOC to selected students to do projects in the industry with the permission from industry.
9. Industry expert lectures shall be given by industry at least twice in a semester

10. Contests of hackathon shall be conducted by industry in association with GU twice per year.
11. Joint conferences shall be conducted by GU in association with industry at least once in a year.
12. Curriculum suggestions shall be given by industry to GU at least once in a year.
13. GU shall give capability enhancement to industrial members of CoE using industrial laboratories, by offering advanced courses to them.
14. Train the Trainer program shall be conducted by the industry to train GU faculty members to lead activities that reinforce learning in the advanced emerging technologies. The industry shall also evaluate the trainer to ensure their readiness to teach in turn to all students.

2.8. Identification of thrust areas of research and development relevant to center of excellence and execution of projects in those areas

1. Meeting of GU team with industrial team of CoE, for identification of thrust areas and standard format for submitting project shall be done by Centre Head.
2. Invitation for projects in thrust areas by GU faculty and students of CoE as acceptable by the industry be carried out by Center Head by:
    a. Sending emails and putting notices in GU campus (one week).
    b. Submission of projects (two weeks)
    c. Compilation of summary of projects for screening (one week)
3. Screening and evaluation of submitted projects by expert team comprising GU and industrial members:
    a. Accept/reject/ suggestion for modification by evaluation team (two weeks)
4. Final revised submission of selected projects by GU faculty and students and selection team shall be:
    - Communicating results to applicants
    - Getting revised projects resubmitted (one week)
    - Evaluation of revised projects based on modification suggested (one week)
5. Review of project progress every two months by expert team comprising GU and industrial members (2 GU faculty members of CoE + 1 senior staff from accounts + 2 industrial experts):
    - Notice of meeting to investigators
    - Presentation by project team
    - Comments by evaluation team
    - Rating project progress by evaluation team (one week for all activities)
6. On submission of completed projects, outcome evaluation shall be carried out by an expert team comprising GU and industrial members, by using rubrics for projects.

2.9. Expected Outcomes

The CoE are expected outcomes as mentioned below.

- Trained manpower as per the requirements of the industry
- At least 10 students placed in first out of those who are doing projects in the associated industries which are having tie up with CoE
- five active funding projects and five consultancies in a year
- Publications in reputed journals and conferences, patents, and intellectual property rights (IPR) with at least 10 reviewed peer journals, two patents in a year and one IPR in two years.
- Two entrepreneurs from CoE every year
- 10 Internships of 6 months and 50 internships of one month in a year
- Guide 5 UG projects every year
- Guide 5 PG projects
- Guide 2 PhD with industry associate
- Organise one conference per year in the area
- Sign 5 MOu with the industries working in the same domain
- Organise summit minimum one in each semester
- 100 staff to be trained for 40 hours
- 5 consultancy assignments

2.10. Checklist

- The CoE using industrial laboratory's proposed budget summary over each financial year using the format shown in Appendix 2.1 Details of the school involved in the proposal using the format shown in Appendix 2.3
- Details of the CoE using IL using the format shown in Appendix 2.4.

Appendix 2.1

Budget summary for each financial year:

SN	Activity	Budget			
		Equipment	Consumables	Manpower	Infrastructure
1		₹	₹	₹	₹
2		₹	₹	₹	₹
3		₹	₹	₹	₹
4		₹	₹	₹	₹
5		₹	₹	₹	₹
6		₹	₹	₹	₹
	Operation and Maintenance	₹	₹	₹	₹
	Total	₹	₹	₹	₹

Appendix 2.2

Program enrollments related to CoE in UG, PG and Ph.D. programs:

Serial No.	Name of the program	Enrollments in Academic year 2018-19	Enrollments in Academic year 2019-20	Enrollments in Academic year 2020-21

Appendix 2.3

Details of the school involved in the proposal

School Information	**Name of the School under which the CoE is proposed**				
	Other Schools Involved	1			
		2			
	External Recognition of Excellence of Proposing School		AY 2018	AY 2019	AY 2020
		Awards			
		Publications			
		Patents			
		Citation Index			
		National Partnerships with the School in or related to the research area proposed			
		International Partnerships with the School in or related to the research area proposed			
	Total Students	Undergraduate			
		Postgraduate			
		Research			
	Current Faculty Strength				
	% of Faculty having Ph.D.				

Appendix 2.4

Details of CoE using IL

Centre of Excellence	**Name of the centre to be Established**		
	Thematic Area of the proposed Centre		
	Total Project Estimate		₹
	Funding Expected from External Agencies		₹
	Gap funding required from the University (Seed Funding)		₹
	Social Relevance of the activities of the proposed Centre		
	How does the Centre promote Sustainable Development		
	Quality of faculty in terms of credentials and achievements to be associated with the centre.		
	No of MS /Ph.D likely to work in the proposed centre.		
	Basic Infrastructure: Attach separate justifications for each item listed	Buildings	₹
		Laboratories	₹
		Equipment	₹
		Special Facilities	₹
	Collaboration & Partnerships	Existing	
		Proposed	

Appendix 2.5

Project Progress Review

Serial No.	On-going Funding Projects	Hardware Cost – Acquired yes/no	Software cost Acquired yes/no	Title of Technical report and deliverables to agency	Stage of project

Appendix 2.6

List of funding projects proposed for submission:

Serial No.	Title of Proposed Funding Project	Name of Principal Investigator	Proposed project budget in Lakhs	Review stage of project submission

Professional Society membership

All the faculty members are required to enrolled in the International Technical Society (Engineering & Non-Engineering). It's mandatory to all. As part of Promoting Research and Publications, Research Funding Projects UCRD recommends Galgotias University Faculty Members to be part of at least 01 of the Professional body's societies related to your domain with name of Galgotias University affiliation. Kindly register yourself and this will increase our global presence among the research communities.

Membership dues shall be reimbursed as per the following criteria

- 2 years' work experience at GU:
- 25% Fee will be reimbursed for AP/ Associate Professor
- 50% Fee will be reimbursed for Professor.

Society should be international and we are recommending some professional bodies

- IEEE – The world's leading professional association
- ACM – Association for Computing Machinery
- CSI – Computer Society of India
- ISTE – Indian Society for Technical Education
- IEINDIA – Institute of Engineers (India)
- NISB – NIE- IEEE student branch
- SAE – Society of Automotive Engineers@NIE
- ISHRAE – Indian Society of Heating, Refrigerating and Air Conditioning Engineers.
- INBA- Indian National Bar Association
- Indian Tourism & Hospitality Congress-LifeTime Member
- World Chef Choice Federation-Lifetime Membership

Free Membership

- IANEG -International Association for Engineers
- ISDS Society- International Society for Development and Sustainability
- **The IRED** - The Institute of Research Engineers and Doctors
- IEDRC - International Economics Development and Research Centre
- ABA-American Bar Association

Chapter 3: Students UG PG Projects and Outcomes

The process mentions the steps involved in allocating projects to students, continuous monitoring of progress of the project and evaluation using rubrics, program outcome meets code of conduct and targets

3.1. Introduction:

3.2. Types of projects and quality metrics

3.2.1. Allocation of projects

- Appointment of the project coordinator
- The project coordinator shall request the students to form a group of 2-4 members and identify the project area/title along with the consent from faculty/industry professionals who shall guide them and collect these details from the students at least two weeks before the start of the VII-th semester.
- The Dean /Head shall provide the list of faculty members and their area of specialization to the students at least one month before the start of the VII-th semester.
- The students of a project group shall be formed by the Dean/ Head /project coordinator with students from weak, average and bright student categories and also looking at gender ratio
- The Dean/ Head /project coordinator shall finalize project titles; guide and project team of students and display the allocation at least one week before the start of the VII-th semester.
- The Dean/ Head /project coordinator shall also allocate project laboratory resources for in-house projects and allocation of number of days per week for doing projects in the industry for projects carried out in industry.
- The Dean/ Head /Project coordinator shall list the types of projects and identify each project with a particular type from this list.

3.2.2. Continuous Monitoring and evaluation

- A committee for evaluation team to be set up which shall have expert from each area to be there to evaluate the project falls in their area
- the targets to be set by each guide whether outcome of the project is going to be patent / publication/ product
- once done it must be monitored in each month's review and dean has to ensure the targets are met for the school
- The Dean/ Head /project coordinator/project guide shall prepare PBL based project design according to the format shown in **Appendix 4.1.**
- The Dean/ Head /project coordinator/project guide shall keep track of PBL based project progress by filling up the format shown in **Appendix 4.2.**
- The Dean/ Head /project coordinator/project guide shall make a unit planner based on the questions of **Appendix 4.1**, as shown in **Appendix 4.3**.

- As part of formative assessment and summative assessment the format of **Appendix 4.4** shall be used to evaluate the performance of students in project work by Dean/ Head /project guide. every month
- The Dean/PC/Project guide shall evaluate the contribution towards the attainment of program outcomes of project at the end of semester as shown in **Appendix 4.5.**
- In assigning the marks in Pos and PSOs attainment in Appendix 27.5, the rubrics shown in **Appendices 4.6 – 4.10**, shall be used by the Dean/ Head /Project guide.
- The quality metric of the project is defined as the average of the scores of POs and PSOs attainment. If the averages of these are above 3, then the quality of the project is in between the acceptable and exceptional category. The Dean/PC/Project Coordinator should ensure that at least 90% of the projects secure an average greater than 3 out of 4.
- Students write their respective dissertations after conducting the field work/ library work and the project report is presented after due checking similarity index which should not exceed 25% for undergraduate students.
- Progress is continuously monitored by the supervisor and periodically project evaluation committee in the form of PPT presentations. Assessment of projects is done considering factors such as:
    (i) their quality,
    (ii) the state-of the-art technology used in execution,
    (iii) their relevance to society, industry and academics,
    (iv) the use and development of theoretical and experimental methods, and
    (v) the coverage of broader areas of the pharmacy.
- Faculty uses Rubrics for the assessment of projects for the internal assessment. Final evaluation of the project report is conducted in formal set up where the external examiner appointed by the university takes the viva.

3.2.3. Outcomes of the projects such as papers, products, awards, etc.

- Dean/ Head /Project Coordinator shall continuously monitor and encourage students to submit papers, make complete usable products and apply for awards by making them to participate in project competitions as appropriate for the projects.
- Dean/ Head /Project Coordinator shall prepare the outcomes of the projects in terms of these activities as shown in Appendix 26.5 of mandate # 26.

3.2.4. Rubrics for Project Evaluation:

Review #	Major Component for Evaluation	Evaluation Parameters		Marks
First Review	Project scopes and proposal	·	Literature review	20
Second Review	Methodology and expected outcome of the proposed work	·	Implementation methodology	30
		·	Expected outcomes	
Final Review (External)	Technical achievement	·	Innovative contribution	30
		·	Use of proper tools	
	Project Report Evaluation	·	Quality of project report	20
		·	Description of concepts	
		·	Knowledge of contemporary issues	
			Conclusion and future scopes	

Appendix 3.1

PROJECT DESIGN: OVERVIEW	page 1			
Name of Project:				**Duration:**
Subject/Course Name (if any):		**Faculty:**		**No. of Credits:**
Other subject areas to be included, if any:				
Need to Knows: Key Knowledge and Understanding				
Success Skills (to be taught and assessed)	Critical Thinking/Problem Solving concepts:		Self-Management (Individual work):	
	Collaboration (team work):		Other:	
Project Summary (include student role, issue, problem or challenge, action taken, and purpose/beneficiary)				
Driving Question				
Products	Individual:		Specific content and competencies to be assessed:	
	Team:		Specific content and competencies to be assessed:	

PROJECT DESIGN: OVERVIEW	page 2			
Making Products Public (include how the products will be made public and who students will engage with during/at end of project)				
Resources Needed	On-site people, facilities:			
	Equipment:			
	Materials:			
	Community Resources (if any):			
Reflection Methods (how individual, team, and/or whole class will reflect during/at end of project)	Journal/Learning Log		Focus Group	
	Whole-Class Discussion		Fishbowl Discussion	
	Survey		Other:	
Notes:				

PROJECT DESIGN: STUDENT LEARNING GUIDE			
Project:			
Driving Question:			
Final Product(s) Presentations, Performances, Products and/or Services	**Learning Outcomes/Targets** knowledge, understanding & success skills needed by students to successfully complete products	**Checkpoints/Formative Assessments (Reviews)** to check for learning and ensure students are on track	**Instructional Strategies for All Learners** provided by teacher, other staff, experts; includes scaffolds, materials, lessons aligned to learning outcomes and formative assessments
(individual **and** team)			

Appendix 3.2

Unit Question For the faculty: A question that helps initiate and focus the inquiry For the student: A question that creates interest and a feeling of challenge and guides the project work	
Products	
Public Audience (Experts, audiences, or product users' students will engage with during/at end of project)	
Knowledge and Skills What knowledge and/or skills are going to be used to enable the student to respond to the unit question?	
Resources and Materials Needed What resources are available to us? How will our classroom environment, local environment and/or the community be used to facilitate students' experiences during this unit?	
Multiple Means of Representation ● What different teaching methodologies will we employ? ● How are we differentiating teaching and learning for all? Have considered those with special educational needs? ● How will students know what is expected of them? Will they see examples, rubrics, templates, etc.? ● How will we know if the students have enough prior knowledge?	
Multiple Means of Expression ● How will students acquire the knowledge and practice the skills required? How will they practice applying these? ● How will students demonstrate their learning?	
Multiple Means of Engagement ● How do we help students engage and keep their interest in learning?	

Reflection Methods How individual, team, and/or whole class will reflect during/at end of project?	**Observational** **Essays** **Surveys** **Discussions**

Appendix 3. 3

Unit Title: One that engages student enquiry		**Total Duration of the Unit (in hours):**
Subject/Course:	**Teacher(s):**	**Grade Level:**
Other subject areas to be included, if any: (For cross-curricular PBL)		

Core Competency Focus

Which Core Competency/Competencies will be my focus?

Subject(s)	**Big Ideas** What are the Big Ideas from the new curriculum?	**Curricular Competencies** What are curricular competencies from the new curriculum?	**Curricular Content** What are curricular content from the new curriculum?

PBL Unit Planner

Assessment

What am I looking for? How will I know the students have achieved these goals? How will we use formative assessment to give students feedback during the unit?

Include project rubric(s) and an assessment plan so that students know how they will be assessed.

Rubric(s)/Assessment Activity	**Curricular Connections**	**Formative or Summative?**	**Individual or Group?**

Scenario Scenario within which the project will take place	**Challenge** **A description of task as it is presented to the students**

Appendix 3. 4

Particulars	Components of evaluation	Weightage out of 50
Zero-th review	Need to Knows	5
	Driving Question and Project Description	
First review	Success Skills	15
	Units Questions and Assessment of learning of units	
	Voice and Choice, Critique and Revision	
Second review (Final review)	Products Developed	30
	Verification of Project Objectives	
	Presentation to Public Audience	
	Quality of report	
	Total	**50**

A project work assigned to students covers almost all the POs.

Appendix 3.5

Programme Outcome	Programme Outcome Description/Assessment Instrument	Score
1.	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	**3**
2.	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	**4**

3.	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	**3**
4.	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	**4**
5.	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	**4**
6.	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	**3**
7.	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	**4**
8.	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	**4**
9.	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings	**4**
10.	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	**4**
11.	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments	**3**
12.	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	**3**
PSO 1		**4**
PSO 2		**2**

Appendix 3.6

Rubrics for Program outcome # 9: Individual and Team work performance

		Unacceptable (1)	Marginal (2)	Acceptable (3)	Exceptional (4)	Score
Workload and time management skills	Planning			√		
	Time management					
	Contributes to the project					
Team Dynamics	Decision Making			√		
	Problem Solving			√		
	Technical Knowledge			√		
Communications skills	Written Communications				√	
	Oral Communications					
OVERALL*				√		

Appendix 3.7

Non-technical Constraints of Program outcome # 3

	Unacceptable(1)	Marginal(2)	Acceptable(3)	Exceptional(4)
For all non-technical constraints:	Incorrect analysis on how this constraint affects the design of the system, component, or process.	Analysis contains a mixture of correct and incorrect reasons as to how this constraint affects the design of the system, component, or process.	Analysis provides correct reasons as how this constraint affects the design of the system, component, or process but contains only a brief discussion.	Analysis provides correct reasons as how this constraint affects the design of the system, component, or process and contains in-depth discussion.

Non-technical constraint	Examples of relevant questions	Score or N/A				
Economic	- Is a development cost considered? - Is a production cost considered?	1	2	3	4	N/A
Environmental	- Does the project use environmental-friendly products? - Is the impact of the project to the environment considered? - Are resources being used properly and efficiently?	1	2	3	4	N/A
Social	- Is the impact of the project to the society considered?	1	2	3	4	N/A
Political	- Does the project follow the government guidelines or laws?	1	2	3	4	N/A
Ethical	- Are there any foreseen potential conflicts with a profession's Code of Ethics arising from the development of the project?	1	2	3	4	N/A
Health and Safety	- If the safety issue should be concerned, does the project discuss about it? - Are there relevant health effects that are affected by this project?	1	2	3	4	N/A
Manufacturability	- Can the project be built? - How can the project be designed to eliminate manufacturing errors? - How can the project be designed to minimize manufacturing costs?	1	2	3	4	N/A
Sustainability	- To what degree over time will the project be useful and viable?	1	2	3	4	N/A

Appendix 3.8

Rubrics for evaluating the Program Outcome # 7: the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

Project topic (An Engineering Solution) being discussed _____

(The value of fill in the blanks in the above sentence comes from the following Rubrics)

Unacceptable (1)	Marginal (2)	Acceptable (3)	Exceptional (4)	Score
Very little understanding or discussion on the impact of engineering solutions in a global, economic, environmental, and societal context is provided, or discussion is incorrect	Some discussion on the impact of engineering solutions in a global, economic, environmental, and societal context is provided, but still missing some major points.	A student shows an understanding on the impact of engineering solutions in a global, economic, environmental, and societal context and he/she provides a nearly complete discussion, but misses only some minor points.	A student shows a complete understanding on the impact of engineering solutions in a global, economic, environmental, and societal context and he/she provides an in-depth discussion.	

