

## S. P. Mandali's

# RAMANARAIN RUIA AUTONOMOUS COLLEGE

## SUPPLEMENTARY REPORT

Curriculum design and its proper implementation is the hallmark of any successful educational institution. Freedom to design and implement its own curriculum, therefore, provides the necessary impetus to excel in the field of education. Autonomy provides this freedom and Ramnarain Ruia College has been aspiring to be an autonomous institution since the late seventies. Many of the former Principals at the College had approached the State Education Department for the same. It is therefore, a long cherished dream-come-true for the College to be granted the status of autonomous Institute on 28<sup>th</sup> June, 2017. As a reputed institution for higher learning, Ruia College has always been in the forefront, striving for excellence in education. After acquiring the autonomous status, the College has taken concrete steps to bring in innovations in education to meet the current social, economic and human resource needs of society at large.

As an autonomous College that has recently transitioned from the affiliated status, the College has obvious limitations in implementing far reaching changes within a short span of less than 30 days in the curriculum. The College therefore, has evolved strategies to address key areas in the syllabi, that were perceived as issues that need immediate attention. Each Department has constituted a Subject Board (Board of Studies) by including subject experts from reputed institutions like IIT's and industries to get all-round inputs. Each Department has undertaken an exercise to evaluate the University syllabi and identified aspects that needed revision. The Departments have revised their syllabi accordingly and have also made provisions to permit lateral mobility of students from the College to other institutions that are in the affiliated status. The College, in the autonomous status, has retained its focus imparting skill-based learning, with emphasis on entrepreneurship aptitude.

Several new initiatives have been envisaged by the College in the teaching learning program to encourage research at undergraduate level. The curriculum has been revised to include more project-based learning. To meet the requirements of various Subject Boards in the revised syllabi, the College has augmented many of its infrastructural facilities that are offered to the faculty and students. Most of the facilities in the College have been restructured to make it disabled-friendly. The College is looking forward to a paradigm shift in its focus by incorporating skill-based programs to make education more application-based in nature. To achieve this, the College has been organizing "train-the-trainers" programs and also encouraging faculty members to participate in training workshops in current advances in their field.



The College has utilized its collaboration with the foreign Universities by providing opportunities to faculty and students to get trained by experts from these universities. Another area that the College is actively pursuing is nurturing innovations among the faculty and students by encouraging protection of intellectual property through the generation of patents.

A comprehensive summary of the initiatives taken by the College under the recently acquired autonomous status is appended. The summary, addressing each criterion separately, forms a supplementary report to the SSR already submitted earlier by the College. The Management and Staff of the College is committed to utilize responsibly, the liberties available under autonomy, in order to make the teaching-learning process at the College a more cherishable and enlightening experience at all levels.

**PRINCIPAL** 

Prof. Suhas Pednekar



## CRITERION I: CURRICULAR ASPECTS

Freedom to design and implement more innovative, skill-based and socially relevant curricula is the main impetus for the College to apply for autonomy. Curriculum provides direction and content to the learning process of the student. An autonomous institution has adequate liberty in the areas of admission, design of curriculum, conduct of examinations, evaluation and declaration of results, etc. The institution is able to focus on curricula with regional and local needs of the students. The College has already made sincere and continuous efforts to bridge the gaps with regards to the curriculum enrichment, its implementation and upgradation. Various departments at the College have already revised syllabi in consultation with experts from the industry and academia. The College has taken into account, several finer aspects like academic flexibility, feedback systems, use of technology, etc. to ensure that the teaching and training at the College meets the contemporary needs of the Society and enhances the entrepreneurship prospects of the students. The College has been able to garner benefits of the long years of research culture at the institution, in both designing and implementing curricula at various levels.

The College has been implementing the syllabi prescribed by the University for the last eight decades. Within the restrictions of the University framework too, the College has been taking sincere efforts to bring in innovation in implementing the syllabi. After acquiring autonomy, the College has taken steps to modify the syllabi to fill gaps that were perceived. Following are the steps taken by the College in this direction;

- The Departments made a comprehensive analysis of the syllabi to understand the areas that needed improvement and aspects that needed to be incorporated.
- Each Department took inputs from various stakeholders like students, industry and the faculty.
- Each Department has constituted a Subject Board for every subject that is being taught. The Board is constituted of members representing the academia, industries and research institutes apart from the representatives of the students, faculty and other stake holders, including faculty from international institutions.
- The Subject Board of the respective subject has reviewed the revised syllabi. The Subject Board has provided valuable inputs with respect to the content, implementation and evaluation strategies for the respective subject areas.
- The syllabi are implemented after approval by the Subject Board.
- The College has plans to revise the syllabi regularly so that current needs of various stakeholders are addressed in the implementation and



practice of the teaching learning process. The revision of syllabi has been made with consideration of lateral mobility of students and with provisions of bridge courses wherever necessary.

