## PROSPECTUS







# Welcome to Bengaluru



Bengaluru is the capital city of the Indian state of Karnataka, located on the Deccan Plateau in the southeastern part of Karnataka. Bengaluru is India's third most populous city with a population of almost 8 million and is known as garden city and it is well known for its weather. Bengaluru is the India's biggest IT- Hub and is known as Silicon Valley of India and it is the house for many advanced technology research establishments including aerospace and defence. There are more than 15 public, deemed and private universities in the city with more than 60 engineering colleges and 8 medical colleges with a total student population in higher education exceeding 2,50,000.















Dr. M. S. Ramaiah (1922-1997)

established Gokula Education Foundation - A Public Charitable Trust in 1962 with a mission "To Deliver Education and Health Care for the Betterment of Mankind". The trust established M. S. Ramaiah Institute of Technology in the year 1962.

#### The following institutions were established over the years:

M. S. Ramaiah Medical College

M. S. Ramaiah Medical Teaching Hospital

M. S. Ramaiah Dental College

M. S. Ramaiah College of Pharmacy

M. S. Ramaiah College of Hotel Management

M. S. Ramaiah Composite Junior College

M.S. Ramaiah Vidyanikethan

M. S. Ramaiah College of Arts, Science and Commerce

M. S. Ramaiah College of Law

M. S. Ramaiah Institute of Management Studies

M. S. Ramaiah Polytechnic

M. S. Ramaiah School of Advanced Studies

M. S. Ramaiah Memorial Hospital

International Medical School

M. S. Ramaiah Gokula Ayush Arogyadhama

M. S. Ramaiah College of Education

M. S. Ramaiah Advanced Learning Centre

M. S. Ramaiah Rehabilitation Centre

M. S. Ramaiah Institute of Neuro Sciences

M. S. Ramaiah Narayana Hrudayalaya Heart Centre



















## **Chancellor's Message**

It gives me great pleasure to note that the University has entered its fourth academic year after successfully completing the first three years. The University was launched with the intention of embracing global educational practices into our existing higher education system to bring it on par with the higher education system that is in vogue in developed countries. Initially, I was rather skeptical about the acceptance of the system of education that had been designed by our faculty members who had gained several years of experience in imparting education using the practices adopted in developed countries particularly in Europe.

I would like to convey my thanks to our students and their parents for wholeheartedly embracing the new system. At the end of the each

academic year I have witnessed the positive energy amongst the students, parents and staff and, on enquiry, students have expressed their opinion that although the system demands enormous efforts the learning experience made it worthwhile.

In India, IITs are known for engineering and technology education, IIMs are known for management education, NIPER is known for pharmacy education, AIIMS is known for medical education and NID is known for design education. It is my dream that we at Ramaiah University of Applied Sciences should replicate the combined characteristics of all these institutes and achieve this status of excellence in due course. I am confident that this challenge will be accepted and fulfilled by the members of faculty at the University and its administrators. Collectively, we are aiming to develop a great institution that our nation can feel proud of while serving the generations of the future and focusing on developing global citizens.

I wish great success to all the members of the University in their endeavor to achieve excellence in higher education.

Dr. M. R. Jayaram



#### Philosophy

Education with Devotion (Bhakthi) is a process of Perfection for larger good

#### Vision

"RUAS aspires to be the premier university of choice in Asia for student centric professional education and services with a strong focus on applied research whilst maintaining the highest academic and ethical standards in a creative and innovative environment"

#### Mission

Our purpose is the creation and dissentination of knowledge. We are committed to creativity, innovation and excellence in our teaching and research. We value integrity, quality and teamwork in all our endeavours. We inspire critical thinking, personal development and a passion for lifelong learning. We serve the technical, scientific and economic needs of our society

#### **Objectives**

- To disseminate knowledge and skills through instructions, teaching, training, seminars, workshops and symposia in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to equip students and scholars to meet the needs of industries, business and society
- To generate knowledge through research in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to meet the challenges that arise in industry, business and society
- 3. To promote health, human well being and provide wholistic healthcare
- To provide technical and scientific solutions to real life problems posed by industry, business and
  society in Engineering and Technology, Art and Design, Management and Commerce, Health and
  Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences
- To instill the spirit of entrepreneurship in our youth to help create more career opportunities in the society by incubating and nurturing technology product ideas and supporting technology backed business
- To identify and nurture leadership skills in students and help in the development of our future leaders to enrich the society we live in
- To develop partnership with universities, industries, businesses, research establishments, NGOs, international organisations, governmental organisations in India and abroad to enrich the experiences of faculties and students through research and developmental programmes