Appendix 3. 9

Rubrics for Program Outcome # 8: an understanding of professional and ethical responsibility.

The project topic being considered _____

	Unacceptable (1)	Marginal (2)	Acceptable (3)	Exceptional (4)	Score
Understanding of ethical and professional issues	Little or no understanding of professional/ ethical issues even where there are serious questions involved	Some consideration of professional, ethical issues related to the project, system, etc.	Good understanding of all the essential issues related to the project, system, etc.; reasonable analysis of the relevant issues	Deep understanding of the professional issues involved and the ethical implications of the project, system, etc.	

Appendix 3.10

Rubrics for Program Outcome # 12: recognition of the need for, and an ability to engage in life-long learning.

The project topic being considered _____

	Unacceptable (1)	**Marginal (2)**	**Acceptable (3)**	**Exceptional (4)**	**Score or N/A**
Recognize the need for further education and continuing professional development.	Little or no recognition for the need in continuing education	Moderate recognition for the need in continuing education	Good recognition for the need in continuing education	Deep understanding for the need in continuing education	
Demonstrate an ability to engage in life-long learning	Incapable of doing research on his/her own. No references or knowledge of previous work demonstrated.	Demonstrate some capabilities in doing research on his/her own. Demonstrate some (but inadequate) references or knowledge of previous work.	Capable of doing research on his/her own, i.e. he/she can research major points related to the project Demonstrate that he/she somewhat familiars with previous work	Very capable of doing research on his/her own, i.e. he/she can do a complete research related to the project. Demonstrate that he/she familiars with previous work	

Chapter 4: Innovative projects

Goal: At least two innovative projects must be undertaken and completed by students in each semester for each program and a students' innovation cell must be established

4.1. Introduction:

- This mandate enforces that each student should undertake two innovative projects in each semester and a students' innovation cell should be established in the university.
- The process mentions the steps involved in making the students take two innovative projects over a semester and an evaluation to be carried out at the end of semester.
- The process also specifies the organization and activities of the innovation cell at the university level.

4.2. Approval of Projects:

- The Dean/ Head /DC shall inform the students to submit the two innovative projects of the third-year students and two design projects of the first year and second year students, three weeks before the start of each semester.
- Maximum 3 students shall be allowed to form a team for doing projects.
- The format to be used for project approval should be as shown in **Appendix 5.1.**

4.3. Project Progress review and demonstration:

- The Dean/PC/DC shall evaluate the skill metric of the students in terms of CGPA, other successful projects handled, papers presented, awards received in competition and any other special curricular/co-curricular accomplishments during the study in the school.
- The Dean/PC/DC/Guide shall identify the division of p
- Problem into modules as according to the format shown in **Appendix 5.2.** This problem division shall be done two weeks before the start of the semester.
- The Dean/PC/DC/Guide shall evaluate the teams' progress two weeks before the start of CAT-1 test. The format used for evaluation is given in **Appendix 5.3.**
- The Dean/PC/DC/Guide shall evaluate the teams' project completion one week after the CAT-2 test using **Appendix 5.3 and Appendix 5.4**. The Dean/PC/DC shall collect the project report and copy of ppt presentation from students to keep in an archive, as soon as the project evaluation is completed along with filled up details according to the format given in **Appendix 5.5.**

4.4. Innovation Cell

- An innovation cell shall be established by the experts from the school.
- The organizational structure of innovation cell shall have an Innovation Cell Head and Division Heads similar to the center of excellence using industrial lab set up specified in mandate # 8. The division heads shall be experts from the schools.

- The Dean/PC/DC shall suggest and organize the training programs and workshops conducted by industry and well-established academia for students four weeks before the start of the semester in the innovation cell.
- The Innovation cell shall also provide hardware and software tools not available in the schools to students for doing projects. Additional computers and related equipment as necessary for students shall be procured and kept in the innovation cell by the innovation cell Head complementing what is available in the university elsewhere.
- The completed project reports and demonstrated projects shall be kept in the innovation cell for future developments.

4.5. Checklist

- Innovation Cell Head shall keep the infrastructure details of the Cell.
- Innovation Cell keeps the records of training programs, Workshops or activities performed for students in the Innovation cell in order to train them to do projects.
- Dean/PC/DC shall have the **Appendix 5.1, 5.2, 5.3, 5.4 and 5.5** filled up for each innovative project done by students and submitted to Innovation Cell Head for record keeping.
- Innovation Cell Head shall have the project reports submitted by students.

Appendix 4A

Project Approval Form

Name of the Students: Enrollment Numbers:

Program and Batch: Year and Semester:

Sr. No	Categories	Items	Marks awarded	Mapped POs and PSOs
1.	Pre-requisite Courses done by students and relevant courses currently being done	List of courses done 1) 2) 3) Currently doing courses 1) 2)		PO1
2.	Relevant Literature for the project	Journal/Conference papers 1) 2) 3) Technical Reports (Research/Industrial) 1) 2) 3)		PO2, PSO1
3.	Internal/Industry Guide's Expertise	Publications by faculty Journal/ Conference papers 1) 2) 3) Technical Reports by faculty 1) 2) 3) Funding projects by faculty 1) 2)		
4.	Resources provided by guide	References: Code for tools:		
5.	Limitations of existing systems	Report by students		PO2
6.	Objectives of the project and problem description	Report by students		PO3
7.	Number and description of steps involved in solving the problem	Report by students		PO4, PO5
8.	Components, tools and packages required with justification	Report by student		

9.	Cost involved in acquiring components and tools, if not available, with justification	Estimation report by students		
10.	Number of hours spent by guide with students on category # 5,6,7,8 and 9.	Total number of hours =		

Project Approved? - Is the percentage of marks awarded > 75% and has the project been found realistic, useful and novel?
Yes -- Approved **No - Not Approved**

Dean PC DC IQAC PVC-Academics

Appendix 4B

Division of Problem

Serial Number	Name of Student	Skill Metric of Student	Problem Division/Module	Tools/Design used by student
1.				
2.				
3.				

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Appendix 4C

Project Progress Review and Demonstration

Name of the student: Enrollment Number:

Serial Number	Categories (for individual students)	Descriptions of Achievement	Marks Awarded	Mapped POs and PSOs
1.	Stage of Module Developed	Initial/Middle/Final		
2.	Functions Implemented	1) 2)		PO3
3.	Functionality Tests performed	1)		PO4

		2)		
4.	Novelties Involved	1) 2)		
5.	Demonstration			
6.	Teamwork and Leadership	1)Description of Interfacing of modules		
7.	Presentation	PPT slides with graphs, curves, tables		
		Viva - voce		

Overall Achievement

Serial Number	List of objectives achieved	Level of Integration of Modules	Demonstration stage of objectives	Marks awarded based on objectives achievement
1.				
2.				
3.				

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Appendix 4D

Project Report Evaluation (based on Project – R6 of Mandate # 7)

SN	Categories	Marks Awarded	Mapped POs and PSOs
1.	Quality of project Report		
2.	Description of concepts and Knowledge in literature, proposed problems and methods used to find solutions, and results		
3.	Conclusion and future scopes		

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Appendix 5E

Project Outcomes

SN	Categories	Outcomes	Marks Awarded	Mapped POs and PSOs
1.	Field Trial of usage of project	Place: Date:		
2.	Paper(s) presented in magazine/Conference/Journal	1) 2) 3)		
3.	Participation in Competition	1) which project expo and where 2) Comments given by judges		
4.	Patent Filing	1 Patent no. (India/US)		

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Chapter 5: Development Activities

5.1. Introduction:

Each school must execute development activity at last one in each type of Product Development, Research Laboratories, Instructional Materials, Working Models, Charts and Monograms in each semester to make this achievement possible, each faculty in the school must carry out at least one development works of any type of development works in each semester.

5.2. Types of development activities:

5.2.1. Product Development

Product development is all about designing and developing a product to cater a service to customers which provides new benefits. It may be enhancement of an existing product through modification or entirely a new product. Such as new home appliances, software module, other end products.

5.2.2. Research Laboratory

Establish a new research laboratory or enhance the existing laboratory making it research supportive by enhancing the resources. The lab is utilized for research activities.

5.2.3. Instructional Materials

Materials those are used by faculty members in teaching-learning and given to students for further learning to meet certain objectives of topics and bring about the desired outcome of study. The materials must more exciting, interesting and interactive. They are tools used in instructional activities, which include active learning and assessment in Moodle.

Prints	**Textbooks, pamphlets, handouts, study guides, manuals**
Audio	cassettes, microphone
Visuals	Charts, real objects, photographs, transparencies
Audiovisuals	Slides, tapes, films, filmstrips, television, video, multimedia
Electronic Interactive	Computers, graphing calculators, tablets

5.2.4. Working Models

A model of an object is a physical representation that shows what it looks like or how it works. The model is often smaller than the object it represents. A model of a system or process is a theoretical description that can help you understand how the system or process works, or how it might work Such as a model of big building, model of a machine, etc. Each faculty member must make at least two working models for each course in each semester.

5.2.5. Charts:

A chart is a graphical representation of data, in which "the data is represented by symbols, such as bars in a bar chart, lines in a line chart, or slices in a pie chart. A chart can represent tabular numeric data, functions or some kinds of qualitative structure and provides different info. Faculty members shall also develop charts of the lab processes or the circuit & system used in the laboratory. Each faculty must make at least one chart in each semester.

5.2.6. Monographs:

A monograph is a specialist work of writing on a single subject or an aspect of a subject, often by a single author, and usually on a scholarly subject. Monographs are generally published as individual volumes in a short print run. Each faculty must publish at least one Monograph in each academic year.

5.2.7. Compliance Report

- Dean of the school must collect the details of development activities at the end of each semester.
- Dean of the school shall submit the compliance report within one week after the last instructional day in each semester to IQAC.

Chapter 6: Courses on Research & Innovation

Self-Study & Research Course - Open Research Problem

OVERVIEW

Self-Study & Research course is a research driven course open to both UG and PG students. This Course will enable students to devise and execute a work by formulating a research problem under faculty guidance. In this course, students are given a research problem on which they work for one semester and possibly results into Patent or a Publication. The course will enable critical thinking abilities in problem solving. This process may include a literature survey, collection of data (if any), design approach, analysis and conclusion with results. The student will be required to present the body of work in an objective report and demonstration.

OBJECTIVES

During the course, the student will learn how to:

- Literature Survey
- Carry out a literature search and write a critical state-of-art review
- Select suitable research methods and integrate them within a research methodology
- Carry out the research processes
- Analyze results critically
- Write-up the body of work as a technical report.

OUTCOMES

The SSR course provides an opportunity to pursue research in a topic within the broad area of the student's interest. Undertaking the course will enable the student to achieve all or one of the below:

- Review Paper (Scopus/SCI/UGC Care Journal)
- Patent Publication

Name of The Course	**Self-Study & Research**	L	T	P	C
Course Code		1	0	0	1
Prerequisite					
Co requisite		IA	MTE	ETE	TOT
Ant requisite					

Self-Study & Research

- Earn credits for research (in ECE, EEE, CSE, IT, CE, ME, Applied Sciences & Medical & Allied Sciences).

- Involves working towards patents and papers.
- Research driven & involving flexible study plan.
- Become competitive for MS / PhD abroad.
- Excellent opportunities in R&D companies.
- Student who had published good Scientific papers get R&D Jobs, MS and PhD admission with scholarship in Prestigious Universities.
- Opportunity to interact with scientists and Professors involved in research in your area.
- Opportunity to work on Disruptive and cutting-edge technologies.
- Involve in independent research and flexible study pattern.

GUIDELINES FOR SCHOOLS

- **Course Implementation:**
  - This course will be introduced for 4th and 6th semester in UG course for winter 2020-21 session.
  - For PG students' course will be offered in 2nd semester.
  - Course will be of 1 credit
  - Course will be offered to interested students & can be part of major and minor
  - From each batch minimum 15 students from other schools and 30 students from SCSE will be identified and research supervisors shall be allocated by school research committee based on their area of research.
  - The program which already has research methodology course shall have credit as decided in the course.

- **Approval**—The Self Study & Research should be approved, before the first day of class, by the supervising faculty and the Director of Undergraduate Studies or Certificate Program Director in the relevant department or certificate program. Additional approvals may be required. Please contact the DUS or Certificate Program Director to identify and coordinate all necessary approvals.

- **Faculty appointment**—Self-Study & research must be supervised by a faculty member within the school. An additional mentor outside the GU from renowned research organization is also allowed to mentor the students with one internal faculty if required under the following conditions:
  - a supervising faculty member within the school agrees to be responsible for submitting the final grade and for ensuring that the self-study adheres to academic standards, policies, and procedures pertaining to undergraduate and post graduate students.
  - both the instructor and the supervising faculty member are listed as supervisor and co-supervisor on the transcript.
- **Course Content / Quality**—A student should expect to spend at least one semester, including meetings and readings, on the project over the course of the semester for a 1.0 course credit Self Study & Research.

- **Meeting schedule and self-study expected from student**—
  - 2 hours per week face to face meeting with the supervisor.
  - 4 to 6 hours self-study per week.

- **Calendar:**

SN	Date	Activity
1.	4th Jan 2021	List of students both UG & PG
2.	6th Jan 2021	Allocation of Supervisors
3.	18th Jan 2021	Submission of synopsis
4.	25th Jan 2021	Approval of Synopsis
5.	5th Feb 2021	1st Review
6.	15th Feb 2021	2nd Review
7.	26th Feb 2021	3rd Review and Draft Paper with plagiarism check (less than 15%)
8.	3rd March 2021	Submission of Paper to Journal/Conference
9.	31st March2021	Final status of communicated paper
10.	12th April	Final report from all schools and uploading of paper in google drive.

- **Grading**—The supervisor will evaluate the work, including the final product, associated with the Self Study & Research, and submit a grade by the end of the semester. If the Self Study & Research has an instructor in addition to a supervising faculty member, the instructor will consult on the final grade with the supervising faculty member, and the supervising faculty member will submit the final grade. Student is allowed to appear for final evaluation only if student have published one research paper/ patent of the approved research topic.

- **Credit toward a major, minor or certificate**—the relevant Dean and academic committee of the school will determine whether a Self-Study & Research course successfully completed will count toward the major, minor, or certificate.

Design Innovation & Thinking" (DIT) Course

Galgotias University - is always striving for shaping a better future for its students by putting astonishing efforts to make its education system excellent enough so students and ultimately whole society would benefit. In the light of above context, GU has taken lead and started the design-oriented learning processes at its entire all departments. GU always tries to cope up with all latest trends in Innovation, Entrepreneurship and Technological advancement. In this regard, GU has introduced a creative and interactive practical approach in its course named "Design Innovation & Thinking" (DIT) in **Academic Year 2020-21.**

1. Objective

The main objective of this course is to inculcate interdisciplinary engineering skills in students for taking real time engineering problem available in our society/industry and to come-up with

the grass root innovation, can be helpful to all level of human beings. The objective of using whole Design Thinking process in every semester and repeating it again and again is to master the process so that irrespective of the problem and domain, after study in their professional carrier, students would solve the problems easily irrespective of domain as they would have mastered the process. During their Bachelor of Engineering, students are learning the various principles and aspects of engineering, through this Design Engineering course, university wants to inculcate Design Mind-set/Attitude in the students so that students can use their engineering/technical knowledge to create better solutions.

2. Goal

- Promote the culture of Research in the University.
- Introduce Self Study and Research Course in respective Schools and motivate students to take up the course and faculty to guide the students for SSR Course.
- Ensure that through fortnight meetings, targets for research publications are met as per mandate 40.
- Effective implementation of Engineering Clinic Course by taking responsibility of populating Inter Disciplinary research Project titles in consultation with school faculty and industries.
- Establish best practices in research Publications, funded projects and Consultancy. Identify such proposal in project meetings and ensure completion of objectives.
- Monitoring for effective conversion of PBLs, engineering Clinic, Capstones to Publications in SCOPUS/ WoS/ SCI/ ISI or patents and leveraging good projects to consultancy works for industries.
- Communicate with faculty with diverse backgrounds and experiences to promote mutual learning and populate ideas for interdisciplinary projects for Engineering Clinic, PBLs, etc.
- Ensure MOUs with leading National/International Universities & research labs.
- Ensure that all testing/experimental/ other similar recourses are centrally located & maintained for research proposal.
- Motivate students to work in inter-disciplinary domains and publish research papers, books articles and patents.

4. Implementation Process

Design thinking process is step by step process but iterative in nature. Based on type/nature of projects, it may slightly vary with the sequence. Design Engineering subject at GU is based on below mentioned four modules from 3rd to 6th semester every branch of the engineering curriculum.

a. Engineering clinic courses shall be taken by all students of engineering schools from third semester to sixth semester for 1 credit, with a total of 4 credits in the curriculum from second year to third year and shall be listed under university open core course.
b. Students from multiple disciplines shall be combined together to form a group of 5 to 10 students for their practical study and the design of products, depending on the type of products.
c. Faculty members from each school shall form 2-3 groups of faculties from different schools to guide the student groups. The faculty group shall be multidisciplinary/ interdisciplinary. Faculty from school of business and school of medical and allied sciences shall also be in the group.
d. In the third semester, the engineering clinic – I course shall have a structure as shown in Appendix 1.