- The College has been able to make the syllabi socially relevant and address key issues facing the community by taking inputs from various stake holders.
- The College has made skill development, a major area of focus after achieving autonomy.
- The syllabi have been framed to develop the skills and match the current industry requirement of employability and to make students more competent in appearing for the competitive examinations in their further studies. The curriculum so designed also aims at fostering a research culture amongst the students as the new syllabus focuses on research project based learning for the students.
- Projects, industrial visits and internship are an integral part of the revised syllabi.
- Partnership with industries have been formalized with MoUs wherever necessary.

The College has been in the forefront in implementing novel curricula for the enhancement of the industrial acceptability of its students. The College has been pioneer in conducting courses for Chemistry students; "Industrial and Analytical Chemistry" and it was accepted well by the industries. Under UGC innovative Courses, the College implemented the Post-graduate course in Bioanalytical Sciences. This is now a regular M.Sc. Program in the University of Mumbai. Under DDU-KAUSHAL program, the College is the only institution under Mumbai University to offer programs in Pharma Analytical Sciences and Green House Management. These initiatives by the College have been accepted and replicated both at the regional as well as national levels. Post-autonomy, the College has conferred all the BVoc courses the status of independent departments. The senior-most faculty in each of these courses have been inducted into the council of Heads of departments of the College. The College plans to offer post-graduation in vocational courses (MVoc) to graduates from other relevant subjects thereby opening newer avenues for the vertical mobility of students to interdisciplinary courses (for example a BSc graduate can take admission to an appropriate MVoc program in Pharma Analytical Sciences or Green House Management).

The College has plans to incorporate academic flexibility by offering optional courses as electives that would earn credits for the students. Students will be encouraged to take up electives which are not part of their regular subjects so that the teaching learning process becomes more interdisciplinary. The College has plans to consolidate this academic flexibility further by involving the BVoc departments to provide skill-based entrepreneurial courses to the



interested students of the conventional graduate programs. The College is in the process of organizing more Interdisciplinary workshops, seminars, conferences and training programs for students and faculty in the autonomous system.

## CRITERION II: TEACHING-LEARNING AND EVALUATION

The academic year of 2017-18 heralded the autonomous status of the College. Though the autonomy was conferred after the completion of majority of admissions, the College made special efforts to intimate students and parents regarding the autonomous status of the College. Information was also provided in major local newspapers. The admissions to the academic year 2017-18, had been made under the affiliated system. After the admissions, the students and parents were provided with necessary orientation to the academic and administrative processes of the institution. The Principal, the Vice-Principals and the Heads of Departments were involved in conducting Orientation programs for freshers for 3 hours in the beginning of the academic session for all students. The students were apprised of the Curriculum and details of co-curricular and extra-curricular activities.

Further, individual Department Heads have conducted an orientation session for the students and explained to them the flow of curriculum for their respective subjects, evaluation procedures for internal and external exams and the emphasis on regular attendance with active class participation in both theory and practical. In the coming academic years, the College plans to implement revised admission processes to suit its autonomous status. The website has been upgraded with more elaborate information of the faculty and their achievements in the field of education and research. An open day for visiting the College has been planned prior to the admission days, for the students and parents to experience the College environs. During the admission process, the information about the College and the courses offered by it would be made available on the College website. The new College website is getting ready which would be made more interactive so that online registration of applications and payment options could be made available. Counseling kiosks would be made more accessible for applicants by increasing the number of kiosks and also by providing a helpline. The Admission Committee would take up greater responsibilities to meet the additional regulatory requirements of the autonomous college.

The College places special emphasis on the use of ICT in teaching and learning process to encourage participatory learning and to augment the role of teacher as a facilitator. Adequate ICT enabled class rooms and laboratories have been made available to the faculty for efficient incorporation of ICT in the teaching learning programs. The College has made necessary arrangements to maintain the facilities and to upgrade them to the current needs of the



technology. Facilities are made available to the faculty with necessary software to develop ICT based training modules.

