

7.3.1 One area distinctive to its priority and thrust

Accomplishments of REC in Research and Consultancy constitutes distinctiveness.

REC has established Centres of Excellence and Centre for Sponsored Research and Consultancy (CSRC) to support Research and Consultancy by faculty and students

All project proposals written by the faculty are vetted by a panel of experts whose valuable suggestions help in obtaining approvals.

- Students are encouraged to do projects of high calibre using research facilities available in the college and best projects are awarded.
- Students and faculty are motivated in interdisciplinary research through **Centres of excellence in High-Speed Jet Flows, Medical Imaging, Biofilms, Assistive technologies, Data Science, Renewable Energy, Electric vehicle, Food products and process design, Internet of Things (IoT), Digital manufacturing and CFD and through CSRC in Mems and Microfluids Machine vision, Sustainable construction materials**
- Through Centres of Excellence various upskilling programs for Faculty members are conducted in emerging thrust areas for capacity-building.
- Through Centres of Excellence Students take up in-plant training during summer and winter vacation.
- To promote Consultancy work, faculty are supported to get in touch with leading industries of their specialisation and find opportunities for collaborative research and consultancy activities
- Institute's IPR cell provides guidance for students and staff for developing and filing patents arising from research and consultancy carried out through the Centres of Excellence
- REC has Engaged a professional patent consultant to guide on patents; we have registered 105 patents out of which 8 are granted and 51 published in past 5 years

Accomplishments of the Centers of Excellence and activities comprise improved indicators in

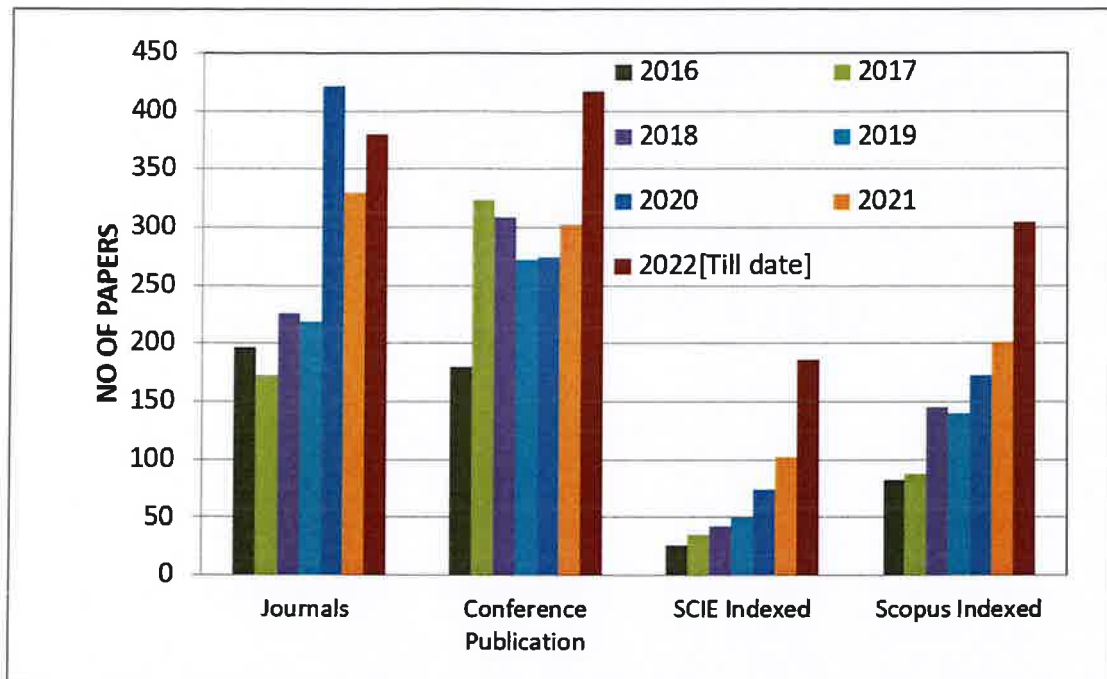
Publications, Research, Consultancy and NIRF rank

- Overall, 65 projects have been awarded to REC during past five years from AICTE, UGC, DST, DRDO and other government Agencies.
- Overall Rs. 38.15 Lakhs fund have been generated from Consultancy for the past Five Years
- Faculty members and students work in research and consultancy projects; this improves team work and inter-departmental collaboration;
- Students are allowed to earn 3 credits by participation in consultancy projects in lieu of one professional elective.
- The publications have improved in numbers and quality arising from Research and consultancy activities