- The list of classroom session topics and lab experiments in various schools shall be framed as a syllabus and the corresponding evaluation scheme shall be framed for engineering clinic – I course, for getting approval from core committee.
- This course shall be considered as an embedded lab course.

e. In the fourth semester, the engineering clinic –II course shall be focused on fundamentals of reverse engineering and competitive assessment.
   - The multidisciplinary student groups shall open the devices, figure out how things work, understand the design, rigorously compare rival designs with respect to functionality, options, user friendliness, etc.
   - The students shall add options and/or improve the design of the devices. The stages of reverse engineering shall be followed as shown in Appendix 2.
   - A separate syllabus shall be developed depending on the type of product to provide the necessary training for students.
   - The evaluation scheme is shown in Appendix 3.

f. In the fifth, and Sixth semesters the engineering clinic –III and IV courses shall focus on nature and scope of the problem, preliminary analyses, number of approaches considered, identifying the selected alternative, and steps taken to complete the design, based on courses taken by students in previous semesters and current semester.
   - Each Dean of the school shall collect design problems for products from reputed Industries.
   - The syllabus format with credit structure with training involved shall be designed by guides and approved by DC, PC, Dean and PVCs.
   - A zeroth first, second and final reviews shall be carried on grading the individual and team.
   - The evaluation scheme is shown in Appendix 4 which shall be based on rubrics for each criterion considered in Appendix 3.
   - Expertise shall be on research publication in SCI/SCOPUS/NIRF accepted.

g. The team shall also write a report on the product design.

h. The courses shall be designed to give practical training or working for the design of actual products as projects, so that at the end of the course, the outcome can be seen in terms of working prototype.

i. Each school shall design minimum 50 multidisciplinary products (25 products over each semester) or problems for product designs to be given over an academic year for each second year, and third year students of engineering. A student can involve himself/herself in two more products as a consult.

j. A faculty instructor from core discipline corresponding to the major part in the product and another faculty from other discipline having minor part in the product, shall be assigned to each group who will guide the students for completion of products.

k. Each faculty shall at least provide three implementable problems of product design with the major part from the school in which he/she comes from and consult other faculty members for minor part from the related disciplines or shall directly collect design problems with major part related to school and minor part from related disciplines from industries.

l. Each school shall compile the list of products in each class which has major part from that discipline and show the compatibility with courses studied by the students and additional area of exposure required as shown in Appendix 4.

m. Depending on the type of practical training involved the faculty instructor can design either tests/assignments, or reviews through presentation of the work. The evaluation scheme shown in Appendix 3 along with rubrics should be pre-approved by DC, PC, Dean and PVCs. The outcomes of engineering clinic courses shall be recorded by the school with the products produced by students having major part from that school discipline, as shown in Appendix 4.

4. Requirements for Implementation

- A separate lab for engineering clinic shall be established in each department/school to carry out the experiment/development and all facilities shall be updated by DC/faculty instructor/guides with time.
- The team shall be given access to various engineering clinics of different schools depending on the requirements of the product design.

5. Pedagogy: Design Sprint, Case studies, Lectures, Discussions, Hands-on group exercises

6. Outcomes

- The products developed by students as part of engineering clinic courses.
- Students shall compete in an expo to show case their skills through product competition conducted by GU or other organizations.
- The students who solve problems of industry shall get internship/job from industry.
- Students shall file for patents.

7. Non-Compliance Action

- Each faculty group of guidance to various batches shall ensure the completion of working prototype of products of each batch of students. Dean shall take non-compliant action against the group of faculty failing to produce working prototype.
- Dean shall be held responsible for not collecting at least 70% of the problems from industry for IV/V semesters engineering clinic products and research papers & patents are filled.
- Dean shall be held responsible for imparting training to students depending on the requirements of students.

8. Design Thinking Process – Details with Tools & Techniques

- Design Thinking: Design Thinking is a process used to create something to solve a problem.
- Empathize mode: The empathize mode is to understand the values of others.
- Define mode: The define mode explicitly expresses the problem that one strives to address.
- Ideate mode: The ideate mode is the mode in which one creates new concepts and ideas.

- Prototype mode: The prototype mode is when one gets the ideas out of one's head and into the world. It is an example object which demonstrates the same features and qualities as the final product.
- Test mode: Test mode is the chance to gather feedback, refine solutions, and continue to learn about one's users.

Appendix 1

Course Details

Serial No.	Units	Brief contents
1	Product Development	1) Introducing students to the science and art of design by evaluating the work of practicing designers 2)Introducing multidisciplinary teams of engineering students to unifying engineering science principles such as mass, momentum and energy balances; materials; thermodynamics, electricity/ magnetism and electronics using a consumer appliance or an engineering process as a test bed
2	Intellectual Property	Enabling students to determine how scientific principles, material properties, manufacturing techniques, cost, safety requirements, environmental considerations and intellectual property rights impact the design of a product, within the context of ethical behavior
3	Engineering Economics	Allowing students to participate actively in a meaningful design effort by instrumenting and evaluating the performance of a consumer appliance, product or an engineering process
4	Engineering Statistics	Utilization of engineering statistical techniques for analyzing data collected
5	MATLAB/SCILAB	Using for engineering statistics; entering data, polynomials as vectors, matrices, matrix operations, using functions, printing and plotting graphs, using .m and .mat files
6	Data Acquisition	Understanding measurement systems for acquiring data; Transducers, Signal Conditioning, Hardware: Analog inputs, analog outputs, Triggers, Digital I/O, real-time system integration bus, software, NI DAQ
7	List of Design Problems	Description of Design methodology using problem solving approach for implementation.

Appendix 2

Course Details

Serial No.	Stages of Reverse Engineering Project	Details
1	Identify the product for reverse engineering	Devices of current use.
2	Make a conceptual design	-
3	Identify different subsystems and components	-
4	Compare it with existing designs	-
5	Propose additional options/ change in design	-

Appendix 3

Evaluation Scheme

Serial No.	Type of review (marks assigned out of 100)	Categories	Marks (out of 100)
1	Zero-th review (10 marks) (2nd Semester)	Type of product and year of manufacturing: industrial/ smart home appliance/ personal gadgets/ entertainment/ agricultural/ biomedical/ automobile/ aeronautical (drones)/ solar/ windmills/ turbines/ software solution, etc.	2
		Type of industry which made and any patents held on the product	2
		Complexity of system in terms of covering concepts from how many disciplines and whether advanced	2
		Number of interfaces between identifiable subsystems and interface standards used.	2
		Collection of literature on various subsystems and components and conceptual design of the product	2
2	First Review (20 marks) (3rd Semester)	Rigorous comparison with rival designs in terms of complexity, number of interfaces, options, and user friendliness	20
3	Second Review (30 marks) (4th Semester)	Additional options and modification in design	30

4	Final Review (40 marks) (5th Semester)	Presentation on final implementation and report	40

Appendix: 4

4th /5th Semester Review

School of _____

Program Name: **Semester:** **Section:** **Date:**

Serial No.	**Name of Research Group**	**Guides Name and School**	**Students' Group**			**Research Papers in SCOPUS/SCI**	**Patents published**	**Entrepreneurship or start-up**	**Whether Internship/job received?**
			Name	Enrollment No.	School				
1		1.xx 2.xxx				1.xx 2.xx 3.xx			
2		1.xxxxx 2.xxxxxx				1.xxxxx 2.xxxxx 3.xxxxx			

Signature of Dean

Anti-Plagiarism Policy of Galgotias University

The Galgotias University is based in Greater Noida (NCR New Delhi, India), has an enrolment of over 20,000 students across more than 100 Undergraduate and Post Graduate program, is devoted to excellence in teaching, research and innovation, and to develop leaders who'll make a difference to the world.

Plagiarism, the term defines as *"stealing and publication of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work"*.

At Galgotias University several policies and procedures had been defined to carryout for good research. It is very much necessary and mandatory that all those who involved with research activities at University should be aware of university plagiarism guidelines and policies.

At University any person who involved with plagiarism will be dealt seriously and referred to the institution disciplinary committee for further necessary action.

Confidential and integrity are the two prime factors that define the trustworthiness among the researchers throughout the globe.

In Galgotias University research group which includes students in under graduate, students in post graduate, Ph.D research scholar, faculty (both technical & non-technical) and staff to ensure that their activities are defined by highest integrity, and do not damage the university reputation and fame.

All the Galgotian involved in research, during their admission/appointment shall sign a research declaration which defines the commitment to uphold the highest standard of research integrity.

1. Honest has to maintain in all aspects of research.
2. Accountability on all forms of research they carry out
3. **Research Publication**
    b. Use proper citation and give proper reference.
    c. Similarity index has to be taken priority before any submission of documents (both offline and online)
    d. The communicating/corresponding author must take the concern of other authors before submission elsewhere.
4. **Plagiarism Policy**
    a. Similarity index of any document between 0 - 10 % is considered as good
    b. Similarity index of any document between 11 - 20 % is considered as moderate.
    c. Similarity index of any document more than 21 % is considered as plagiarized and it is recommended for not submission anywhere.

5. **Conflict of interest**

All the Galgotian should make sure that at any point of time there should not arise any conflict of interest on any aspect of research activity.

Formats for Data Collection & Analysis

1. R&D Publications

https://tinyurl.com/GUPUBLICATIONS

Email Address	Publication Type	Whether the Publication is mentioning Galgotias University Affiliation?	Name of Faculty (Author-1)	Author-1 School / Affiliation	Name of Author-2	Author-2 School / Affiliation	Name of Any other Author / Authors (if any)	Name of School / Affiliation for other Author / Authors (if any)	Title of Paper / Book / Book Chapter / Copyright/ Patent	Publication Details	Publication Year	Publication Month	Does it have Co-authors from UG/PG/Ph.D. Scholar/Faculty	Whether this is a Joint Publication with Outside Organization	If it is a Joint Publication then Please specify the Type	Name of Industry / Academic Organization	DOI of Published Articles. / Patent Application No. / Copyright No.	Journal/ Book Details (ISSN No., ISBN No.)	Impact Factor	Whether indexed in SCI / SCIE (Y/N)	Whether indexed in Web of science (Y/N)	Whether indexed in Scopus (Y/N)	Whether indexed in Google Scholar (Y/N)	Whether the Journal is Listed in UGC Care Journal List	File Upload (Full Paper / Certificate is any)	Details of UGC Care listmentioning the journal	Plagiarism checked though before publishing	% Plagiarism	Date of Publication	Country of the Co-Author (in case of Joint Publication)	No. of Co-authors	Status of Publication

1. R&D PUBLICATIONS

Submit the details of Publications in the form of Journals, Conferences, Patents (applied/published/granted), Books and Book Chapters, copyrights papers reviewed and various other R&D related activities.

* Required

1. Email address *

_____

2. Publication Type *

IJ - International Journal, IC - International Conference, NJ - National Journal, NC - National Conference, Book- Book/Book Chapter

Mark only one oval.

- ◯ IJ
- ◯ NJ
- ◯ IC
- ◯ NC
- ◯ Book
- ◯ Copyright
- ◯ Patent
- ◯ Other: _____

3. Whether the Publication is mentioning Galgotias University Affiliation? *

Mark only one oval.

- ◯ Yes
- ◯ No

4. Name of Faculty (Author-1) *

If you cannot find your name please contact on 9561154688 or mail on manoj.shanti@galgotiasuniversity.edu.in

Mark only one oval.

- A Ram Pandey-GU0514411710
- Aanchal Vij-GUSCSE201927685
- Aarti Neema-GUSECE201927557
- Abdul Gani-GUSOME201827129
- Abhay Kumar-GUSCSE201827180
- Abhilasha Sisodia-GU0911321654
- Abhishek Kumar Singh-GUSLLL201927465
- Abhishek Kumar Srivastava-GU2112912403
- Adwitiya Prakashs Tiwari-GU0911312174
- Adyasa Padhi-GUGSOB201927691
- Aijaz Ahmad Khan-GUGSOB201927657
- Ajay Kaushik-GUSCSE201927682
- Ajay Kumar-GUSBME201927694
- Ajay Shanker Singh-GU1313811531
- Ajit Kaushal-GUGSOL201927598
- Alka Agnihotri-GUGSOB201927493
- Alka Sharma-GU0310912479
- Alok Tripathi-GU0713411631
- Altaf Tarique-GU1314211609
- Ambika Pandey-GU04PS11492
- Ambreen Fatima Fatima-GUSMAS201927445
- Ambrien Ahmed-GU0412812169
- Ameed Inam-GUGSOA201927579
- Amit Kumar Goel-GU1213812306
- Amit Kumar Sharma-GU0815011736
- Amit Kumar-GU0213720341
- Amit Singh-GUSMAS201827183
- Amita Kohli-GU201827244

5. Author-1 School / Affiliation *

Mark only one oval.

- SOAG
- GSOA
- SBAS
- SBBS
- GSOB
- SOCE
- SCSE
- GSOE
- SEECE
- GSFC
- SOH
- SOL
- SLE
- SOME
- SMCS
- SMAS
- SON
- GPTC

6. Name of Author-2

If second author is not from the University, then please write the Name of the Author in "Other" at the bottom of this list

7. Author-2 School / Affiliation

If Author-2 is from outside the Galgotias University, then please mention their affiliation in the "Other" at the bottom of this list

8. Name of Any other Author / Authors (if any)

You can write multiple names separated by comma

9. Name of School / Affiliation for other Author / Authors (if any)

Only mention in case of the author is from outside the Galgotias University

10. Title of Paper / Book / Book Chapter / Copyright/ Patent *

Only mention Title

11. Publication Details *

Name of Journal/Conference/Book / Book Chapter / any.....(Dates and details) E.g. Soft Computing, Volume 22, Issue 6, pp 1891–1902, March 2018

12. Status of Publication *

Mark only one oval.

- Communicated
- Accepted
- Published
- Indexed

13. Publication Year *

Mark only one oval.

- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- Other: _____

14. Publication Month *

Mark only one oval.

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

15. Date of Publication *

Select from Calendar

_____

Example: January 7, 2019

16. Does it have Co-authors from UG/PG/Ph.D. Scholar/Faculty *

Selection based on contribution

Mark only one oval.

- ◯ Faculty
- ◯ Faculty-PhD
- ◯ Faculty-PG
- ◯ Faculty-UG
- ◯ PhD
- ◯ PG
- ◯ UG

17. No. of Co-authors *

Mark only one oval.

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ Other: _____

18. Whether this is a Joint Publication with Outside Organization *

Mark only one oval.

- ◯ Y
- ◯ N

19. If it is a Joint Publication then Please specify the Type

Mark only one oval.

- ◯ Academic
- ◯ Industry

20. Name of Industry / Academic Organization

_____

21. Country of the Co-Author (in case of Joint Publication)

Mark only one oval.

- ◯ India
- ◯ United Kingdom
- ◯ Canada
- ◯ Option 4

Publication Details

22. DOI of Published Articles. / Patent Application No. / Copyright No. *

Paste the link of doi or Application No. as applicable

23. Journal/ Book Details (ISSN No., ISBN No.)

_____

24. Impact Factor

For Publications in Journals (only values) else mention as NA

_____

25. Whether indexed in SCI / SCIE (Y/N) *

Mark only one oval.

- ◯ Y
- ◯ N

26. Whether indexed in Web of science (Y/N) *

Mark only one oval.

- ◯ Y
- ◯ N

27. Whether indexed in Scopus (Y/N) *

Mark only one oval.

- ◯ Y
- ◯ N

28. Whether indexed in Google Scholar (Y/N) *

Mark only one oval.

- ◯ Y
- ◯ N

29. Whether the Journal is Listed in UGC Care Journal List *

Mark only one oval.

- ◯ Y
- ◯ N

30. Details of UGC Care list mentioning the journal

_____

_____

_____

_____

_____

31. Plagiarism checked though before publishing *

Mark only one oval.

- ◯ Turnitin
- ◯ Urkund
- ◯ iThenticate
- ◯ Other: _____

32. % Plagiarism *

Upload File

If you have multiple proofs then please combine to a single pdf and upload

33. File Upload (Full Paper / Certificate is any) *

Upload .pdf file as applicable Full Length Paper / Certificate / Patent Proof / Copyright poof, Book Cover Page

Files submitted:

2. Faculty-Students Awards / Recognition / Resource Person

https://tinyurl.com/GUAWARDSREC

Timestamp	Email Address	Are you a Student or Faculty	Your Full Name	GU Admission No.	Program Name	Semester	School Name	Salutation	Name of the Faculty	GU Employee ID	Affiliated School	Designation	PAN Number	Category of Activity	In-house / External	Name of Activity / Type of Awards / Recognition	Name of Award / Recognition / Fellowship / Event / Activity	Name of Awarding Agency	Website of the Awarding Agency	Mail ID of contact person from the Awarding Agency	Phone No. of contact person from the Awarding Agency	CIN No. of the Organization or Awarding Agency	Year of Award	Date of Award	Date From (In case of Event Organized)	Date To (In case of Event Organized)	Place of Event	Government / Non-Government	Level	Upload Supporting Documents

2. FACULTY-STUDENTS AWARDS / RECOGNITION / RESOURCE PERSON

Dear Galgotians,

Greetings! Galgotias University is known for its strong Academic foundation.
Any University is known for its awards and honors won by its stakeholders. You are important stakeholder of the University.