## Welcome from the Vice Chancellor

We have just completed three academic years, the first batch of postgraduates have left the portals of the University. It is nothing wrong to say that Ramaiah University has pioneered Student Centric Outcome Based Education in India. It was indeed a challenging task to familiarize the members of faculty, staff and students and to gain acceptance for Student Centric Outcome Based Education - a revolutionary, teaching & learning system. Initially, it was a daunting task to make faculty members unlearn older concepts and learn new concepts of teaching and assessing. Students, for a long time, kept comparing their efforts with their counterparts in other universities and often expressed difficulty in coping with

the new system. However, without getting disheartened, we at the University persuaded the faculty members and students on the benefits of the new system often inspiring them with many motivational talks and helping them through training. All these efforts seem to have paid off when we saw a large number of blogs appearing in the digital media, written by our own students, analyzing the visible benefits they were deriving from this new method of teaching and learning with frequent comparisons to the learning experience of their peers studying in the best universities abroad.

With a sense of great satisfaction I am pleased to report that the University has obtained 2(f) status from UGC and has been ranked, by NIRF-MHRD, as the 90th best University in the Country. Recently, K-SURF (Karnataka State University Rating Framework) rated the University as a Four Star University and the best Innovation University in the State of Karnataka. In addition, leading educational and news magazines have ranked the University as the best emerging Research and Innovation University. There are more than 350 faculty members of which more than 100 members are Ph.D. degree holders. We have a further 300 Technical and Administrative staff supporting the University's operations.

University Faculty members have, during the last academic year, published more than 325 research articles in Scopus indexed journals; organized more than 12 seminars and workshops; and filed for more than 25 patents. The Techno Centre has completed more than 50 consultancy projects for industry and businesses while the Research division has attracted reasonable amount of research funds. Our Directorate of Training and Lifelong Learning has trained more than 2000 delegates in various technology areas and in higher education practices. Faculty members and students have provided various community services like patient care and participated in our "Service to Society" programme completing a number of activities for the benefit of the communities spread across the state. Our Technology Incubation and Entrepreneurship Cell is incubating more than 15 start-ups with fund support from MSME. The University will be hosting "Karnataka Aerospace Technology Centre" on its Campus in Peenya. It has setup Garment Design Centre with the funding from Karnataka Government and shortly it will inaugurating "Incubation Centers" funded by Gol and GoK.

The University has entered into collaborative relationships with a number of universities from USA, UK, Russia and other European countries and a number of students and staff exchange programmes have been completed with at least 25 students and staff members visiting an overseas University. More than 15 student Dream Teams have been promoted by the University for Students to take part in international competitions. One team is working on a Micro Satellite while another team is working on Electric Propulsion. Our students have won many national level competitions and hackathons. This year more than 350 students have completed M. Tech., M. Des., MBA, MHA, M. Com., M.Sc., M. Pharm., Degrees. At least 5 M.Tech. Projects have achieved the potential for being commercialized having worked in collaboration with industry and funds from TIFAC. A considerable number of these graduates have been placed in reputed organizations. The University has created 21 specialist Research Centre to emphasize on Research in contemporary areas of knowledge. More than 185 scholars are pursuing their PhD. The first convocation for PG students was held during the month of November 2016.

Equipped with state-of-the-art facilities in the laboratories, libraries and other resource centers the University has created the right environment to provide rich teaching, learning, research and real-life, problem-solving experience to its students as well as its faculty members. Many of the facilities created can be compared to what is available at some of the best universities across the globe.

I believe in the statement "The mind is not a vessel to be filled, but a fire to be kindled." and we strive to "Ignite the Minds" for improving the life of the people of the World and India in particular by developing Global Citizens through our education system.