The College also has in place, a well-planned system of monitoring and receiving feedback from various stake holders like students, parents, faculty etc. The feedback is analyzed by the IQAC and relevant responses are sought from respective departments. Such feedbacks have been used by departments to improve their teaching learning programs especially in areas of scheduling, content improvement, activity based learning and project based learning for undergraduates.

The College encourages participatory learning and peer to peer learning by providing the students with curricular plans in advance. The faculty submits a teaching plan at the beginning of every semester. Under the autonomous status the College plans to upload the same on the website for which the website is being upgraded. Feedback received from students would enable the faculty to understand the learner's perspective of the curriculum.

Under the autonomous system, project based learning is an integral part of the curriculum in subjects where it is feasible. With the STAR programs (DBT STAR Status and STAR Scheme) continuing till 2019, adequate opportunities will be available for various departments to incorporate project based training within the regular curriculum.

The faculty of the College are well qualified and at present, there are 58 permanent teaching staff. All permanent teachers are either exempted from NET/SLET or are NET/SLET qualified (40%). Among the Faculty, 62 teachers are with PhD as the highest qualification and 6% are with MPhil as the highest qualification. In concurrence with the institution's emphasis on quality of the teaching – learning process, the College encourages the faculty to improvise and implement innovative teaching methodologies. Some faculty members have incorporated techniques like mind maps, quizzes and games to enhance the experience of class room teaching and make it more enjoyable. As a motivation to the faculty, during staff meetings, the Principal appreciates the Faculty for Innovative methods introduced and implemented to augment the teaching-learning process. The Faculty makes presentations of the same during Open Forums and Staff meetings. Public appreciation of such teachers motivates other members of the teaching faculty to excel. The College applies for funds, wherever possible, to encourage the teachers with innovative ideas to improvise and develop their ideas further. Under autonomy, workshops are being planned for the benefit of the faculty members to enhance their skills in teaching, use of ICT based resources and evaluation techniques to meet the institutional objectives.

As an integral part of the democratic and inclusive approach of the management, the College has always encouraged diversity in its faculty recruitment. A sizable number of teachers are from other colleges within the State. Two teachers are from outside states. About fifteen percent of faculty



are a product of the same College. A total of 28 visiting faculty conduct sessions / lectures for subjects such as BMM, Chemistry, Biochemistry, Bioanalytical Sciences and BVoc Courses. The College also has made provisions for its faculty to participate in teaching processes of other institutions including some foreign Universities. MoUs have been signed with the University of Harrisburg, Westchester University and Indiana University of Pennsylvania. A faculty member from the Harrisburg University conducted an interdisciplinary workshop for faculty and students on nanotechnology for 6 days in the month of July, 2017. The feedback received from the participants was very positive and requests for similar workshops in future were also received.

The final stamp of recognition of the teaching-learning process in an academic institution is the results of student performance at the evaluation. The College, therefore, has been adopting a multipronged approach to improve the transparency and reliability of the evaluation system. On one hand, the evaluation pattern has been revised to ensure continuous assessment of the student acumen in problem solving while on the other hand, the management of the examination has been upgraded with increased involvement of ICT. The evaluation has been revised to the 60:40 continuous evaluation pattern involving 40% of marks allotted for internal assessment. The internal assessment will involve objective assessment of the students for skills acquired, involvement in the learning process, completion of assignments, execution of projects, soft skills etc. Each Subject Board has the liberty to plan their internal examinations, as per the needs of the subject and the skills that are being assessed.

The College Administration Management system, which is ICT based software, takes care of the conduct and management of the evaluation system. The system has been suitably upgraded for the revised pattern of evaluation under autonomy. The CCMS software at the Exam Cell of the College, is now being upgraded and enhanced to generate the question paper codes, hall tickets, marksheets and for generic result processing and certification. The results of the evaluations are declared by the College within a month of the conduct of examinations. The dates and schedules for the declaration of results are made available on the college website. The College plans to introduce the OSM (On Screen Marking) system and is in the process of obtaining the requisite hardware and software. This will reduce the incidence of errors in the marking process and also make the evaluation process more transparent.



# CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

The long years of a research culture at Ramnarain Ruia College has been nurtured mainly through faculty driven research programs and industry sponsored projects. The sustenance of research at the college relies chiefly on the innovative approach and interdisciplinary nature of the research projects. The college takes conscious efforts to sensitize research scholars and research guides on various aspects of ethical conduct in research. Under autonomy, the College plans to consolidate its mandate for promoting undergraduate research. The College has made the following efforts to augment the involvement of students and faculty in research;

- A dean has been appointed for research and industrial consultancy in order to coordinate all research activities at the College.
- The College has plans to formalize the course work program for research students with sessions in Research methodology, Applied Statistics, IPR, patents, information sourcing (referencing), technical writing, soft skills etc. An "open *viva*" system is also being finalized for research students before the *viva voce* at the University.
- The College also has plans to train the students to use latest softwares for thesis writing and for evaluating technical documents for plagiarism.