I would appreciate if you can spare some time for updating us with your credentials. While updating the details in the database, we expect you to enter the credentials from 2015 onwards (only during the period wherein You were / are part of Galgotias University)

Fill the information about the highly reputed National/ International Awards/ Recognition from Government and Non-Government Agencies and as Resource Person (Session Chair/ Keynote Speaker/ Advisory Board/ Board of industry) / Innovation / Research / Academic Excellence / Research / Entrepreneurship / Others if not covered under any of the above category.

1. The Top 2 faculties and top 2 Students from each school shall be rewarded quarterly
2. Every Achievement shall be on university website & provided with Certificate of Honor
3. Best 20 entries from university shall have Commendation, medal and monetary incentive at a University function annually and shall be placed in GU Prospectus and Newsletters.

AWARDS AND RECOGNITION ENTRY FORM LINK: https://tinyurl.com/GUAWARDSREC
Last date to fill the form 10-Jan-2021
Please submit proof and details through this form.

The awards/ recognition may include any of the following:

1. Prize/award or recognition received in any competition / Hackathon such as SIH etc. organized by MHRD &
   Co-organized by any of the central agencies
2. Best paper award in any conference or journal
3. Paper presentation
4. Any research grant received by government or non-government agencies
5. Patent being Filed / Published / Under Examination / Granted
6. Copyright being filed
7. Qualified NET / SET / GATE score / Any other Major Exam
8. Got full time admission for PhD in institute of national importance
9. Session chair/ Reviewer in the International Conference/Journal
10. Invited as Keynote speaker/ guest speaker/ expert talk on International or National forum such as conference, FDP, STTP, Training, etc
11. Member of selection committee/ Jury member/ Judge in the competition
12. Member of Advisory Board/ Governing Board of any organization
13. Special recognition by any professional society like ACS / ICS / IEEE, ASME, ASCE, IETE,

IEI, etc
14. NPTEL/ SWAYAM/ Coursera and similar Certification
15. Worked as Auditor for Quality/ Energy/ ISO
16. Evaluator for NBA/NAAC or similar bodies
17. Member of LEC, selection panel of University or any other organization
18. Part of working committee or body of professional society as Chairman or executive member
19. Expert or reviewer or panel member or referee for PhD evaluation
20. Any of the committee of State Government / University/ National Institutes
21. None of the above but you feel it is recognition to be considered can be included
22. Conference / STTP / FDP / Workshop Organized

Please provide and upload the document proof

Note: For each awards you need to do those many individual entries.

* Required

1. Email address *

2. Are you a Student or Faculty *

Mark only one oval.

- ◯ Student *Skip to question 3*
- ◯ Faculty *Skip to question 8*
- ◯ Resarch Scholar *Skip to question 3*

Student / Research Scholar Details

3. Your Full Name *

4. GU Admission No. *

5. Program Name *

Research Scholars and any other program missing can add in any other

Mark only one oval.

- ( ) B.Tech in Electrical Engineering
- ( ) B.Tech in Electrical & Electronics Engineering
- ( ) B.Tech in Electronics & Communication Engineering
- ( ) B.Tech in Electronics and Communication Engineering (Bio-Medical Engineering)
- ( ) B. Tech. in Artificial Intelligence and Data Science
- ( ) B.Tech in Computer Science and Engineering (Artificial Intelligence and Machine Learning)
- ( ) B.Tech in Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology)
- ( ) B.Tech in Computer Science and Engineering (Gaming Technology)
- ( ) B.Tech in Computer Science and Business Systems
- ( ) B.Tech in Computer Science & Engineering (Cloud Computing & Virtualization)
- ( ) B.Sc (Hons.) Computer Science
- ( ) BCA
- ( ) BCA (Hons.) Industry Oriented Program
- ( ) BCA (Hons.) Multimedia & Animation
- ( ) B.Tech in Civil Engineering
- ( ) B.Tech Civil Engineering (Construction Technology)
- ( ) B.Tech Civil Engineering Environment and Pollution Control
- ( ) B.Tech in Mechanical Engineering
- ( ) B.Tech in Automobile Engineering
- ( ) B.Tech in Biomedical Engineering
- ( ) B.Sc (Hons.) Biomedical Science
- ( ) B.Sc (Hons.) Biological Science
- ( ) B.Sc Healthcare & Clinical Research
- ( ) B.Sc. Nutrition & Dietetics
- ( ) B.Sc. Medical Biotechnology
- ( ) Bachelor of Architecture (B.Arch)
- ( ) B.Sc. Fashion Design (In association with T-Series)

- [ ] Bachelor of Business Administration (BBA)
- [ ] BBA (Business Analytics)
- [ ] BBA in Logistics and Supply Chain Management
- [ ] BBA in Aviation Management
- [ ] B.Com (Hons.)
- [ ] B.Com (Hons) International Accounting & Finance
- [ ] B.Com (Hons.) Financial Markets
- [ ] BBA Financial Investment Analysis
- [ ] B.A (Hons.) in Applied Psychology
- [ ] B.A (Hons.) in Economics
- [ ] B.A (Hons.) in English
- [ ] B.A (Hons.) in Political Science
- [ ] B.A (Hons.) in Sociology
- [ ] B.Sc (Hons.) Chemistry
- [ ] B.Sc Environmental Science
- [ ] B.Sc (Hons) Mathematics
- [ ] B.Sc (Hons.) Physics
- [ ] B.Sc. (Hons.) Forensic Science
- [ ] B.Sc (Hons) Microbiology
- [ ] B.Sc (Hons) Zoology
- [ ] B.Sc (Hons) Botany
- [ ] B.Sc (Hons) Bio-Chemistry
- [ ] B.Sc.(General) Mathematics & Data Science
- [ ] B.Sc. (General) PCM
- [ ] B.Sc. (General) ZBC
- [ ] Bachelor of Pharmacy (Approved by Pharmacy Council of India)
- [ ] B.Sc in (Medical Lab Technology)
- [ ] B.Optometry
- [ ] B.Sc in Cardiovascular Technology
- [ ] Bachelor in Health Information Administration
- [ ] B.Sc. Medical Imaging Technology
- [ ] B.Sc in Nursing

- [ ] B.Sc. Hotel Management
- [ ] Bachelor of Hotel Management
- [ ] Bachelor of Tourism Administration
- [ ] B.A Journalism and Mass Communication
- [ ] B.Ed (2 year) Full time
- [ ] B.Sc (Hons.) Agriculture
- [ ] Five year Integrated B.A. LL.B (Hons.)
- [ ] Five year Integrated B.B.A. LL.B (Hons.)
- [ ] Bachelor of Laws (LL.B.)(Hons.)
- [ ] M.Sc Computer Science
- [ ] MCA
- [ ] M.Tech in Computer Science & Engineering
- [ ] M.Tech Computer Science & Engineering (Artificial Intelligence & Machine Learning)
- [ ] M.Tech in Data Science
- [ ] M.Tech in Communication Engineering
- [ ] M.Tech in VLSI Design
- [ ] M.Tech in Power System Engineering
- [ ] M.Tech in Energy & Environmental Engineering
- [ ] M.Tech in Structural Engineering
- [ ] M.Tech in Transportation Engineering
- [ ] M.Tech in CAD/CAM
- [ ] M.Tech in Automobile Engineering
- [ ] M.Tech in Mechatronics
- [ ] M.Sc in Clinical Research
- [ ] M.Sc in Biomedical Science
- [ ] M.Sc in Biological Science
- [ ] M.Sc. Nutrition & Dietetics
- [ ] M.Sc. Medical Biotechnology
- [ ] M.Sc. Fashion Design (In Association with T-Series)
- [ ] MBA
- [ ] MBA in Logistics & Supply Chain Management
- [ ] MBA in Aviation Management

- [ ] M.Com
- [ ] MBA in Financial Management
- [ ] M.A in Economics
- [ ] M.A in English
- [ ] M.A in Sociology
- [ ] M.A in Political Science
- [ ] M.A in Applied Psychology
- [ ] M.Sc in Environmental Science
- [ ] M.Sc in Mathematics
- [ ] M.Sc in Bio-Chemistry
- [ ] M.Sc in Physics
- [ ] M.Sc in Forensic Sciences
- [ ] M.Sc in Chemistry
- [ ] M.Sc in Microbiology
- [ ] Master of Laws (LL.M)
- [ ] Master of Pharmacy (Pharmaceutics)
- [ ] Master of Physiotherapy (M.P.T.)
- [ ] M.Sc. Medical Lab Technology
- [ ] Masters in Optometry
- [ ] M.Sc. Cardio Vascular Technology
- [ ] Master of Tourism Management
- [ ] M.A Journalism and Mass Communication
- [ ] M.Ed
- [ ] M.A in Education
- [ ] M.Sc Agriculture (Agronomy)
- [ ] Other: _____

6. Semester *

Mark only one oval.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

7. School Name *

Mark only one oval.

- School of Computing Science & Engineering (SCSE)
- School of Electrical, Electronics & Communication Engineering (SEECE)
- School of Civil Engineering (SOCE)
- School of Mechanical Engineering (SOME)
- School of Biosciences and Biomedical Engineering (SBBS)
- School of Architecture & Design (SOA)
- School of Business (SOB)
- School of Finance & Commerce (SFC)
- School of Liberal Education (SLE)
- School of Basic & Applied Sciences (SBAS)
- School of Medical & Allied Sciences (SMAS)
- School of Nursing (SON)
- School of Hospitality & Tourism (SOH)
- School of Media & Communication Studies (SMCS)
- School of Education (SOE)
- School of Agriculture (SOAG)
- School of Law (SOL)
- University Polytechnic (GPTC)

Faculty Details

8. Salutation *

Mark only one oval.

- Dr.
- Mr.
- Mrs.
- Ms.

9. Name of the Faculty *

Write the Name as per Records (do not write salutation)

_____

10. GU Employee ID *

11. Affiliated School *

Mark only one oval.

- SOAG
- GSOA
- SBAS
- SBBS
- GSOB
- SOCE
- SCSE
- GSOE
- SEECE
- GSFC
- SOH
- SOL
- SLE
- SOME
- SMCS
- SMAS
- SON
- GPTC

12. Designation *

Mark only one oval.

- ◯ Professor
- ◯ Associate Professor
- ◯ Assistant Professor
- ◯ Other: _____

13. PAN Number *

_____

Skip to question 14

Awards & Recognition & resource Person

The Faculty as resource person and other awards and Recognition / Major Events organized to be entered in this section

14. Category of Activity *

Mark only one oval.

- ◯ Academic (NPTEL / Best Teacher / Best Student / Any Other)
- ◯ Extension (NSS / NCC / NGO / Social Service / CSR / Any Other)
- ◯ Innovation Activity (Hackathons / Project Competition)
- ◯ Research Activity (Best Paper / Resource person in Journals and Conferences / Any Other)
- ◯ Other: _____

15. In-house / External *

Mark only one oval.

- ◯ External
- ◯ In-house

16. Name of Activity / Type of Awards / Recognition *

Any activity not listed here to be added as Any Other and Mention the details of the Activity

Mark only one oval.

- ( ) Winner of Competitions/Hackathon
- ( ) Keynote Speaker/ Expert Talk/on International or National forum
- ( ) Reviewer of Journal / Conference
- ( ) Session Chair / Track Chair
- ( ) Guest lecture Delivered
- ( ) Patents being Filed / Published / Under Examination / Granted
- ( ) Evaluator/Examiner/Auditor
- ( ) Research Grants Received
- ( ) Best Paper Award
- ( ) Copyright
- ( ) Qualified NET / SET / GATE score / Any other Major Exam
- ( ) Member of Selection Committee/ Jury member/ Judge
- ( ) Member of Advisory Board/ Governing Board/ BoS
- ( ) Special Recognition by any Professional society
- ( ) Member of LEC, selection panel of University or any other organization
- ( ) NPTEL/ SWAYAM/ Coursera and similar Certification
- ( ) Expert or reviewer or panel member or referee for PhD evaluation
- ( ) Award Recognition against Extension Activity (NSS, Blood Donation etc.)
- ( ) Conference Organized
- ( ) FDP Organized
- ( ) STTP Organized
- ( ) MoU / Collaborations Done
- ( ) Other: _____

17. Name of Award / Recognition / Fellowship / Event / Activity *

Describe the details of the Award or the Event

18. Name of Awarding Agency *

19. Website of the Awarding Agency

20. Mail ID of contact person from the Awarding Agency

21. Phone No. of contact person from the Awarding Agency

22. CIN No. of the Organization or Awarding Agency

You can find the CIN on following websites https://www.zaubacorp.com/ or https://www.tofler.in/ or http://www.mca.gov.in/mcafoportal/findCIN.do

23. Year of Award *

Mark only one oval.

- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- Other: _____

24. Date of Award *

_____

Example: January 7, 2019

25. Date From (In case of Event Organized)

_____

Example: January 7, 2019

26. Date To (In case of Event Organized)

_____

Example: January 7, 2019

27. Place of Event *

_____

28. Government / Non-Government *

Mark only one oval.

- ◯ Government
- ◯ Non-Government

29. Level *

Mark only one oval.

- ◯ International
- ◯ National
- ◯ State
- ◯ University

30. Upload Supporting Documents *

If multiple supporting files for single award then combine it to single pdf and upload

Files submitted:

3. Publication Funding Applications

Email Address	Year	Publication Type	GU Faculty ID / GU Student Admission No.	Name of Faculty / Name of Student	Co-Author / Team Mate Names	School Name	Name of Conf./ Journal / Seminar / Project / Workshop	Title of Research Paper / Project	Event Start Date	Event End Date	Venue of Event	Plagiarism %	Registration Amount	TA/DA	Project Cost	Remarks if any	File Upload (Supporting documents)

4. GU faculty as Resource Person

SN	Name of School	Faculty Name	Type of Activity	Activity for which as a recourse person (Workshop, STTP, Conference)	Venue	Date From	Date To	Year

5. Patent Details

SN	Patent Application Number	Name of Faculty involved	School	School/Department	Title of the Patent	Date of filing	Year of Filing	Date of Publication	Year of Publication	Category	Status	Request for Examination Date	First Examination Date

6. Research Targets

SN	School	Scopus / SCI journal	Achieved	International Conference	Achieved	Funded Projects	Achieved	patents	Achieved	OBE/NPTEL/MOOC Certifications	Achieved	Scopus / SCI journal	International Conference	Funded Projects	Patents	OBE/NPTEL/MOOC Certifications

7. MoU Details

SN	Name of Company	Start Date	End Date	Nature/ brief Detail about MOU	Name of School for which MOU is applicable/ Whole University

8. International Research Collaboration

SN	Name of University	Country	Potential Collaborating Departments	Person in contact	Brief Summary	ATR	Remarks

9. Events Organized

Email Address	Name of the Event	University / School	Date of Event	Time	Nature of Event	Description of the Event	Event In-charge	Resource Person Name	Resource person (External/ Internal)	Resource person Designation.	Expected No. of Participants	Resource person Affiliation.	Resource person Mail ID	Resource person Mobile No.	Type of Event	In Collaboration with	End Date of Event	Report Submitted (Yes/No)

10. Consultancy Data

SN	Financial Year	Bill No.	Date	Name Client Organization	Description of Assignment	School Name	Name of faculty (Chief Consultant)	Amount (Rs.)					Amount received (in words)
								Amount (Rs.)	CGST	SGST	IGST	Total	

11. Consultancy Summary

School Name	2018-19		2019-20		2020-21	
	No.	Amount (Rs.)	No.	Amount (Rs.)	No.	Amount (Rs.)