Ramaiah University of Applied Sciences "Inspiring Applied Thinking"

Prof. S.R. Shankapal

## Ramaiah University of Applied Sciences

Ramaiah University of Applied Sciences (registered as M. S. Ramaiah University of Applied Sciences) is a Private University established by an Act of the State of Karnataka, India. The University is sponsored by Gokula Education Foundation – a public charitable trust owned by Ramaiah family. The Gokula Education Foundation has promoted more than 29 institutions in the last 55 years offering higher education and quality healthcare.





Ramaiah University of Applied Sciences (RUAS) has been established with a vision to be known as a modern, innovation—intensive university, where the university continuously interacts with the industry, business, communities and government organisations. The University aims to produce

graduates who are confident, can think creatively and apply their academic learning and practical skills to find innovative solutions to problems faced by the Society.

The University has Faculties of Engineering and Technology, Art and Design, Management and Commerce, Science and Humanities, Pharmacy, Dental Sciences and Hospitality Management. All the faculties offer undergraduate, postgraduate and PhD programmes. The University infrastructure supports 10,000 students. There are separate Directorates like

Quality, Educational Processes and Educational Technologies; Student Affairs; Sponsored Research; Training and Lifelong Learning; Techno Centre; Transferable Skills and Leadership Development and International Collaborations and Partnership Management to support the academic activities and interaction with Industry, Business, Communities, Government and other Universities in India and abroad.





The University has invested in advanced design, simulation, manufacturing and testing facilities, all housed in modern buildings. RUAS has implemented outcome based curriculum which focuses on equipping our youth with knowledge & understanding, cognitive abilities, practical skills relevant to industrial and societal needs. The University has adopted global

best practices in teaching, learning and assessment to ensure allround development of students for a happy and successful career. Being a comprehensive university, the courses are inter and multidisciplinary in nature which is an essential characteristic of present day education. All courses are designed to train students to be creative, innovative and imaginative which are the fundamental requirements of the graduates of 21st Century.





In India, the IITs, IIMs, AIIMS, NIPER and NID are well known for technology, management, medical, pharmacy and design education respectively. It is envisioned that RUAS will evolve into a University that combines the successful features of all these institutions and become the Premier Innovation University in Asia in the coming decade.

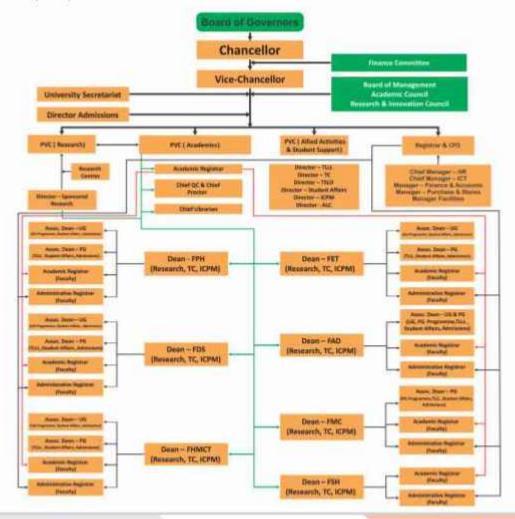
#### Faculties, Directorates and Organization

The University aims to focus its programmes on student centric higher education so that the graduates are equipped with the theoretical knowledge and skills expected by industry and business. The university has five verticals – Academic Studies; Academic Research; Sponsored Research; Training, Skill Development and Lifelong Learning; and Techno Centre – a Consultancy, Product Design and Development and Entrepreneurship Development unit. Students of the University are expected to experience an integrated approach to academics, research, training, real life problem solving and entrepreneurship.

The University, at present has established faculties in Engineering and Technology, Art and Design, Management and Commerce, Hospitality Management and Catering Technology, Pharmacy, Dental Sciences, Science & Humanities and Ayurveda and Integrative Medicine. Through these faculties, the University offers undergraduate, postgraduate and doctoral programmes. The faculties offer an enriched curriculum drawn from the strong relations the faculties have had with the industry and business.

The University has created Directorates of: Student Affairs; Quality, Educational Processes and Educational Technologies (QEPET); Sponsored Research; Training and Lifelong Learning (TLLL); Transferable Skills and Leadership Development (TSLD); International Collaborations & Partnership Management (ICPM) and Techno Centre to provide rich all-round experience to the students.