Currently, the Research Advisory Committee of the College monitors the research activities in the College and also formulates policies and guidelines to maintain the quality of research. In the meeting of the local Research Advisory Committee held on 10<sup>th</sup> July, 2017, a policy was formulated to address the issues to check malpractices and misconduct in research. The policy encompasses the following measures to prevent malpractices in research:

- 1. Plagiarism The students are made aware of the repercussions of plagiarism and are informed of the software available to check the same.
- 2. Duplication of the projects: Duplication of projects of the students is avoided by arranging presentations of the students on a common platform.

Various departments at the College carry out interdisciplinary research and this enables efficient sharing of common facilities and expertise. The college also emphasizes industry collaboration in research to foster more applied work. This industry collaboration encourages consultancy services where the expertise of the faculty members are used.

The College has provided adequate infrastructure with contemporary technology for carrying out research. Research scholars are provided with advanced research laboratories as encouragement for research work. Although there are no residential facilities available to the research scholars, computer



and internet facilities are made available to the research scholars and faculty members on campus. Various research projects are being conducted by students, especially under-graduate students, during the summer vacation, and the College has plans to allow the students to obtain extra credits for their projects in the coming years.

The College encourages innovation and assists research scholars and faculty to safeguard their intellectual property rights. Special lectures are organized in college to explain the significance of intellectual property rights. There is also a special cell to guide and mentor the members for filing patents.

The outlook of research at the College is globalized by the faculty members who are associated with major publication houses of technical and research papers. Many faculty members are members of editorial boards of national and international journals and are reviewers of peer reviewed journals in interdisciplinary areas.

## CRITERIA IV: INFRASTRUCTURE AND LEARNING RESOURCES

Being situated at the heart of a megapolis like Mumbai, the College tries its best to optimally utilize the precious space available within its campus. The working schedule of the College is staggered so that the spatial needs of various departments and courses are accommodated. The College functions from 7.45 Hr till 17.30 Hr, in two shifts, to adequately cater to the diverse requirements of different classes and courses. Laboratory space is shared between courses by conducting practical sessions in batches. The scheduling of classes is so managed that there is minimal mobility of students between classes. Common facilities like auditorium, audio-visual rooms, and seminar halls with special aids are allotted to student activities on priority basis. Common instrumentation facility is offered to all courses on need basis so that students from diverse background get the necessary exposure to technology. The main library of the College has been renovated and redesigned to enable optimal utilization of the space. Redesigning and renovation of the library includes larger and enhanced number of Reading spaces within the Library, such as - a new Reading Hall within the Library (seating for 42), a separate Reference section with large windows providing natural light and ventilation (seating for 12), a separate study room for Teachers (seating for 6), a different Periodicals Section (seating for 16), a special OPAC room for students (seating for 6), Compact-stacking cupboards for optimum utilization of space and CCTV network in the Library for better security. To enable better management and upkeep of various infrastructural facilities in the College, a separate post of Dean, Infrastructure and Maintenance has been created.

Convenient access to supplementary information and its efficient dissemination are important factors that ensure effectiveness of the teaching



learning process. With over 1.32 lakh printed books, 6500 back volumes and subscription to 87 national and international journals, the College library functions as an efficient nerve-centre for information exchange. To cater to the revised syllabi under the autonomous status, the library has made provisions to obtain relevant books and other knowledge resources to meet the student needs.

The total area of the library is approximately 780 sq.m. It has 4 separate Reading Halls and a special e-Learning Center to provide open and free internet access to all current students. The Floor plan of the Library, including all the renovated sections, is displayed at the Library entrance for the benefit of users. Signage, denoting specific subject books, is put on the cupboards. Books are labeled and tagged according to their location, for quicker and easier access.

In an effort to provide maximum access to its collection, the library uses many tools. Main among them is OPAC (Online Public Access Catalogue) which is inbuilt in the library software. Access to information superhighway is provided by an Internet band width/ speed of 10 mbps.