12. Seed Money

a. Pre-Review Report of Seed Funding Research Proposals

SN	Name of Faculty	Date	School Name	Title of Proposal	Duration	Total Score	Review Committee Members Name	Advisory Committee Comments	Proposed Amount

b. Review Report of Seed Funding Research Proposals

SN	Name of Faculty	Date	School Name	Title of Proposal	Duration	Collaboration with Industry/Govt. Organisations/International establishments	Project Outcome (Social/Community/research/UG/PG/Ph.D/Emerging trends)	Review comments of the Research committee	whether approved (yes/No)	Total Amount Proposed	Total Amount Sanctioned

c. Seed Fund Project Review

SN	Name of the Faculty	Designation	Name of the Project	Significance of the research (10)	Originality (40)	Quality of scientific content (10)	Publications/projects/patents related to the proposed work (10)	Design and Methodology (10)	Plagiarism Report (5)	Feasibility of the Proposal (10)	Benefits for Organization (5)	Total Score 100	Category (1/2/3/4)

d. Seed Money Summary

SN	School	Name of Principal Investigator	Name of Co-Investigator	Tittle of the project	Reference No	Date of Approval	Year of receiving	Duration of the grant (in months)	1st Instalment (in Lakhs)	2nd Instalment (in Lakhs)	3rd Instalment (in Lakhs)	Total amount of seed money (in Lakhs)

13. Faculty Research Citation

SN	GUID	Department	Faculty Name	No. of Paper in Web of Science/SCI	Citations in WoS/SCI	No. of Papers in Scopus	Citations in Scopus	No. of Papers in Google Scholar	Citations in Google Scholar	Google Scholar h-Index	Google Scholar i10-index	Google Scholar Link	Publons Link	ORCID ID	Scopus ID	Research Gate Link	Total No. of Papers with GU Affiliation	Total No. of Papers with Other than GU Affiliation	All Profile made public Y / N

14. Faculty Research & Innovation Awards

SN	Name	GUID	Designation	School	Total No. of Scopus conference papers published	Total No. of Scopus Journal papers published	Total No. of SCI papers with/without impact factors published with GU affiliation	Total cumulative impact factor	Patent published/Granted	Book Chapters Scopus/Non-Scopus	Authored Books	Edited Books	Funded projects	Total Amount

					under GU affiliation	under GU affiliation								

15. Research Groups

SN	Faculty Name	Designation	Research Group	Sub Domain	Group In-charge	Email	Contact No

16. Student Project and Review Formats

Project Group No.	Student	Enrollment Number	Admission Number	Student Name	Program	Branch/Section	Semester	Student Email-ID	Student Mobile Number	Category	Group Count	Guide Name	Guide Email Id	Guide Mobile Number	Title of the Project	Approval Form	Abstract Status	Area/Domain	Outcomes Conference	Whether attended the paper writing /Research	Review 1 Date	Review I Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20 (In Binary)	Action taken on Review 1	Review 2 Date	Review 2 Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20	Action taken on Review 2	Review 3 Date	Review 3 Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20	(R1+R2+R) Final Status	Final Review Status	Total Marks (R1+R2+R)

17. Student Project and Review Summary

SN	School	Project Details Filled Status	UCRD Review Date	Journal Target	Conference Target	Patent Target	Product Target	Other Target	Total

18. Ph.D Supervisor Details

S No	Name of Faculty	Highest Qualification	Designation	Research Area	Ph.D. students allotted outside of GU	Ph.D. students allotted in GU	Quota available	Vacancy

19. Ph.D School wise Information Sheet

SN	Name of PhD Scholar	Reg. no	Year and month of Enrollment	Mb. No. of PhD Scholar	Whether full time or part time	Affiliation of part time scholar	Name of Internal Supervisor	Name of External Supervisor	Affiliation of External Supervisor	Ph. No of Internal Supervisor	Ph. No of External Supervisor	Name of courses completed/ pursuing	Status of course work	Name of External Expert for DC	Affiliation and Email, mb no of expert	DC conducted I/II/III	Fees paid/ dues if any	No of seminars presented (Progress report)	No of publications in journals with DOI, name of Journal and publisher	Thesis submitted or not

GALGOTIAS UNIVERSITY

Mandate # 2
Research & Innovation- Formats

INDEX

Consultancy Formats

Consultancy Formats Index

1. *Invoice List Summary*

SN	Financial Year	Bill No.	Date	Name Client Organization	Description of Assignment	School Name	Name of faculty (Chief Consultant)	Amount (Rs.)					Amount received (in words)
								Amount (Rs.)	CGST	SGST	IGST	Total	

2. *School Wise summary for Consultancy*

Revenue generated from consultancy during the last five years (INR In Lakhs)							
SN	School	2020-21	2019-20	2018-19	2017-18	2016-17	Total
1	SBAS						
2	SOA						
3	SCSE						
4	SEECE						

3. *Consultancy Request Letter* *Annexure-I*

Ref. No: GU/SBAS/RAI/01/16-17 **Date:**

The Principal Scientist
Integral Biosciences Private Ltd.
Noida

Subject: Industry- Institute Interaction and Identification of Areas of Industrial Consultancy

Dear Sir,

I am writing this letter on the behalf of Galgotias University, Greater Noida, UP. has been established through The Galgotias University Act, 2011 passed by State Legislative assembly, listed with UGC under section 2(f) of UGC Act, 1956. The University has been conceived as a temple of learning for intellectual, cultural, aesthetic and skill development of the brilliant youth of the country. GU offers Under Graduate and Post Graduate courses, in an ideal Academic environment, conducive to Research, development and Industry integration. This unique mix of cultures and backgrounds helps our students learn the finer aspects of life, above the regular academics. We know that Integral Biosciences Private Limited is a leading name in facilitating India is a drug discovery services company based out of India.

IBS also offer end-to-end integrated drug discovery services to innovation focused biotech start-ups and small to mid-sized pharmaceutical companies. IBS is a well renowned Contract Research Organization (CRO) in India providing preclinical development solution. Our office of Research & Industrial Consultancy at Galgotias University intends to work in collaboration in Providing with your company on innovative research solution to known problems.

Could you please spare some time from your schedule to discuss the cited matter with the undersigned at your earliest convenience.

With regards

Dean
SBAS

4. Minutes of Meeting

Ref. No: Ref. No: GU/ **Date:**

Minutes of Meeting

Sub: Meeting Regarding Industrial Consultancy

Place: **Date of Meeting:**

Members Present	***Signature***
1.	
2.	
3.	
4.	
5.	
6.	

The following discussions were held:

- *Point 1*
- *Point 2*
- *Point 3*
- *Point 4*

5. *Letter to Industry*

Ref. No: **Date:**

Dr.
Address of the company

Subject: Industrial Consultancy to _____

Dear Sir,

We are greatly thankful to you, for sharing your industrial problem with us. We assure you that our office of Research & Industrial Consultancy, Galgotias University will provide you feasible and acceptable solution.

As per our discussion with you, GU will charge the following consultancy fee:

Consultancy Charges:

With regards

Dean

6. *Problem Statement*

On Company Letter Head (4)

Ref. No: **Date:**

Dear

This is in continuation of our communication regarding working jointly in the industry since we are dealing with products and customers. Integral Biosciences Pvt. Ltd (IBS) is a drug discovery incubator, which offers end-to-end integrated drug discovery services to innovation focused biotech start-ups and small to mid-sized pharmaceutical companies. IBS is a well renowned Contract Research Organization (CRO) in India providing preclinical development solution.

Following assistance is required from your side: -

- Standardization of protocol for assessing DNA damage (apoptosis) by annexin V staining.

Regards,

7. Sample Consultancy Report

GALGOTIAS UNIVERSITY

(Under the Uttar Pradesh Private Universities Act No. 12 of 2019)

Consultancy Sample Report

Submitted on

Company Name

Submitted By
Date

Standardisation of assay protocol for apoptosis by annexin-V binding

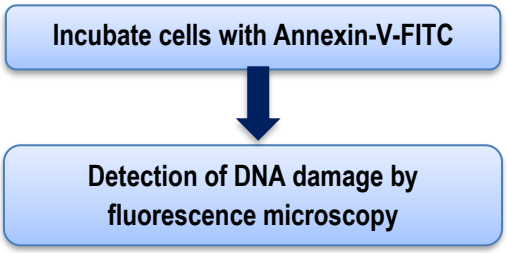
The entitled project "**Title of the Project"** has been developed for ……Pvt Ltd. to assess the DNA damage in cancer pathogenesis. IBS offers end-to-end integrated drug discovery services to innovation focused biotech start-ups and small to mid-sized pharmaceutical companies. IBS is a well renowned Contract Research Organization (CRO) in India providing preclinical development solution.

Issues to develop a standardized assay protocol for apoptosis

1. To determine the DNA damage at an early stage.
2. To standardize the assay protocol for easy and precise apoptosis assessment.

The following steps are used in this project:

Flow Diagram



Statement of Problem:

Most of apoptosis detection method determines the apoptosis at a later stage. The late detection of apoptosis prevents the treatment of cell damage in cancer patients. To overcome this problem, a method to detect apoptosis immediately after its initiation is utmost important. Annexin V-FITC Apoptosis Detection is based on the observation that soon after initiating apoptosis, cells translocate the membrane phosphatidylserine (PS) from the inner face of the plasma membrane to the cell surface. Once on the cell surface, PS can be easily detected by staining with a fluorescent conjugate of Annexin V, a protein that has a high affinity for PS.

Materials and Chemicals Required:

- Annexin V-FITC
- 1X Binding Buffer
- Propidium Iodide (PI)
- Microcentrifuge
- Pipettes and pipette tips
- Fluorescent Microscope
- Glass slides
- Orbital shaker

Consultancy report

Identification of problem

Apoptosis is an ordered and orchestrated cellular process that occurs in physiological and pathological conditions. It is also one of the most studied topics among cell biologists. An

understanding of the underlying mechanism of apoptosis is important as it plays a pivotal role in the pathogenesis of many diseases. In some, the problem is due to too much apoptosis, such as in the case of degenerative diseases while in others, too little apoptosis is the culprit. Cancer is one of the scenarios where too little apoptosis occurs, resulting in malignant cells that will not die. The mechanism of apoptosis is complex and involves many pathways. Defects can occur at any point along these pathways, leading to malignant transformation of the affected cells, tumour metastasis and resistance to anticancer drugs. Despite being the cause of problem, apoptosis plays an important role in the treatment of cancer as it is a popular target of many treatment strategies. The abundance of literature suggests that targeting apoptosis in cancer is feasible. However, many troubling questions arise with the detection of apoptosis

Expected Solution

The early detection of apoptosis can be done by

1. Annexin-V-FITC staining assay
2. Early identification of apoptotic cells by fluorescence microscopy.

Detection of DNA damage apoptosis by Annexin-V-FITC staining assay

Annexin V-FITC Apoptosis Detection is based on the observation that soon after initiating apoptosis, cells translocate the membrane phosphatidylserine (PS) from the inner face of the plasma membrane to the cell surface. Once on the cell surface, PS can be easily detected by staining with a fluorescent conjugate of Annexin V, a protein that has a high affinity for PS.

The standardised assay protocol is as follows:

1. Incubation of cells with Annexin V-FITC
    a. Induction apoptosis by desired method.
    b. Collection of 1-5 x 10^5 cells by centrifugation.
    c. Re-suspension of cells in 500 µl of 1X Binding Buffer.
    d. Addition of 5 µl of Annexin V-FITC and 5 µl of propidium iodide.
    e. Incubation at room temperature for 5 min in the dark.
2. Detection by Fluorescence Microscopy
    a. Place the cell suspension on a glass slide. Cover the cells with a glass coverslip.
    b. Observe the cells under a fluorescence microscope using a dual filter set for FITC & Texas Red.

Dated:

8. *Project Closure Report*

Ref. No: **Date:**

LETTER TO DEAN

To
The Dean,
UCRD
Galgotias University
Greater Noida

Subject: - *Consultancy to be provided to……*

Respected Sir
School of Basic Applied Science has successfully completed the consultancy project titled "Standardisation of assay protocol for apoptosis by annexin-V binding" for Integral Biosciences Private Ltd. The payment of Rs. _____ as consultancy charges has been received via Cash/NEFT and the same is being submitted to your office.
This is for your information please.

With regards,

Dean

Ref. No: **Date:**

To
The Dean UCRD
Galgotias University
Greater Noida.
Subject: ***Project Closure Report***

Consultancy for:
Consultancy Team Members:
Duration:
Problem Identified:
Problem Details:
Solutions Suggested:
Consultancy Fee:
Mode of Payment: Cash or NEFT

With Regards

Dean

Seed Fund Formats

Seed Fund Formats Index

Seed Funding Summary

a. Pre-Review Report of Seed Funding Research Proposals

SN	Name of Faculty	Date	School Name	Title of Proposal	Duration	Total Score	Review Committee Members Name	Advisory Committee Comments	Proposed Amount

b. Review Report of Seed Funding Research Proposals

SN	Name of Faculty	Date	School Name	Title of Proposal	Duration	Collaboration with Industry/Govt. Organisations/International establishments	Project Outcome (Social/Community/research/ UG/PG/Ph.D/Emerging trends)	Review comments of the Research committee	whether approved (yes/ No)	Total Amount Proposed	Total Amount Sanctioned

c. Seed Fund Project Review

SN	Name of the Faculty	Designation	Name of the Project	Significance of the research (10)	Originality (40)	Quality of scientific content (10)	Publications/projects/patents related to the proposed work (10)	Design and Methodology (10)	Plagiari Report

d. Seed Money Summary

SN	School	Name of Principal Investigator	Name of Co-Investigator	Tittle of the project	Reference No	Date of Approval	Year of receiving	Duration of the grant (in months)	1st Instalment (in Lakhs)	2nd Instalment (in Lakhs)	3rd Instalment (in Lakhs)	Total amount of seed money (in Lakhs)

Annexure-II

Circular

Ref: **Date:**

CALL FOR SEED FUND PROPOSAL

University Centre of Research and Development (UCRD), Galgotias University is Inviting Research Proposal from Faculty Members/ Research Scholars/ UG/PG Students from all the Schools and collaborations with outside Organizations/Industries.

The UCRD Department team will be assisting them to get funds from Industry and other Government/ Non-Government Funding Organizations.

1. The budget of the Proposal should be minimum 03 Lakhs and Not to exceed 10 Lakhs.
2. The proposal format is attached herewith. The last date for submitting the proposal is
3. The project can involve UG/PG/Ph.D students if needed`.
4. The project needs to involve more than one school for Interdisciplinary Research.
5. The proposal needs to address Social issues/ Beneficial for Community.

UCRD Department team will review the Proposal and Suggest avenues for Funding Opportunities. The hard copy as well soft copy of the proposal needs to be submitted as undersigned. Please find enclosed the Performa for Seed funding Proposals and fill the following points as given in annexure.

Registrar

PROFORMA FOR SUBMISSION OF SEED FUND PROPOSAL

Part I: General Information

1. Project Title (should be focused not exceeding 15 words):

2. i. Name of Principal Investigator:

   ii. Name of Co-Investigator:

3. Collaboration if any, give details of institution(s)

4. Any Project(s) previously sanctioned by any funding agency? If yes give the details:

SN	Title of the Project	File No.	Name of Division and funding agency (DST/DBT…)	Date of completion/ status	Amount (Rs lakh)	Whether final project completion report has been submitted (if yes, mention date)

5. Whether project activities require any clearance from relevant authorities in respect of any environmental/legal/ethical issues?
6. Duration (months):
7. Cost (Rs. in Lakhs): Recurring
   Non-recurring
8. Enclose the following while submitting the application form:

Duly filled application form (complete with all Annexures)- 5 hard copies plus 1 soft copy on a CD	
Bio-data of the PI & Co-I -**5 copies**	

Part II: Proposal Summary

1. **Origin of the Proposal:** (Maximum 1 page)
   (Scientific/Technical rationale for doing this work should be elaborated)

2. **Objectives (Only 4-5 focused one that can be observed, measured or clearly assessable)**

i.
ii.
iii.

3. **Review of status of Research and Development in the subject**
   3.1 International Status: (Maximum 2 pages)
   (Researchers working in the area worldwide and their contributions must be properly highlighted with recent references and reviews. A correct and faithful description of the international research status must be given)
   3.2 National Status: (Maximum 1 page)
   (Same as above to cover the contribution of Indian Scientists in the project area)
   3.3 Importance of the proposed project in the context of current status (Maximum 1 page)
   *(*Highlight what is the new area or gap which will be solved in the project in relating to what is already known. This is a very important section to project the novelty content of the proposal*)*
   3.4 If the project is location specific, basis for selection of location be highlighted: (Maximum 1/2 page)

4. **Work Plan:**
   4.1 Methodology: (Maximum of 5 pages)
   (It should contain all the details of how each of the objectives will be addressed. This section must be detailed and have clear plans, not vague and generalized statements. It should have several schemes, tables, figures, equations etc. in addition to text, explanation and justification of why the project research plan will work)
   4.2 Time Schedule of activities giving milestones through BAR diagram. *(Maximum 1 page)*
   4.3 Suggested Plan of action for utilization of research outcome expected from the project. (Maximum ½ page)
   4.4 Environmental impact assessment and risk analysis. (Maximum ½ page)

5. **Expertise:**
   5.1 Expertise available with the investigators in executing the project: (Maximum 1 page)
   (Professional expertise existing with each of the investigators in terms of publications, Patents and preliminary results, to execute every component of the

proposal should be highlighted)

5.2 Summary of roles/responsibilities for all Investigators:

(If the proposal contains more than one Investigator, it is important to clearly mention the role of each Investigator in implementing the objectives of the proposal. The Board does not encourage Investigators who do not have specific scientific role in the proposal)

SN	Name of the Investigators	Roles/ Responsibilities
1.		
2.		
3.		

5.3 Key publications published by the Investigators pertaining to the theme of the proposal during the last 5 years

5.4 Bibliography

6. List of Projects submitted/implemented by the Investigators

(All the Investigators should list out details of the Projects submitted, implementing and completed by them. The list should start with the Projects implemented by the Principal Investigator, followed by Co-PI1, Co-PI 2 etc.)

6.1 Details of Projects submitted to various funding agencies:

SN	Title	Cost in Lakh	Month of submission	Role as PI/Co-PI	Agency	Status

6.2 Details of Projects under implementation

SN	Title	Cost in Lakh	Duration	Role as PI/Co-PI	Agency

6.3 Details of Projects completed during the last 5 years

SN	Title	Cost in Lakh	Duration	Role as PI/Co-PI	Agency

7. List of facilities required from Galgotias University for the project implementation.

7.1 Infrastructural Facilities

SN	Infrastructural Facility	Yes/No/ Not required Full or sharing basis

1.	Workshop Facility	
2.	Water & Electricity	
3.	Laboratory Space/ Furniture	
4.	Power Generator	
5.	AC Room or AC	
6.	Telecommunication including e-mail & fax	
7.	Transportation	
8.	Administrative/ Secretarial support	
9.	Information facilities like Internet/Library	
10.	Computational facilities	
11.	Animal/Glass House	
12.	Any other special facility being provided	

7.2 Equipment available with the Galgotias University/ Other Institutesfor the project:

Equipment available with	Generic Name of Equipment	Model, Make & year of purchase	Remarks including accessories available and current usage of equipment
PI & his group			
PI's Department			
Other Institute(s) in the region			

7.3 Total Budget (Rs. in Lakhs):

- Recurring Cost (Rs):
- Non-Recurring Cost (Rs):

SN	Item	Budget			
		1st Yr	2nd Yr	3rd Yr	Total
A	**Recurring** 1. Manpower 2. Consumables 3. Travel 4. Field testing, Demo/ Training expenses (if applicable) 5. Contingencies/Other costs 6. Institutional Overheads* 7. Any other item				
B	**Non-Recurring** Permanent equipment Construction of work shed/structures Fabrication of prototype equipment				

	Grand Total (A+B)				

A. Recurring:

1. Budget for Manpower

SN	Designation	No.	Qualification & experience	Monthly emolument (Rs)	Budget (Rs. in lakhs)			
					1st Yr	2nd Yr	3rd Yr	Total

i. Only NET/GATE qualified candidates can be appointed as Res. Associate/ SRF/ JRF.
ii. GU would not entertain any request for hike in emolument of project staff during the project period.
iii. Limited funds may be allowed as 'Honorarium to Experts' for need-specific consultancy.