The University head office is located at the Gnanagangothri Campus, MSR Nagar, New BEL Road, Bangalore. The University has invested in modern infrastructural facilities like Class Rooms, Seminar Halls, Laboratories, Work Shops, Clinics, Libraries, Student Amenities including Sports Centres, Hostels, Cafeteria, Recreation Centres, Literary and Cultural activity centres, Wi-Fi and other support facilities to make the students' experience enjoyable and memorable. The strength of the faculties lies within its well qualified, experienced and student friendly Faculty Members. The M. S. Ramaiah University of Applied Sciences is committed to work on the philosophy of inclusiveness and service to society; train its faculty members and students to contribute significantly to the growth of science, technology and society through their imaginative, creative and innovative pursuits. The University is expected to have more than 500 members of faculty and 8000 students on its campuses spread over more than 100 acres of land in the near future.

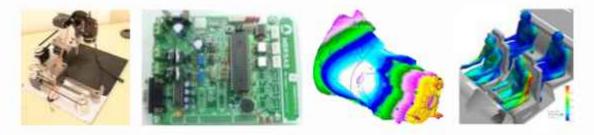


#### 9. Techno Centre

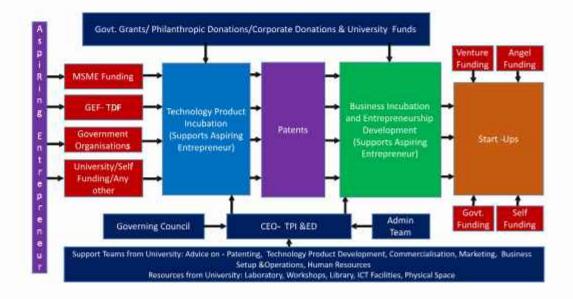
Techno Centre manages Consultancy, Product Design and Development, and Business Incubation activities. Directorate harnesses the research and problem solving abilities that are available with the members of faculties, in addition to the teaching resources and practical skills to work on real life projects. Industries, Businesses and Research and Development organisations who may want to work on challenging problems; interested in developing a new product concept; interested in new product development and commercialisation or would like to invest in new technology development can access the ecosystem that exists on the campus to meet their requirements. Students and Entrepreneurs alike are also provided access to the University's resources for this purpose. The Techno Centre aims to bring the University, Industry, Business and Communities together for their mutual benefit.

Techno Centre is comprised of following Centres

- Engineering Design and Analysis Centre
- · Electronic System Development Centre
- · New Product Design and Development Centre
- · Centre for Mechanical Prototype Development
- E-Med Centre
- Technology Product Incubation & Entrepreneurship Development Centre



The model for Technology Product Incubation and Entrepreneurship Development is as described below



#### 10. Training & Lifelong Learning at RUAS

The Directorate of Training and Lifelong Learning is a vertical of the University involved in conducting training and skill upgradation programs that come outside the gamut of the academic curriculum. The Directorate offers these skilling programmes to aspiring professionals, fresh graduates and reskilling and upskilling programmes to practicing professionals from industry, business and academia The Directorate conducts Credit based and noncredit based courses

The credit based courses are,

- 1. Bachelor of Vocational Degree Programmes
- 2. Post Graduate Certificate in Professional Practice- Dentistry
- 3. User Oriented Post Graduate Courses

The noncredit based courses include.

- 1. Corporate Training Programme
- 2. Advanced Certificate Programme
- 3. Modular Training Programme
- 4. Fellow Ship Programmes
- 5. Skill Training Programme
- 6. Seminars / Workshops
- 7. Proficiency Programme
- 8. Short Term Cookery Courses

#### Credit Based Courses - Bachelor of Vocational Degree Programmes

Bachelor of Vocational Degree Programme (B.Voc) is part of Skill India initiative and UGC's efforts to promote skill based higher education in India. The B.Voc course with 70% focus on skill development and 30% focus on theoretical knowledge prepares the student for skill sets required for that industry or entrepreneurial role. The course curriculum is structured such that students will be able to get a job opportunity at the end of each year.