In the last five years, the Library has organized two information literacy trainings. A one-week 'Certificate Course in Basics of Library & Information Science' was specially designed for the library support staff (Library Clerks and Attendants). Under College of Excellence (CE) Grant, Ruia Library organized a Workshop on 'Searching and Managing Information' with an aim to train users in effective searching with Google & beyond and Management of References using Zotero: Free Reference Manager. The workshop was attended by 102 participants (72 Ruia Staff & PG students, & 30 external). Positive feedback and requests for further such useful workshop were received.

The financial resources for the Library come mainly from students' Library Fees and from various other grants like, UGC plans, CE grant, DST FIST etc. The feedback about the Library is collectively taken as part of the complete College feedback collected by IQAC. The Library receives suggestions and thereafter, improvements are made upon the concerned areas. In its efforts to give more to its users, Ruia Library underwent complete renovation to enable continual information dissemination through the use of ICT. In its future plans, the Library will set up a special Digital Resources Center dedicated to avail the digitized rare collection and other e-resources.

In the modern world of information revolution, the College has taken great strides to provide access to digital information portals without restrictions of band width and speed. This has been possible through the deployment of a DOER (Decentralized distributable Disk of Offline Open Educational Resources) Interface developed by Homi Bhabha Centre Science Education, Mumbai. This interface allows students to access open educational resources on their mobiles through the server placed in the College.



## **CRITERION V: STUDENT SUPPORT AND PROGRESSION**

The College continues to cater to a diverse population of students with a higher proportion of girl students. The management and administration are committed to provide continued support and encouragement in a studentcentric and inclusive manner in the autonomous status. The revision of curricula has been made by giving special consideration to the progress of students to higher studies, while, at the same time vertical and lateral mobility of the students are not seriously hindered. The College has planned several provisions in the curricular programs to enable students to accumulate credits, acquire extra credits and transfer credits. Many programs are made available to students to facilitate the overall development of their personality, technical skills and life skills. Long before the college received autonomy, Ruia College has been making efforts to establish collaborations with foreign Universities. The MoU with Penn Hub universities, one of such collaborations, has enabled groups of students and Faculty members to visit Universities in Pennsylvania in the past two years. Moreover, one of the students from Microbiology could get direct admission to the Indiana University of Pennsylvania for the postgraduate program. As a part of such collaborations, provisions are being made for student exchange programs, joint degrees, twinning programs, etc., where the students would spend 2 years in Ruia College and 2 years at the foreign university.

The College has been winning accolades through its students' performance in various cultural programs, both at the regional and national levels. The College provides support to such talented students by arranging additional classroom sessions and examination, if needed. The College proactively encourages such students by arranging for professional guidance and training. The encouragement provided by the College to students for participation in cultural activities have been bringing in rich dividends in the form of a sizeable number of students being recognized as well-known exponents in various cultural arena including films and stage.

Girls form the majority of student population of the College. It is therefore, evident that the College encourages girls to participate in all aspects of the curricular and extracurricular activities at the Institution. A sizeable number of students have taken up sports activities like boxing, shooting, martial arts, etc. which are otherwise considered male-domains. The all women team of the College has also won awards at various prestigious tournaments. The College also has a separate NCC wing for the girls and a significant number of girls participate in national level parades.

The College provides support to students for obtaining various governmental and NGO based scholarships and freeships, especially for the underprivileged and challenged students. Annually around 10 students from the College are recipients of the prestigious INSPIRE scholarships for budding scientists. The College is also a popular center for higher education and research. Several



students complete their Doctoral degree every year and the trend has been very encouraging.

	2012-13	2013-14	2014-15	2015-16	2016-17
Submitted	10	13	15	13	18
Accepted	10	13	15	13	18
Resubmitted	NIL	NIL	NIL	NIL	NIL
Rejected	NIL	NIL	NIL	NIL	NIL

Though the College received autonomy recently, in comparison with other colleges, Ruia College is the most sought-after by students, due to its consistent performance record as compared with other colleges. A comprehensive statistic of admissions made in the academic year 2017-18 is provided below;

Course	<b>Applications Received</b>	Actually admitted
FYBSc	2109	582
FYBA	1534	465
FYBMM	1236	111
BVoc TTM	154	47
BVoc PAS	103	32
BVoc GHM	34	09

Autonomy has provided the College with the liberty to modify and amend syllabi so that the curriculum matches the current needs of various stakeholders. Subjects like Computer Science and IT are highly dynamic fields with technologies getting updated very frequently. Every few months the technology gets updated and students remain unaware of these changes. In autonomy, the College plans a dynamic curriculum that will remain regularly updated with the upcoming technologies. To make the student progression to employability much easier in the IT sector, the curriculum has been revised to include current topics like Bid Data, Android Apps, IoT, Agile and Scrum Software development etc. Hands-on training has been made an important aspect of all applied subjects in order to enable better linkage with the job market for improving students' employability. Internships have been included



as integral part of several curricula so that students understand the workenvironment and other professional requirements of the industry.

# CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

The management of the College is based on a democratic set up with an inclusive approach, devoid of any bias and providing opportunities for all. Under autonomy, the College has continued to follow the same management principles while opening more opportunities for its faculty and staff to be actively involved in the development of the College. The College has proposed significant changes in the sectors of administration and academics, as per the norms stipulated by the UGC and University of Mumbai for autonomous institutions. The College is in the process of constituting Governing Body, Academic Council and Subject Boards to formulate new courses within the nomenclature specified by UGC and Finance Committee.

Subject Boards have been already constituted by all the departments and meetings have been conducted for the discussions on the proposed changes in the curriculum and evaluation pattern. While framing the syllabus, focus has been on making curricula more skill and research oriented. The College ensures that all the positions in its various statutory bodies are filled and meetings are conducted at the stipulated intervals. New leadership positions have been initiated from this academic year as we progress with the autonomous status. The proposed positions include appointment of Deans for focal areas like Academic Programs, Research Consultancy and Resource Mobilization, Infrastructure and Campus Development, Human Resource and Student Development and, Finance and Accounts. The Gender Sensitization Committee against sexual harassment in the College proposes to conduct a gender audit with an aim to reviewing the participation of women in various academic and cultural programs.

The IQAC of the College has geared up to address various new responsibilities under the autonomous regime. The College has plans to improve the facilities of IQAC by augmenting its ICT support and adding more support staff. IQAC will take up the responsibility of continuous monitoring, periodic review and internal audit of the academic programs to provide valuable feedback to various departments.

The Dean for Academic Programs, proposed to be set up in this academic year, would work as the central body of the college and shall be responsible for continuous review of the teaching learning process. Other members of this body comprise Heads of departments and faculty members. Based on the



Academic Audit conducted by the University of Mumbai on 9<sup>th</sup> January 2017, the following initiatives have been undertaken by the College:

- Interdisciplinary Research Activities –A six day Workshop was conducted on Nano- & Biotechnology- Innovation & Revolution. It was organized by Ramnarain Ruia College in collaboration with Harrisburg University and was inaugurated on 10th July, 2017
- Energy Conservation Programs Installation of Water Harvesting Unit has been initiated in the college
- Outcome from existing collaborations 21 students from Departments of Biotechnology and Bioanalytical Sciences underwent a 28 day training program entitled 'Exploration Program in Biotechnology' at Indiana University of Pennsylvania in May 2017.

The College has been proactive in planning for the development of academic programs and activities. The outcome of the meticulous planning carried out by the college is apparent in the form of various awards and recognitions received by the College in the past five years.

## CRITERION VII: INNOVATIONS AND BEST PRACTICES

Under the newly conferred autonomous status, Ruia College plans to design innovative curricula in new and emerging areas that will help in the academic and professional advancement of students, teachers and stake holders. Furthermore, the College aims to strengthen one of the Best Practices of enhancing the research culture, by making project based learning an integral component at the UG level. Such an exercise will fortify and sharpen the critical thinking and analytical ability of the advanced learners and will also encourage the average and weaker students to explore and innovate. Research projects at the post-graduate level will sharpen the research skills of the students and will help them develop other ancillary skills too. The College is also taking concrete steps towards widening its research foundation by improving networking and collaboration with academic and research institutions in India and in the US especially for research in inter-disciplinary areas.

Ruia College was the only College in Mumbai to be selected by the UGC, for setting up the KAUSHAL Kendra in 2015. Under this scheme the College plans to now design new skill based short term courses for students of all streams. Such courses will help the students explore new academic horizons and develop skills that can make them suitable for different job roles. Recently this Centre organized a 'Train the Trainer workshop' for academicians associated with the Life Science Sector Skill Council. We plan to conduct more such workshops for faculties in other subject areas such that they can



deliver skill based training more effectively. Such workshops would include innovative teaching learning methods like- role play, use of visual aids, peer to peer learning techniques to deliver effective training. Internships/ industry training is an integral part of courses under the KAUSHAL Kendra. Ruia College intends to extend internship for students of other subjects, whereby the students are introduced to work environments in professional organizations and also to skill required for careers in such organizations.

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