2. Budget for Consumables*

SN	Description of consumable	Qty./Yr	Budget (Rs. in lakhs)			
			1st Yr	2nd Yr	3rd Yr	Total

*Includes items like chemicals, raw materials for fabrication, stationery, etc.

3. Budget for Travel

SN	Purpose	Budget (Rs. in lakhs)			
		1st Yr	2nd Yr	3rd Yr	Total
1.	Project logistics				
2.	Field activities				
3.	Review meetings (if elsewhere)				

i. International travel is not permitted
ii. Please provide detailed justification for budget proposed under first two headings.

4. Field Testing/ Demo/ Trainings*

SN	Description of field testing/demos /trainings	No/Yr	Budget (Rs. in lakhs)			
			1st Yr	2nd Yr	3rd Yr	Total

*Include material for technology field testing/demo, training manuals, training expenses for beneficiaries. Note: For training give details about the subject of training(s), no. of beneficiaries/training, duration of training days, cost /training).

5. Budget for Contingencies*

SN	Item	Qty./Yr	Budget (Rs. in lakhs)			
			1st Yr	2nd Yr	3rd Yr	Total

*Includes items like computer time, secretarial assistance, documentation, cost of technology transfers/acquisitions (intellectual fees), lab/field trials, maintenance/servicing of equipment, incidental expenses, etc.

B. Non-Recurring:

Budget for Permanent Equipment/ Workshed/ Structures

SN	Equipment/Item details	Qty	Budget (Rs. in lakhs)
1.			
2.			
3.			
4.			

i. Include installation charges, transport, taxes/duties/levies, etc. Please try to avail tax/duty exemptions as applicable to your institution/organization.
ii. Budgetary quotations will be required for permanent equipment (estimates, if the equipment is to be fabricated locally for prototype testing etc) and other items under non-recurring head, once project is approved for financial support.
iii. Drawings/layouts, etc. prepared by authorized professionals/agencies should be submitted for proposed work shed/structures, if applicable, and supported by documents showing availability of required land along with consent letter from the owner (Panchayat/individual/Govt./etc.).
iv. Proper record should be maintained for the items procured under this Head.

8. *Project Duration:_____months*

9. *Deliverables*

Deliverable	Mark √	Brief description
Product development/adaptation		
Process development/adaptation		
Technology package for development of the project area and local community		
Technology capability development, training & documentation (e.g. reports, papers, articles, technology manuals, patents)		
Scientific knowledge and/or data generation leading to technology development in future		
Other (Please specify)		

10. *Name and address of experts/ institution interested in the subject / outcome of the project.*

Part III - Technical Details

1. Title (Short & Focused not exceeding 15 words) :

2. I. **Statement of the problem** (200 words)

i. State the main problem you seek to address:
ii. Who has this problem, where does it occur?
iii. How did you come to know of this, did the people who have problem approach you or you visualized it yourself?
iv. Why is it important to solve it?

II. **Technology gaps & Suggested solution** (150 words):

(Describe how the proposal will lead to a novel and effective solution, **based on a scientifically and technically sound concept** and keeping in view the user needs and local availability of resources)

i. Outline your idea or solution you plan to develop:
ii. ii Did you think up the technological solution within your team or was it thought up in consultation with others (who):

3. **Review of Status** - (100 words): Are you aware of any other initiative related to proposed activities to solve this problem? What were the outcomes?

(Mention importance of the project in context of the current status, and demonstrate how the project will progress beyond the "state-of-art" or the best initiative tried by others in providing new innovative technological solution to the identified problem and user needs)

4. **Objectives** (Only 4-5 focused that can be observed, measured or clearly assessable**):**

i.
ii.
iii.

5. **Methodology** (100 words):

(Describe how the project will leverage livelihood/economic opportunities and solve societal challenges in a sustainable way. Also explain how, and in what way, the project will contribute to the advancement of knowledge in the subject/topic. Support with defined steps/relevant process details, e.g. flow chart, model, survey procedures, protocols, engineering design/schematic/layout plan - as applicable to achieve the stated objectives)

6. **Work Plan** (150 words - Please also provide activities schedule – Pert Diagram):

i. **Phase wise work plan of action with time line and deliverables in tabular form (**Describe how the proposal includes a plan for pilot application or trial in a realistic user environment of the technology/product, where the expected impacts to meet end user needs may be demonstrated to the fullest feasible extent).

ii. **Technology Selection** (State the criteria used for selection of technology for

addressing key problem(s) and the assessment of available technologies related to the project)

iii. **Technology Development/Adoption/Modification/Capacity Building** – as applicable (Provide information on the new R&D/adapted R & D to be carried out for technology development/adoption/ modification and brief description of the technology or training package(s) to be used. Information should be provided on the scale of operation, minimum economic viable scale, estimated cost and likely benefits of the proposed technological intervention):

iv. **Institutions/places where detailed lab/field testing or experiments will be carried out:**

v. **Source of Technology**:

Source	Name of agency/ institution/ individual expert
Generated in-house by staff	
Generated in-house by employing outside experts	
Borrowed from an outside institution/ expert	
Modification of technology/ know-how being used by the beneficiaries	
Any other (please specify):	

vi. **Mechanisms for Beneficiaries mobilization & Involvement:**
(Please indicate how mobilization & participation of beneficiaries in the project work will be ensured)

- Formation of new technology user group or beneficiaries' group for project implementation
- Through demonstration of usefulness of technology or training package
- Involvement of beneficiaries through formation of enterprises
- Provision of certificates for participation/proficiency for beneficiaries
- Involvement of the beneficiaries as trainers and/or trainees
- Financial contribution by beneficiaries in project execution
- Material contribution (tools/raw material, labour, etc.) by beneficiaries in project execution handholding through local panchayats/welfare organization
- Any others (please specify):

7. Environmental, Legal and Ethical Issues:
(Explain any environmental, legal and ethical compliance issues. Please mention how these will be addressed & enclose clearance certificate from concerned authorities if required)

8. Deliverables (the list below must correspond with and be derived from # 4, # 5 & # 6. Please also indicate affordability of deliverables to the target beneficiaries):

Deliverable	Mark √	Brief description
Product development/adaptation		
Process development/adaptation		
Technology package for development of the project area and local community		
Technology capability development, training & documentation (e.g. reports, papers, articles, technology manuals, patents)		
Scientific knowledge and/or data generation leading to technology development in future		
Other (Please specify)		

9. Estimated Benefits (100 words):

Benefit	Mark √	Brief description
Economic (Cost-benefit analysis)		
Employment generation		
Social		
Environmental including potential for CDM benefits		
Others (Please specify)		

Note: Please also comments on the possible benefit sharing mechanism of project outcome by different stakeholders.

10. Self- sustainability of the project after GU's project support is over (30 words):

11. Possibility of replication of project in similar areas (after the proposed technological solution is proven, how it will be distributed? Involving state govt. for large scale technology dissemination or via market or any other means - any entrepreneur or business person involved in the work in any manner?)

Ref. No: **Date:**

Minutes of Meeting

SUB: Pre-Review of Seed Funding Research Proposals

Place: **Date of Meeting:**

Members Present	***Signature***
7.	
8.	
9.	
10.	
11.	
12.	

The following discussions were held:

- *Point 1*
- *Point 2*
- *Point 3*
- *Point 4*

Dean

Sanction Letter

Ref No: **Date:**

UCRD Seed Research Funding Approval -01

Note

This is bringing the matter in your kind that Internal and External Reviewers Point Report (Annexure-1 attached) of Seed Funding Project Proposal on Title' "……." By Prof……., Principal investigator of the project from School of……...

Total Amount Sanctioned with Following Parameters

1. Provisional Patent
2. Proposed:
3. Approval:

The above said fund is for consumable. There will be a bond that needs to be signed for initiation of the project. Final approval of Honorable Vice Chancellor is also attached.

Prepared By: Approved by:

UCRD
Galgotias University, Greater Noida, UP
Greater Noida, UP

Vice Chancellor
Galgotias University,

Research Publications, Patent & Book Chapter's Formats

Research Publications, Patent & Book Chapter's Formats Index

Faculty Research & Innovation Awards

Date;

Certificate of Appreciation

Research and Innovation Awards 2020

The Faculty representatives from various schools of Galgotias University, who have significant achievements and are coordinating Research and Development activities, are awarded with Special Mention.

This is to appreciate ***Dr……..*** *for recognition of their significant efforts.*

Greater Noida

Vice-Chancellor

Faculty Research & Innovation Awards Summary

SN	Name	GUID	Designation	School	Total No. of Scopus conference papers published under GU affiliation	Total No. of Scopus Journal papers published under GU affiliation	Total No. of SCI papers with/without impact factors published with GU affiliation	Total cumulative impact factor	Patent published/ Granted	Book Chapters Scopus/Non-Scopus	Authored Books	Edited Books	Funded projects	Total Amount

School-wise Research Publications Target Sheet

SN	School	Target Given SCI journal	Achieved	Target Given Scopus journal	Achieved	Target Given International Conference	Achieved	Target Given National Conference	Achieved	Target Given Funded Projects	Achieved

Faculty-wise Research Publications Target Sheet

SN	Faculty Name	School	Target Given SCI journal	Achieved	Target Given Scopus journal	Achieved	Target Given International Conference	Achieved	Target Given National Conference	Achieved	Target Given Funded Projects	Achieved	Tar

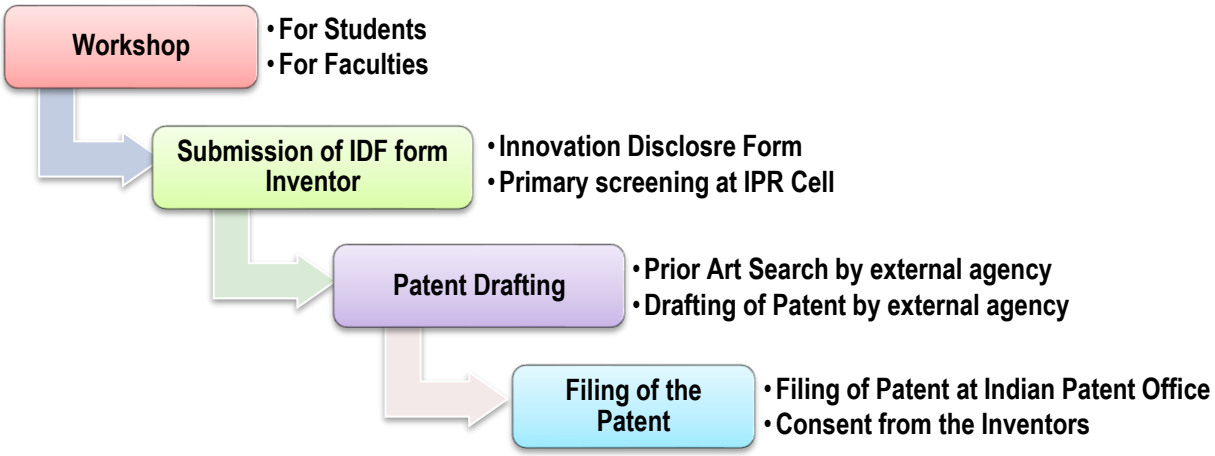
Faculty Research Citation

SN	GU ID	School	Faculty Name	No. of Paper in Web of Science/SCI	Citations in WoS /SCI	No. of Papers in Scopus	Citations in Scopus	No. of Papers in Google Scholar	Citations in Google Scholar	Google Scholar h-Index	Google Scholar i10-index	Google Scholar Link	Publons Link	ORCID ID	Scopus ID

Patent Details

SN	Patent Application Number	Name of Faculty involved	School	School/Department	Title of the Patent	Date of filing	Year of Filing	Date of Publication	Year of Publication	Category

Flow Chart for Patent



Student Project Formats

Student Project Formats Index

Student Project Summary

SN	School	Project Details Filled Status	UCRD Review Date	Journal Target	Conference Target	Patent Target	Product Target	Other Target	Total

Student Project and Review Formats

Project Group No	Student	Enrollment	Admission	Student Name	Program	Branch/Section	Semester	Student Email ID	Student Mobile Number	Category	Group	Guide Name	Guide Email Id	Guide Mobile Number	Title of the Project	Approval Form	Abstract Status	Area/Domain	Outcomes Conference Paper/ Journal/patent/product	Whether attended the paper writing /Research workshop	Review 1 Date	Review I Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20 (In Rigor)	Action taken on Review 1	Review 2 Date	Review 2 Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20	Action taken on Review 2	Review 3 Date	Review 3 Comments (Minimum three)	Research Paper Status % of Paper Written	Marks out of 20	(R1+R2+R) Final Status	Final Review Status	Total Marks (R1+R2+R)

Research Group Formats

SN	Faculty Name	Designation	Research Group	Sub Domain	Group In-charge	Email	Contact No

Research Groups Minutes of Meeting

SN	School Name	Faculty Name	Area of Research	Date of Meeting	Time	Minutes of Meeting

Research Groups Count

SN	Name of Group	No. of Faculty	No. of PG / Ph.D Students

Data of Research Publication Progress Status

SN	Project Group No.	Name of Faculty/ Student	GU_ID	Publication Type (Eg: IJ/ IC/ NC/ NJ/ Book	Title	Whether Communicated/ Accepted/ Published/ Indexed	Whether Joint Publication with faculty/ UG/ PG/ Ph.D Students

Ph.D. Formats

Ph.D. Formats Index

Proforma For Eligibility as Ph.D. Supervisor

Name of faculty member:
Designation:
School/Department:
Total experience in years (Teaching, Industry, research):

Teaching (yrs)	Industry (yrs)	Research organization (Yrs)	Total (yrs)

Experience with Galgotias University (Yrs):
Ph.D. guidance (Scholar name, research topic, University, awarded or in process):

Name of Scholar	Supervisor/co supervisor	University	Status (Awarded/In Process)	Vacancy Available With me

Publications (Authors, journal name, publisher, UGC/refereed/: Attach separate sheet if necessary

Declaration by faculty member

I hereby declare that

1. My area of specialization is_____ and details about my experience and Ph.D. guidance as furnished above are true to my knowledge.
2. I will ensure the completion of Ph.D. research scholars registered under me and will not leave the candidate/GU in between. In such cases, I will completely take the responsibility of all research scholars registered under me with GU.
3. I will also inform in writing about my change of employment to keep my candidature as a guide.
4. I will abide the rules and cooperate in guidelines of the Galgotias University.