Passenger Car Repair & Maintenance	Office Administration		
Machine Tool Operation & Maintenance	Retail Marketing		
Product Design & Modelling	Banking & Insurance		
Garment Manufacturing & Quality Control	Accounting & Logistics		
Culinary Operations	Photography & Visual Effects		
Dental Hospital Assistance	Home Care & Nursing Assistance		

Passenger Car Repair & Maintenance is a B.Voc., Degree programme with specialization in automotive repair and maintenance and is designed to train and produce skilled automotive repair and maintenance workforce to handle the advanced automotive technologies. The students are trained as per requirements of the industry, thus helping them procure jobs with ultimate working satisfaction. As the course includes managerial subjects and principles, it will be an added advantage to the student to be able to grow as a technically skilled entrepreneur.

Machine Tool Operation & Maintenance: The Machine Tool industry is moving towards increasingly sophisticated CNC machines, driven by demand from key user segments, such as, automobiles and consumer durables, Aerospace etc. While the estimated manpower requirement in this segment in 2017 is said to be close to 20 lakh people, the same is expected to double by 2022. Therefore, skill training of people in the Machine tool Operation, repair and maintenance is the need of the hour to prepare human resource for the Machine tool industry. 70% of India's machine tools are produced in Peenya in Bangalore and therefore, there is close collaboration with industry for the conduct of this course

Culinary Operations: Catering operations have exhibited a phenomenal growth over the last few years and are a significant contributor to economic growth. They employ millions of people who are driven by

passion, creativity and determination. The culinary operations course integrates theoretical, practical and innovative aspects of food production. Fundamental concepts that progress to advanced techniques in Food Production operations with emphasis on hygiene, nutrition, work ethics and other ancillary elements will contribute to the overall career growth of the individual, both as a professional chef and as an entrepreneur.

Product Design & Modelling: Indian Engineering and Design sector has witnessed a combined growth rate of about 15 percent touching US\$ 26.4 billion over the last year driven by increased national and global demand for its produce. Many local and international firms have set up R&D and Design centers in India to develop innovative products and offerings. This course provides the prospective students with a strong foundation of the art of creating scaled models and prototypes of the concepts envisioned by prestigious R&D and Design centers in India and abroad.

Garment Manufacturing & Quality Control: The textile industry contributes about 14 percent to industrial production and four percent to the gross domestic product (GDP). It is second largest industry in the country in terms of employment generation and world's second-largest producer of textiles and garments. The industry requires more sewing machine operators and quality controllers. About 30% of the readymade garments of the country are manufactured in Bangalore. Many of the sewing operator professionals have become entrepreneurs to enjoy their career and flexi lifestyle. There is tremendous potential for professionals in sewing operation and quality control, as the market is evergreen, growing and developing at a fast pace.

Office Administration: The manufacturing and service sector contribute to about 84% of the GDP, which grew at over 7% and is poised to be one of the largest economies of the world. This growth spurt demands multiple offices across the country. Needless to say, this entails for a steady supply of efficient and effective office administrators. B.voc in Office administration is a set of daily activities that include secretarial services, personal assistance, co-ordination between various functional departments, front office administration, files and records maintenance, logistics, liaising with external agencies and coordinating commercial activities within an organization. Training in management, computer applications, expert use of the internet, and life skills will enhance the effectiveness of a good office administrator.

Retail Marketing: The size of the India Retail sector, spanning diverse categories across food and non-food, is estimated to be in excess of 400 billion USD and growing at a healthy pace of more than 15 % per annum. Regardless of size and structure, all retail organizations are required to engage in a gamut of retail operations and retail merchandising, retail operations, Retail Marketing and Sales, retail information technology and systems - all of which require well-trained retail professionals.

Banking & Insurance: The Indian banking sector's assets reached US\$ 1.8 trillion in FY15 from US\$ 1.3 trillion in FY10. Rising incomes are expected to enhance the need for banking services in rural areas and therefore drive the growth of the sector; programmes like MNREGA have helped in increasing rural income aided by the recent Jan Dhan Yojana. The Indian life insurance industry is estimated to grow at a compounded annual growth rate (CAGR) of 14.1 per cent, and reach US\$ 111.9 billion in 2015 from US\$ 66.5 billion in 2011, according to a report by BRIC data. This would make India the third-largest market for life insurance in the world by 2015. The vocational Programme will integrate theoretical, practical and innovative aspects of Banking and Insurance operations. The Programme is designed to introduce fundamental concepts and simulate the operations of banking and Insurance.