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Faculty Publications



Comparison of Faculty Publications Year wise from 2016 to 2022

Innovation projects and Patents

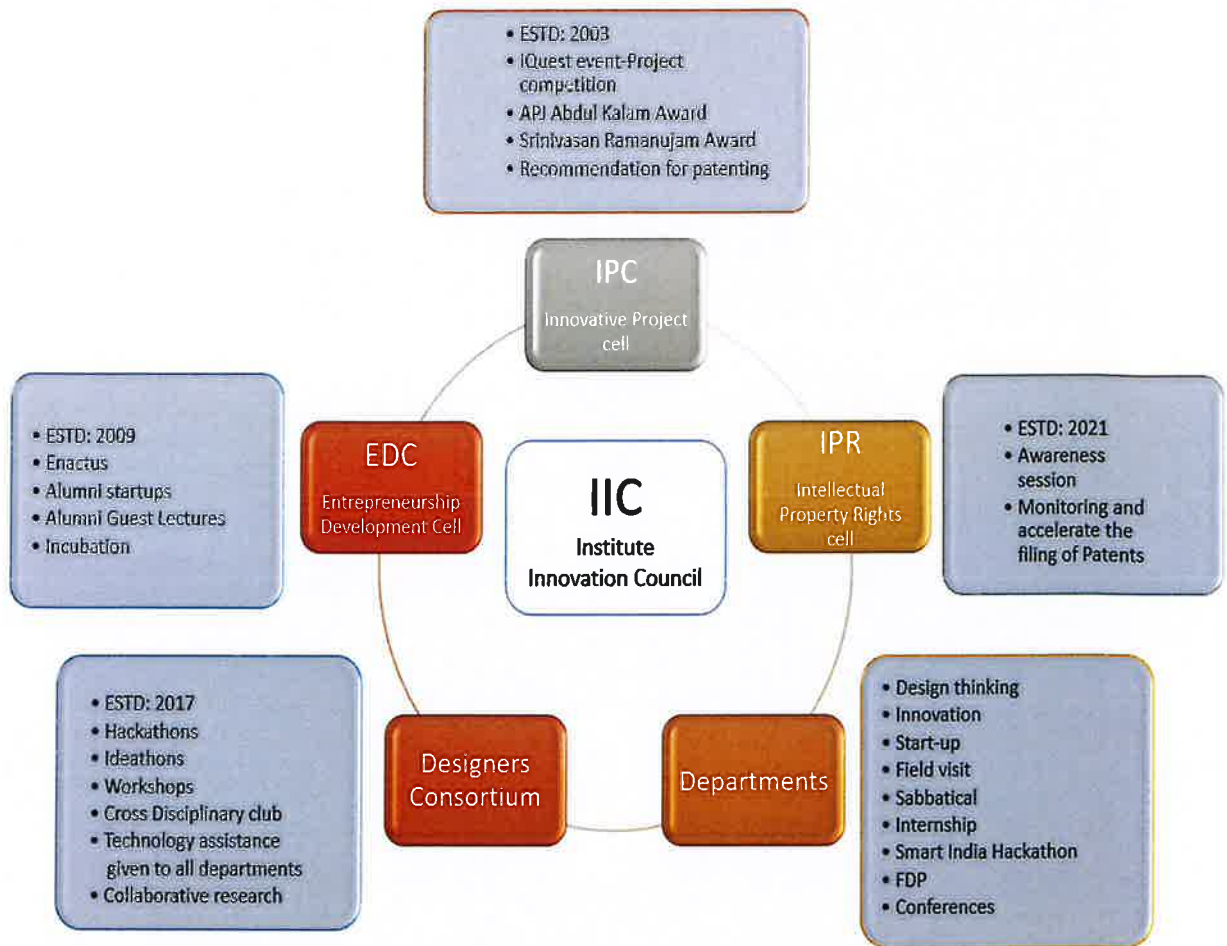
- Students are encouraged to participate in activities of the centres of excellence. Best projects on computing and mechanical streams are selected and funded to convert the idea to product.
- REC has established Institute Innovative Council (IIC) to motivate and arrange workshops and competitions to further innovation in REC.
- Curriculum includes Innovative projects as mini projects as well as Capstone projects to be carried out in the Centres of Excellence – such projects may also be part of consultancy engagements
- College has an Entrepreneurship Development Cell which helps and educate students to convert their innovative ideas to start-ups.
- Students have won Smart India Hackathons and Industry Hackathons and project competitions to prove their innovation through projects and coding.
- Students are provided ample opportunities to do projects in the laboratories having state of art equipment. Best projects are awarded prizes and supported for further development. Viable projects are taken forward for patenting.
- 105 patents have been filed out of which 8 patents were awarded so far
- Dean Innovation has been appointed with patent agent certificate to improve Innovative projects and patents.