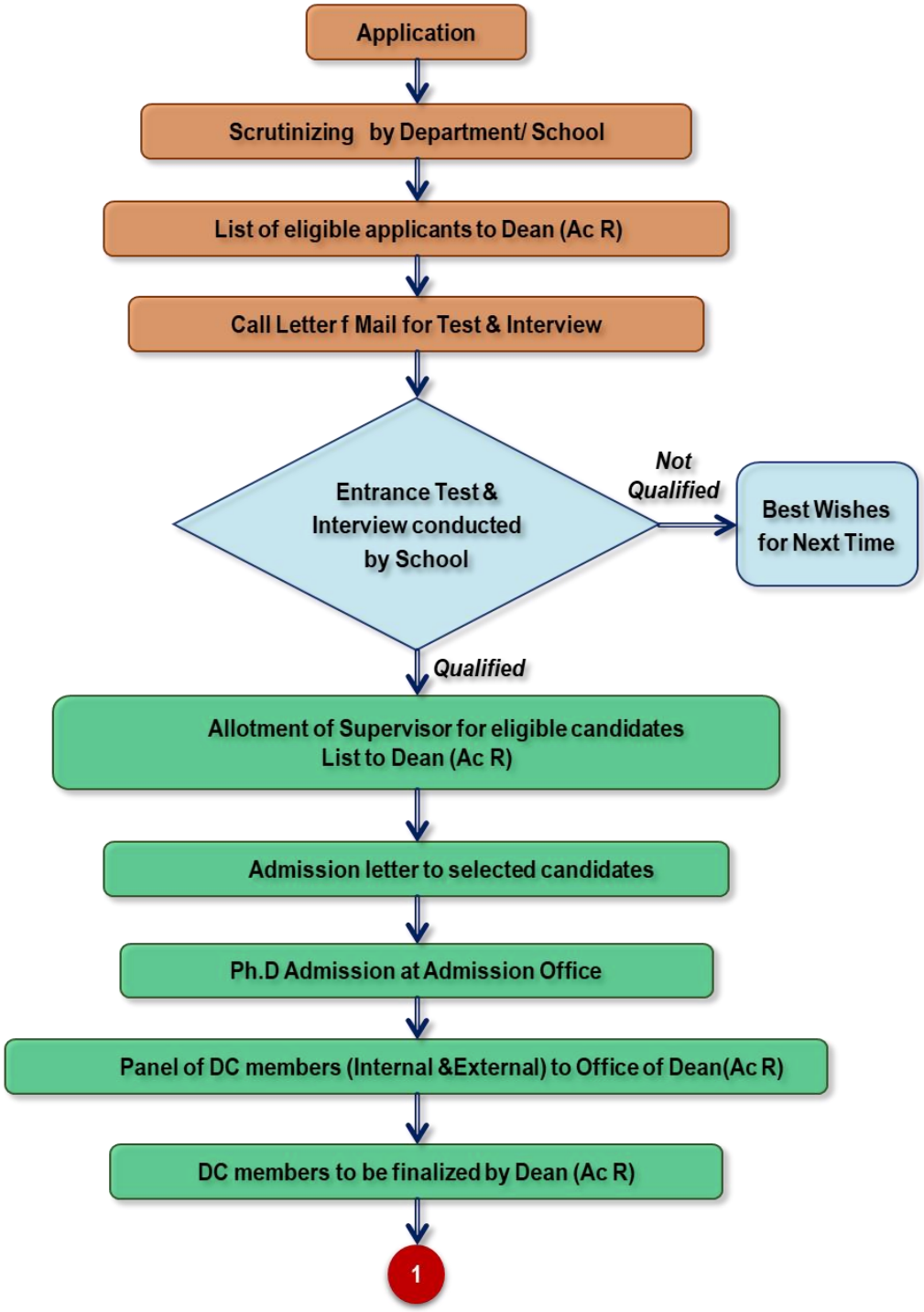
Signature of Faculty member

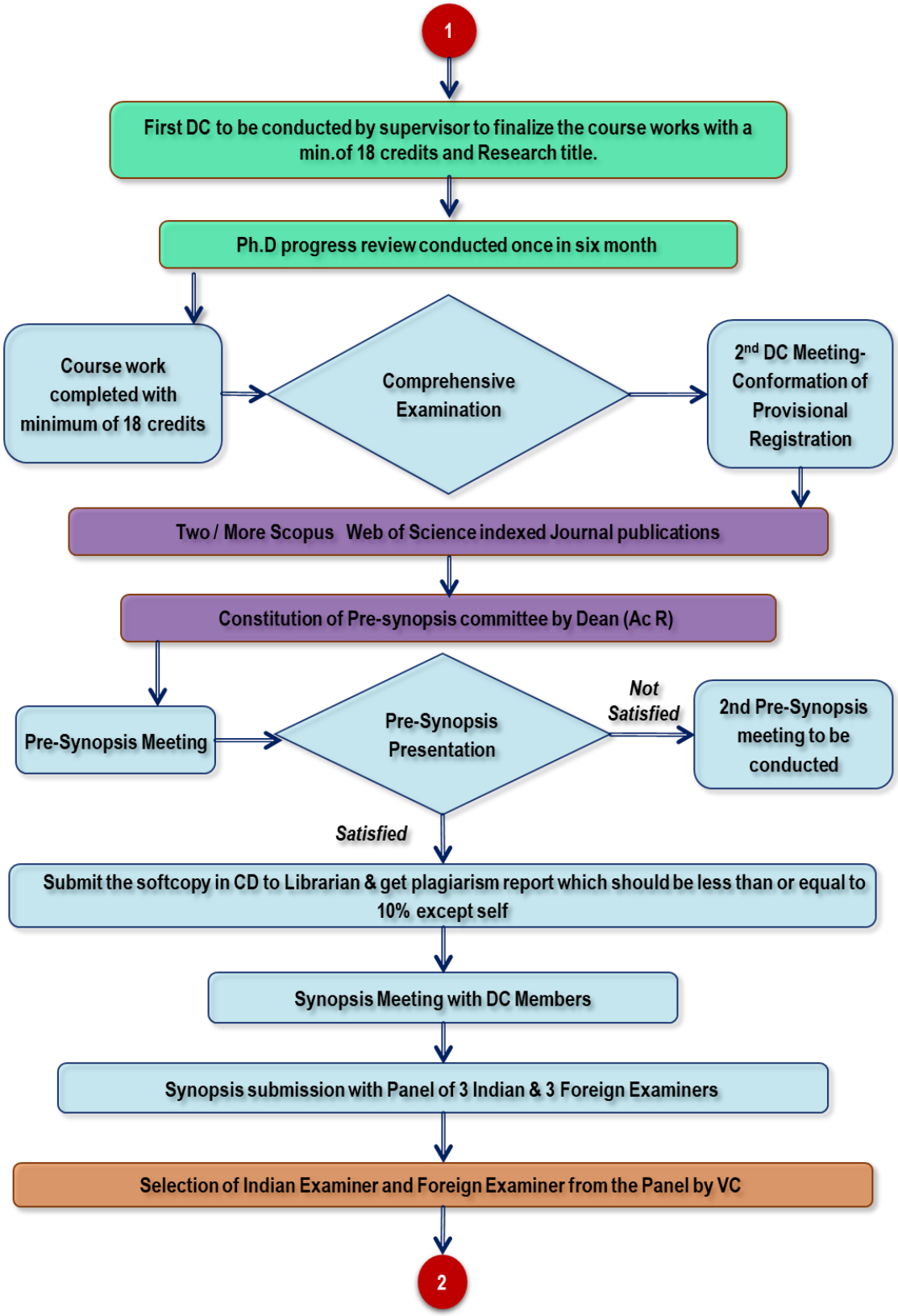
Recommendation of Dean of School

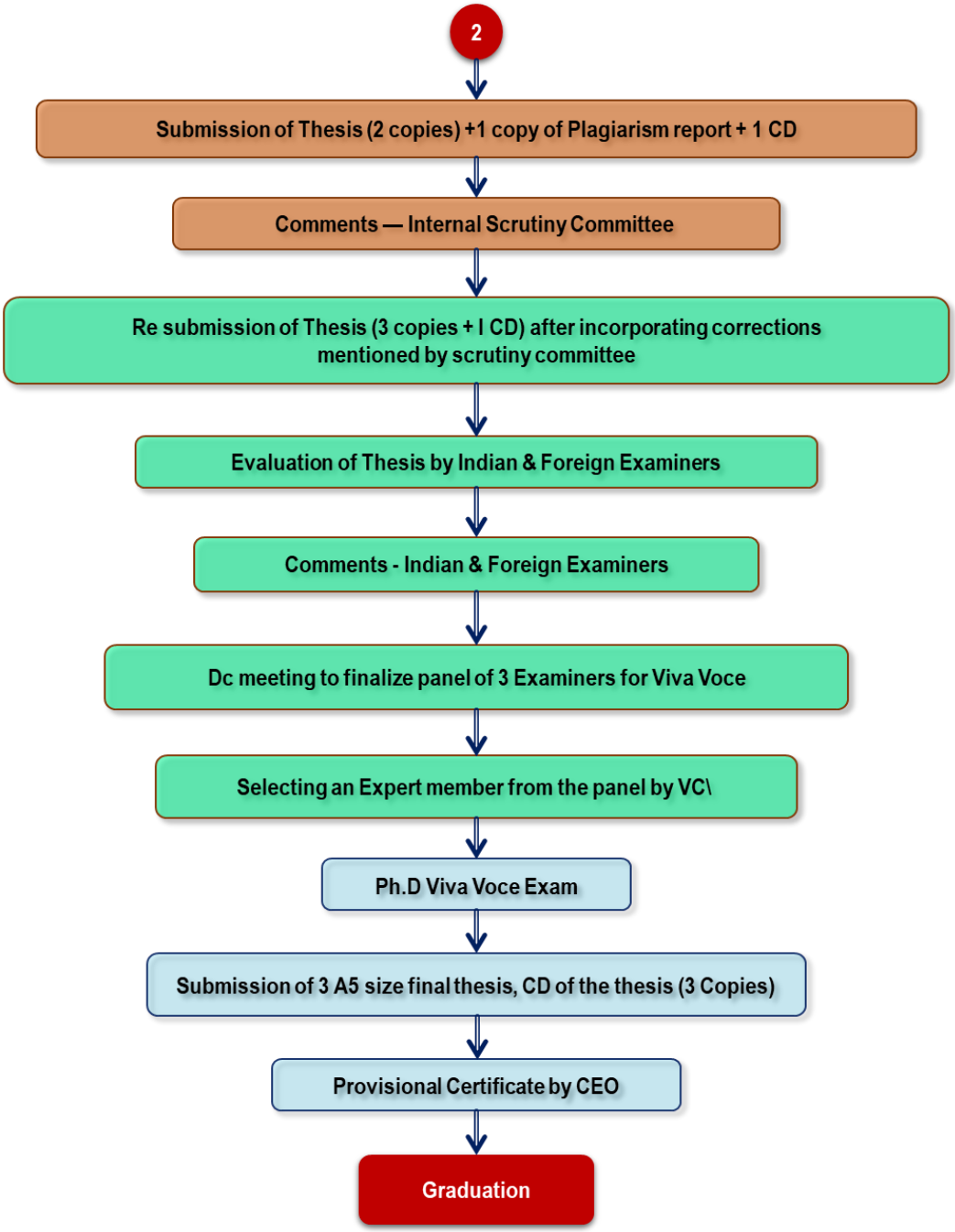
Note: Duly filled in Performa has to be submitted to Dean (Research) Office

GALGOTIAS UNIVERSTY

Ph.D Programme Flowchart




1
First DC to be conducted by supervisor to finalize the course works with a min.of 18 credits and Research title.
Ph.D progress review conducted once in six month
Course work completed with minimum of 18 credits
Comprehensive Examination
2nd DC Meeting- Conformation of Provisional Registration
Two / More Scopus Web of Science indexed Journal publications
Constitution of Pre-synopsis committee by Dean (Ac R)
Pre-Synopsis Meeting
Pre-Synopsis Presentation
Not Satisfied
2nd Pre-Synopsis meeting to be conducted
Satisfied
Submit the softcopy in CD to Librarian & get plagiarism report which should be less than or equal to 10% except self
Synopsis Meeting with DC Members
Synopsis submission with Panel of 3 Indian & 3 Foreign Examiners
Selection of Indian Examiner and Foreign Examiner from the Panel by VC
2


2
Submission of Thesis (2 copies) +1 copy of Plagiarism report + 1 CD
Comments — Internal Scrutiny Committee
Re submission of Thesis (3 copies + I CD) after incorporating corrections mentioned by scrutiny committee
Evaluation of Thesis by Indian & Foreign Examiners
Comments - Indian & Foreign Examiners
Dc meeting to finalize panel of 3 Examiners for Viva Voce
Selecting an Expert member from the panel by VC\
Ph.D Viva Voce Exam
Submission of 3 A5 size final thesis, CD of the thesis (3 Copies)
Provisional Certificate by CEO
Graduation

Course Registration Form

1. Name of School: _____
2. Name of the Ph.D Scholar (in capital letters): _____
3. Father's Name: _____
4. Enrollment No.: _____
5. Programme: Ph.D
6. Course (s) for which student is registering:

SN	Course Code	Course Name	Credit	Year & Session
1.				
2.				
3.				
4.				

Date:

(Signature of Student) (Signature of Guide)
Address and Mobile No:

(Signature of Dean of School)

Supervisor Allotment Form

(To be submitted to Dean Research)

Name of School:

1.	Name of the Ph. D. Scholar	
2.	Enrollment No.	
3.	Research Area	
4.	Brief Description of the Research Area (Maximum 250 words) Attach separate sheet	
5.	Name of the Supervisor(s)	
6.	Supervisor Contact number	
7.	Contact Number of the Research Scholar	
8.	Signature of the Student	
9.	Signature of the Supervisor (s)	

Name Signature

_____ (Member SRC)

_____ (Member SRC)

_____ (Member SRC)

_____ (Member SRC)

(Signature, Chairperson SRC)

Constitution of Doctoral Committee

1. Name of the Candidate and Official Address (E-mail address, Phone/Mobile Number)	
2. School where registered	
3. Category of the Scholar	(Please tick the relevant one) (i) Internal: Full Time / Part Time (ii) External: Part Time
4. Date of Registration	
5. Area of Research	
6. Likely topic of Research	
7. Guide (s)	
8. Research Advisor (if any)	

9. Panel of Experts suggested from the School where registered or other school of the University (Please suggest a minimum of three names)

Name, Designation and School	Area of Specialization
1.	
2.	
3.	
4.	

10. Panel of Experts suggested from other University/Institutions (Please suggest a minimum of three names, all from outside the School, where the candidate is registered. Bio-data of all members suggested from outside the Institute should be enclosed).

Name	Area of Specialisation	Complete address for communication (Please give Phone/Mobile, Fax & e-mail also)
1.		
2.		
3.		

Signature of Supervisor

Date:

Nomination by the Dean

The following are nominated as external & internal experts for Doctoral Committee

External Expert:

1.

Internal Experts:

1.

2.

Signature of the Dean of the School

(Dean Research)

Doctoral Committee Meeting

(Meeting: I/ II/ III)

Name of Research Scholar: _____

Registration No.: _____ Year of Admission: _____

Name of School: _____

Category (Full time/ Part time): _____

Address: _____

_____ Mobile No.: _____

E-mail: _____

Name of Supervisor: _____

Name of Joint Supervisor (if any): _____

Recommendations of DC (Attach separate sheet if necessary):

Name & Signatures of members present:

1.
2.
3.
4.

Signature of Convener (DC) Signature of Dean of School

Signature of Dean (Research)

Half Yearly Progress Report for the Ph.D Programme

Period (from)_____ to _____

(To be prepared for a period of six months, specifying month and year)

1.	Name of Scholar:	
2.	Admission No/Registration No	
3.	Address for Correspondence	
4.	E-mail address and Phone/Mobile number	
5.	Date of joining the Institute as research scholar	
6.	Whether Full-time/Internal Part-Time/External Part Time	
7.	Details of fee remitted (attach photo copy of the e-receipt)	
8.	Name & Address of Supervisor	
9.	Name & Address of Research Advisor (if any)	
10.	Title of the Research topic	

A brief report of the progress achieved during the half year period

SN	Title of the Paper	Status of the Paper	Journal/Conference	Indexing (Scopus, SCI)	Volume

Plan of work for the next six months: Should be enclosed with the report.

Place:

Date: Signature of the Candidate

Signature of Supervisor Signature of the Dean

Remarks of the Supervisor

Place:
Date: Signature of the Supervisor

Forwarding remarks of the members of SRC of School in which the candidate is registered (use separate sheet if necessary)

Names and signatures of Members of SRC

1.
2.
3.
4.

Chairman SRC Dean (PG & Ph.D)

GU/Ph.D./20-21/08

Proforma for Submission of Long Abstract/Synopsis of the Ph.D Thesis

(Note: This Performa duly filled-in in all respects should be submitted along with the synopsis)

1. Name:
2. Address for correspondence:
3. E-mail address, Telephone/Mobile Number:
4. School in which registered:
5. Category (Internal Full-Time/Internal Part-Time/External Part-Time):
6. Date of Registration:
7. Date of Course Completion:
8. List the Courses Completed and grades obtained (Please enclose Xerox copy of the certificate issued by the COE):
9. *Date of Comprehensive Viva Voce Examination:*
10. Thesis fees payment details: *Payment Date……, Amount……, Receipt No…… (Please enclose a copy of fee receipt)*
11. *Papers published in refereed/UGC /SCI/Scopus Journals*

[List out all publications giving the full details like title of the paper, Authors, Name of the Journal, Year and Pages. A separate sheet may be used if needed. Enclose a copy of each of the papers]

Signature of the Candidate

Signature of Guide

Checklist for submission of Long Abstract/ Ph.D. thesis

1. Minutes of meetings of all three DCs conducted (In original)
2. GU Ph.D. form no 7 to duly filled by candidate and signed by supervisor
3. Ph.D. Fee receipts till date (Xerox copies)
4. Xerox copy of grade sheet issued by COE as a proof of course work completed
5. Plagiarism report of Ph.D. thesis as issued by Chief Librarian
6. Copies of research papers published

   (Two papers in international refereed journals with GU affiliation must be published before conducting DC III – GU Ph.D. guidelines 2014)
7. Two panels of examiners (with their bio sketch) each panel consisting five examiners and having at least one examiner from outside India as recommended by SRC for approval of VC through Dean (PG & Research).
8. Soft copy and five hard copies (spiral bound) of long abstract.

(Following format is to be printed on the letter head of the Organization where the candidate is currently working)

No Objection Certificate

This is to certify that Mr. / Ms. _____ is employed with our organization as _____ Since _____till date _____. He / She has an experience of _____years and _____months in our organization. We allow / relieve him /her to join PhD in _____ at Galgotias University, Uttar Pradesh In session_____ on Full-time / Part-time basis.

It is further certified that he/she will be allowed to use facilities for research work at our Organization.

(Signature & Name of Head of Organization with seal)

Date:

SRC Meeting

Name of School:

Minutes of Faculty Meeting

Location: Date:

Attendees:

Time:

Actions Taken:

Following Resolutions are made for the upcoming School Research Committee Meeting:

1. Point-1
2. Point-2
3. Point-3
4. Point-4

Minutes Recorded by:

Members Present:

1.
2.
3.
4.
5.

Minutes Approved by Dean.