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Operation of Institute Innovation Council



Indicators from NIRF Ranking 2021 & 2022

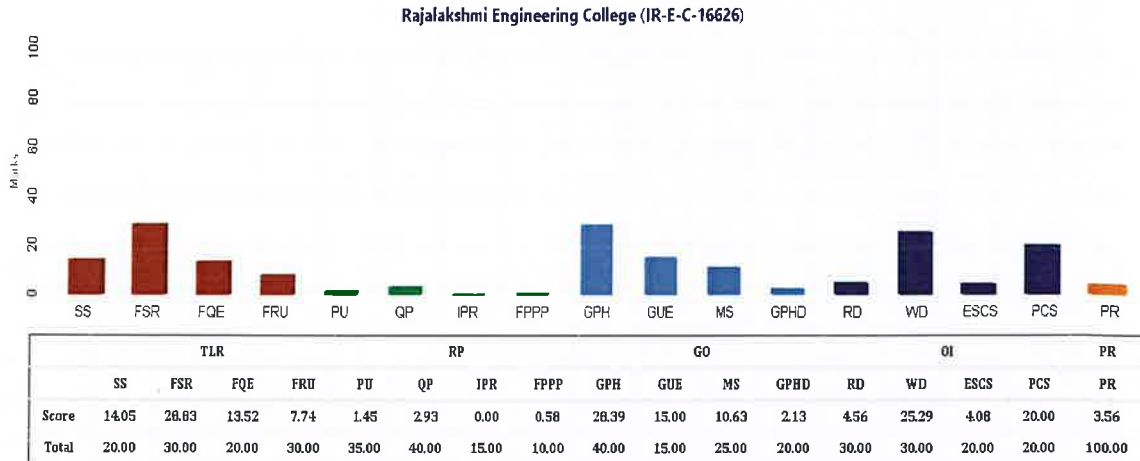
- Improvement in Research, Consultancy, Publication the NIRF ranking of REC Year wise. In 2021 it was 110 and in 2022 it improved to 95. Rajalakshmi Engineering college is in the 2nd position among Autonomous Private Engineering Colleges in Chennai.

S. V. Hemphill

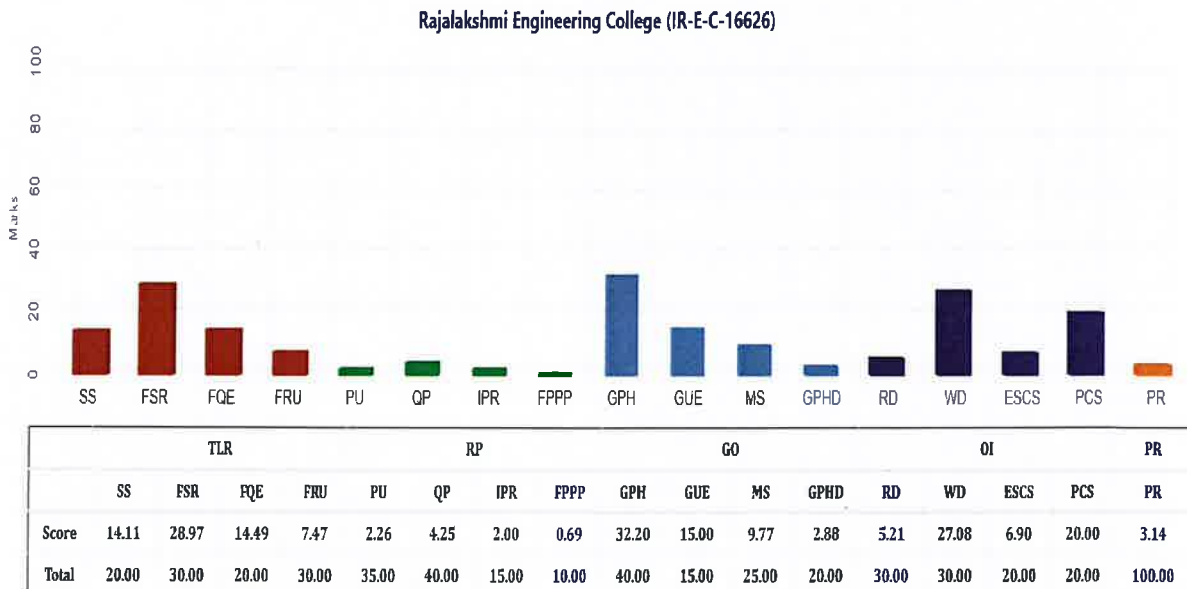
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- The NIRF Graph representation of the year 2021 taken from <https://www.nirfindia.org/nirfpdfcdn/2021/graph/Engineering/IR-E-C-16626.jpg>



- The NIRF Graph representation of the year 2022 taken from <https://www.nirfindia.org/nirfpdfcdn/2022/graph/Engineering/IR-E-C-16626.png>




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