20. Ph.D Supervisor Details

SN	Name of Faculty	Highest Qualification	Designation	Research Area	Ph.D. students allotted outside of GU	Ph.D. students allotted in GU	Quo availa

21. Ph.D School wise Information Sheet

SN	Name of PhD Scholar	Reg. no	Year and month of Enrollment	Mb. No. of PhD Scholar	Whether full time or part time	Affiliation of part time scholar	Name of Internal Supervisor	Name of External Supervisor	Affiliation of External Supervisor	Ph. No of Internal Supervisor	Ph. No of External Supervisor	Name of courses completed/pursuing	Status of course work	Name of External Expert for DC	Affiliation and Email, mb no of expert	DC conducted I/II/III	Fes paid/ dues if any	No of seminars presented (Progress report)	No of publications in journals with DOI, name of Journal and publisher	Thesis submitted or not

Organizing Conference Formats

Organizing Conference Formats Index

Conference Logo

International Conference on _____(IN-2020-21)

Date:

Venue:

Patron	:	**Mr. Suneel Galgotia,** Chancellor, Galgotias University
Chief Patron	:	**Mr. Dhruv Galgotia,** CEO, Galgotias University **Prof. (Dr.) Preeti Bajaj,** Vice-Chancellor, Galgotias University
Pro. Vice Chancellor	:	**Prof. (Dr.) VB Babu**
Dean Planning	:	**Prof. (Dr.) Avadesh**
Dean UCRD	:	**Prof. (Dr.) Meenakshi Sharma**
Centre of Excellence-AI	:	**Ms. Sofia K Pillai**
General Chair	:	
Program Chair	:	
Organizing Chair	:	
Publication Chair	:	
Publicity & Public Relation Chair	:	
Local Arrangement Chair	:	
Finance Committee	:	
Exhibit Committee	:	

Organized By

School Name:

Galgotias University, Greater Noida

About School of

Theme of Conference

Guidelines to Author (s)

1) All authors are requested to send soft copy of manuscript (MS-Word format as attached) in single column format and also, **plagiarism** should be **below 10%**.
2) Please mail your original manuscript to mention theme of paper and contact details of author in mail.
3) The paper reviewed and scrutinized by the panel of experts. Only original and unpublished work will be accepted. The total length of the paper should not exceed Eight (08) A4 size pages including bibliography and appendices. If exceeds then extra page fee will be applicable.
4) All the accepted papers will be published in the proceedings of International Conference with ISBN No. and in associated International journal, **Scopus Indexed** with ISSN No.
5) Time allotted is 5-7 minutes for presentation and 3 minutes for Q & A.

Presentation Mode

1) Author can directly present paper and attend the conference at School Name_____, Galgotias University
2) Authors those who fail to attend the conference can send PowerPoint presentation of minimum 15 slides and will be published.
3) Authors can give presentation by video conferencing.

Objectives of the Conference

- The conference will create a unique environment for participants to establish professional networks in their respective fields, particularly with representatives from academia.
- To promote scientific and educational activities towards the advancement of the theory and practice of all Management, Engineering and Technology fields and related arts and sciences.
- To bring together Researchers, Engineers, Scholars and Students in the areas of Management, Engineering and Technology, and provides a forum for the dissemination of original research results, new ideas, Research and development, practical experiments, which concentrate on both theory and practices.
- To improve the common man's life by developing new innovative Engineering ideas, Technical tools or models or products of their need.
- To get new ideas and knowledge, for disseminating to common man, by organizing conference and by publishing high quality academic International research papers.

Advisory Committee

Technical Committee

Important Date(s)

Abstract Submission Deadline
Notification of acceptance of Abstract
Full Paper Submission Deadline

Registration (Inclusive Conference Kit & Lunch)

Category	Up to	Up to
Students	Rs. 1200 /-	Rs. 1500 /-
Research Scholar (s)	Rs. 1800/-	Rs. 2000/-
Academician (s)	Rs. 2500 /-	Rs. 3000 /-
Industry Delegates	Rs. 3000 /-	Rs. 3500 /-
Foreign Author (s)	US $ 150	US $ 170

Topics include but not limited to

Sample

a) **Track 1**
   Open Source Technology
   Artificial Intelligence
   Internet of Things & Wireless
   Digital India
   Data Analytics
   Grid Computing, Cloud Computing & Mobile Computing
   Cyber Security
   Software Engineering
b) **Track 2**
   Smart Material
   CAD/CAM/CAE
   Welding Technology
   Robotics
   Hybrid Technology
c) **Track 3**
   MEMS
   Power Drives and Control
   Instrumentation
   Smart Grid
   Soft Computing Methodologies
d) **Track 4**
   Image Procession
   Sensor Networks
   VLSI Design & Embedded Systems

Medical Electronics
Space Communication

e) Track 5

GIS, GPS & Remote Sensing
Modern Construction Project Management
Advancement in Pre-stressed Concrete
Green and Intelligent Building

f) Track 6

Physics
Chemistry
Environment
Economics

g) Track 7

E-Business
Real Estate Management
HRM and Finance
Logistics and Supply Chain Management
Entrepreneurship Management

Budget:

SN	Name of the Item	Quantity	Amount

Conference Committee

SN	Committee Name	Committee In charge	Members

Signature Dean

To do list for International conference

SN	Work	Date
1	Conference webpage, speaker biodata and abstract updation	
2	Registration process, registration fees,	
3	Ticket and accommodation for speakers, Travel schedule of speakers/guests and escorting persons	
4	Program Schedule	

5	Session chairs, Invitation, escorting	
6	Instructions to presenting authors, getting PPT, travel schedule of authors	
7	Accommodation of authors- hostel rooms, helping to get hotels, sending mail to for hostel rooms booking	
8	Finalization of catering and banquet, Cultural program for banquet	
9	Banner and standees, I card, Certificate preparation printing, Memento with personalized names and best paper trophy/award, gifts	
10	Inaugural function invitation, Programme schedule to invitees and authors	
11	Conference proceeding/ abstract book- Messages, programme team, etc. Soft copy of proceeding in CD/pen drive/ flash drive, 10 hard copies	
12	Registration kit with all material like prospectus, pen, note pad, program schedule, etc.	
13	Press release- pre-conference, holding press conference	
	During the conference	
1	Help Desk- Navigation, layout plan, Local arrangement for authors, information about Local tour if any	
2	Registration desk with registration sheet and registration kit	
3	Inaugural function- complete arrangement- minute to minute schedule, etc.	
4	Session conduction: **Preparation:** Format of paper evaluation during presentation, folders for session chair, stop watch, call bell, laptop, LCD **Checklist for conduction-** Oral welcome, about rules and timing of presentation, introduction of session chair, floral welcome of session chair, handing over to session chair, presentation of papers, closing remarks by session chair, certificate distribution, memento to session chair, vote of thanks **Submission:** soft copy of all PPTs, report of session, attendance sheets, receipt of certificate, Attendance sheet, Receipt of certificate, Feedback form from authors appropriate practice, format	
5	Live streaming/Live telecast	
6	Uploading of photos on whatsapp, Galgotias activity page, facebook and other social media on the same day after the completion of event and tagging, website	
7	Catering – breakfast, lunch, tea/coffee break	
8	Banquet arrangement	
9	Escorting of speakers/ guest during their stay- pick up and drop of speakers/ guests	
10	Taking care of honorarium/gift/mementos of speakers/session chair	
11	Press release- press news of day1, Day2	
	After the conference	
1	Report of Conference	
2	2-3 slides of PPT covering inauguration, speakers, attendee's information	

3	Submission of feedback analysis and feedback forms	
4	Submission of Proceeding-one soft copy and hard copy to each library, R&D cell	
5	Submission of budget and utilization within two days after the conference	
6	Combined Press release for campus buzz or any other print media.	
7	Bill settlement	

Springer

Springer Proceedings Proposal Form

The following questions are designed to help us get a clear picture of your book proposal and to provide us with information about the readership which will enable us to develop an effective marketing and promotion strategy. Please complete the form as precisely as you can.

Full or working title of the book:

Subtitle:

Name and address of each editor as they should appear on the book cover (i.e. only author(s) or volume editor(s), not the series editors or contributing authors). Please underline surnames.
Please Refer Annexure-I (Consent letter)

Name + Title(s)	***Address (work +***	***Email + URL***

Please attach curriculum vitae (including relevant publications) of each editor

BOOK FORMAT

What will be the approximate final length of your book (approx. 450 words = 1 page)? :

- **When do you anticipate being able to submit the first complete draft? :**

CONFERENCE PLAN

- **Please indicate a conference webpage address and/or a Call for papers.**

- **Please indicate WHERE and WHEN the conference will take place**

- **Please list the names of Conference Organizers and Boards**

  International Advisory Board

Please Refer Annexure-II (Consent letter)

Sr. No.	Name	Affiliation	Email
	Min 20		

Organizing Body

- **Honorary Chair**
- **General Chair**
- **General Co-Chair**
- **Program Chair**
- **Publicity and Public Relation Chair**
- **Registration Chair**
- **Local Arrangement Chair**
- **Is any society involved in the organization of this conference?**
- **Please indicate the Conference History (is this one the first edition of the conference? If not, please indicate previous edition of this conference, the number of participants attending them, the conference webpages and, if available, please cite previous proceedings publications related to those**
- **How many participants do you expect?**
- **Only proceedings financed by attendance fees and not by direct paper publication payment will be considered for publication. Do you agree with and/or have any comments on that?**
- **We expect that at least one of the authors for each articles accepted in the book will attend the conference. If the author of accepted papers does not register to the conference, his/her paper should not be included in the book. Do you agree with and/or have any comments on that?**

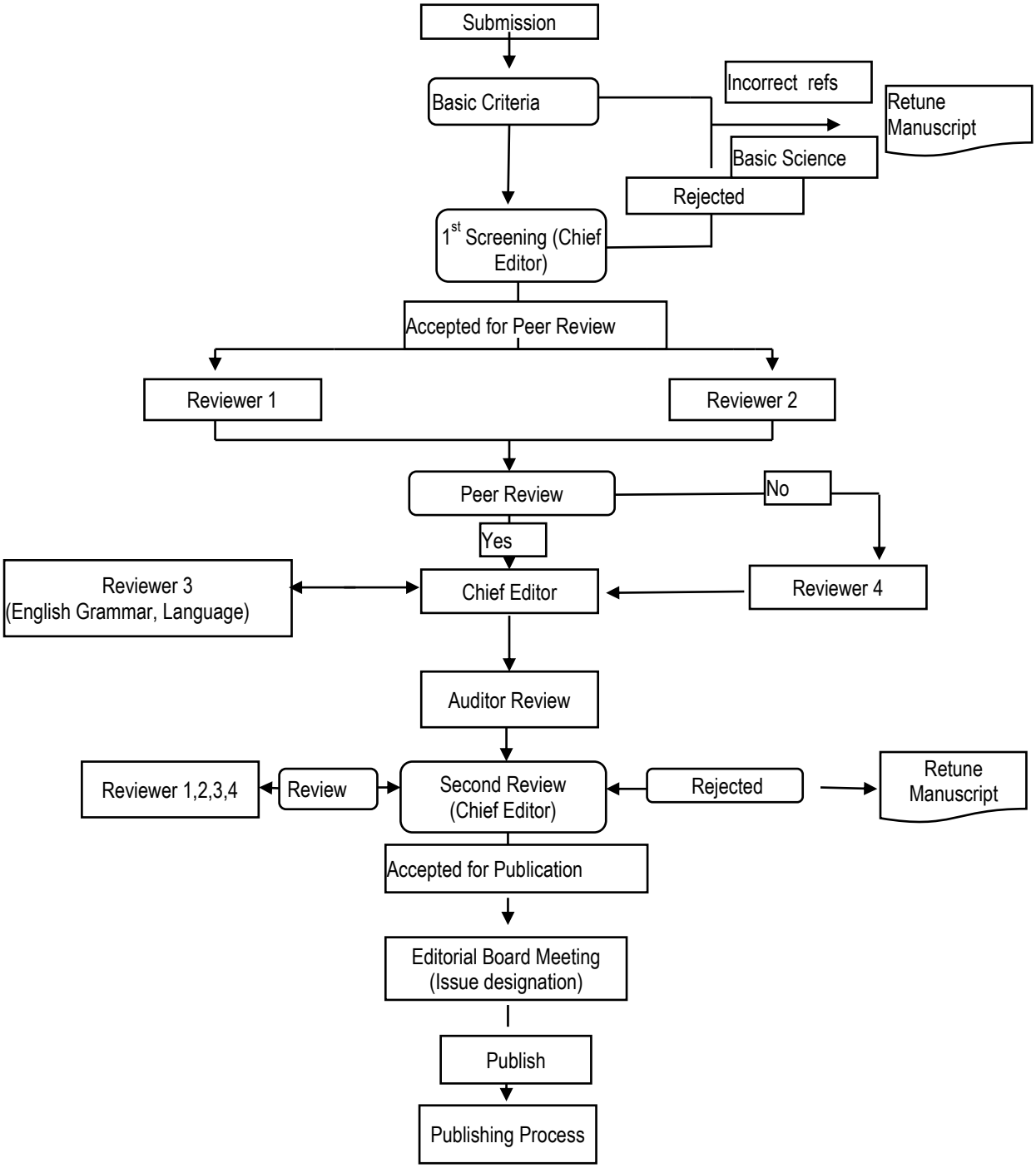
REVIEW PLAN

Please describe the review process as detailed as possible. Our minimum requirements are listed below:

- ✓ **At least two independent reviewers will need to review and approve a paper**

- ✓ **A maximum of 10 papers should be assigned to a single reviewer**
- ✓ **All the review reports should be submitted to Springer as soon as they will become available (after the notification of acceptance).**
- **Please specify the detailed review time plan (submission deadline, notification of acceptance, submission deadline for revised papers)**

Flow –Chart for Review Process



- **Please list names, affiliation (and webpage, if available) of the reviewers who will be effectively involved in the review process who already gave their availability to review the papers.**

Please Refer Annexure-III (Consent letter)

SN	Name of the Reviewer with Designation	SN	Name of the Reviewer with Designation
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	
11.		12.	
13.		14.	
15.		16.	
17.		18.	
19.		20.	
21.		22.	

- **Please indicate the (expected) acceptance rate**

The acceptance rate will be 20% to 30% depending upon the originality and Quality of research paper and will also depends on reviewers' comment

SPECIAL INSTRUCTIONS

- **Do you use any plagiarism and SciGen detection system?**

Yes, we do have legal plagiarism checking software ithenticate. The papers with plagiarism less than 20% will be considered for the conference.

Please be aware that a few people may try to do unprofessional and/or unethical things, e.g. submit fake (automatically generated) papers, submit two or more very similar papers (self-plagiarism, dual publication), present the work of others as it were their own and without proper acknowledgement, use falsified/fabricated data. A careful review process together with a system to detect plagiarism should make you able to detect those attempts. We will be able to train you in its use. If you have any doubts about any submitted papers, please do not hesitate to contact us.

ABOUT YOUR BOOK

If you have not already provided us with a brief synopsis (approx. 3500 characters), which can also be used as the back-cover text to the reader and provisional table of contents please could you do so when you return this form. Additionally, could you provide us with a list of those features that you feel sets your book apart from others in the field? Please list them in order of importance. If this is not the first edition of your book, please state the improvements over the last edition.

BOOK ORGANISATION

Please provide us with a preliminary description of the structure of your book (e.g. Table of Contents). We usually require a topical organization in different parts e.g. according to the main conference topics.

-Table of Contents

Organizing Committee, International Advisory Board and Technical Programme Committee
Preface from Organising Committee
Technical Sessions-I
Technical Sessions-II
Technical Sessions-III
Technical Sessions-IV

Keywords/Conference Topics

Please list any keywords associated with your book.

- Smart Transportation with urban planning
- Clean energy and environment
- Water Distribution and waste management
- Smart Materials and Structure
- Disaster Management

Competitive literature

What other works have been published on this subject (please give author, title, publisher, year of publication and price where possible)?

- First of its unique type of conference, which will be conducted in our region

MARKET

Please outline the primary and secondary markets for your book. You should include academic and industrial areas and wherever possible please indicate the level the book is aimed at (e.g. Undergraduate, postgraduates, researchers etc.), the academic discipline involved, the titles of courses at which it could be taught, and specific job titles, functions and responsibilities. **Please be as detailed as possible.**

Primary market

The proceedings will be purchased by under-graduate and Post-graduate students. Re-searchers will be mostly be benefited by the work published by the academicians and the Industry persons who will be publishing their original work. The proceeding will be highly in demand as the conference brings together academicians from three different areas of civil streams. The conference is not restricted to particular area as research and idea does not grow during boundary conditions. The market is wide open even for budding researchers and post graduate students from different disciplines. The Industry ready solutions will also be published in the proceedings will finally benefit the Industry experts to exchange their own ideas and implement them in effective manner. The society will be largely benefited by the conduction of conference in-association with your name.

Secondary market

Diploma students can be also benefitted from the proceedings, Students from nearby Professional colleges Under-graduate and Post graduate from nearby vicinity. Professional societies like Institute of Engineers IE(I), ASCE, ICI,

ACCE(I) (students chapter) will to promote nearby affiliated universities as the institute has association with such professional societies.

Other comments or suggestions for promotional activities

- Conferences/Workshops etc. (place/date/contact name)
- Journals for reviews
- Professional societies
- Names and Addresses of persons you know of willing to help promoting and selling the book (e.g. through conferences, lectures or reviewing your book)

Additional Information

Many thanks for taking the time to complete this questionnaire. Your detailed responses will be very helpful in our assessment of the potential market for your proposal and will enable us to reach a decision regarding publication that much sooner.