Accounting & Logistics: To support the rapidly growing industrial sector, logistics as well as accounting professionals will be critical to enhance their productivity. India is expected to witness unprecedented growth in the logistics sector to provide end-to-end logistic solutions from manufacturers of goods to the consumer through organized retailers. As a concomitant role, regardless of size and scale all organizations are required to keep track of finances, budgets, transactions and maintain all statutory requirements of accounting records, all of which require accountants. The integration of technology to

both accounting and logistics will boost economic growth. Job opportunities exist in warehousing, cold storage, shipping and ports, freight forwarding and transportation, logistics solutions and supply chain management companies besides the manufacturing and retailing sectors. The B.Voc is expected to meet these requirements

Photography & Visual Effects: There is a wide world of photography. People enjoy photography and are thinking of it as a career, there are actually many different directions one can choose from. One can begin by creating a resume and portfolio of your work and can be done with proper qualifications for the job. Video editors use digital editing software to piece raw footage into a cohesive video story. Much of the editing direction is provided by the director or producer overseeing the project. Video editors also make sure that audio files match the speech appearing on screen. A video editor spends large amounts of time in front of several monitors in a closed office environment. The B.Voc provides the requisite training for various levels of photography and visual effects.

Home Care & Nursing Assistance: India faces an acute shortage of nursing staff with an estimated deficit of 2 million. In the public sector alone, an additional 140,000 staff nurses are required. Needless to say, this gets more acute when the patient is recovering at home. With most families, especially in the urban setting, being nuclear and both partners working, having a small child, or an elderly parent or a relative recuperating from an illness, either short term or long term calls for a care giver. While the opportunity for employment for home care is tremendous, an unexplored area is the potential for these graduates to work as nursing assistants to help tide over the paucity of quality nursing care, a need both in India as well as the rest of the world. Therefore, the B.Voc degree, addresses this niche area of training for home care and nursing assistance.

Dental Hospital Assistance: Dental assistants are an important part of the dental health care team and increase the efficiency of the entire dental health care delivery system. In addition, training on counseling is seen as an invaluable adjunct tool in the education system, across the community. The education could be in a clinic, a primary health centre, secondary and tertiary care hospitals and schools. Assistance in a laboratory is a skill that is valuable both in a lab as well as hospital. It saves both time and effort involved in using lab support for simple lab procedures. The B.Voc training imparted above happens in a multidisciplinary environment, delivered effectively through an internship programme.

#### Post Graduate Certificate in Professional Practice- Dentistry

Aesthetic Dentistry and Smile Design: Keeping in line with the growing trend of personal aesthetics, dentistry too has fulfilled the need for a beautiful and healthy smile. As more and more people are focused on a beautiful smile, demand for dental services to enable this has also been set in motion. In response, the global dental devices market is slated to reach a whopping \$12.9 billion by 2016. Hence the need of the day is to train graduates and orient them to meet the esthetic trends of society.

Oral Implantology: Globally, edentulism compromises quality of life by reducing masticatory efficiency and thereby the nutrient value of food consumed. Treatment methodologies to treat edentulism have evolved over the years with near predictable results. A student of Oral implantology will be exposed to a wide variety of cases, due to, advanced training facilities including the Advanced Learning Centre and location and attachment to the 1400 bed hospitals. As rehabilitation of the missing tooth forms a major portion of private practice, effective training in current and advanced rehabilitative methods is essential.

User Oriented Post Graduate Courses: The University offers tailor made postgraduate courses in Engineering, Art & Design, Finance, Management and other Allied Areas to Industries and organisations interested in their employee development through education by the part time route. The duration of the course is 3 years and classes are conducted during weekends ie. on Saturdays and Sundays or on days convenient to the users. The users can opt for regular courses that are offered by RUAS or can opt for customised courses. The methodology adopted for teaching and learning and credit to be earned for the award of the degree is same as that of full time courses.

#### Non Credit Based Courses:

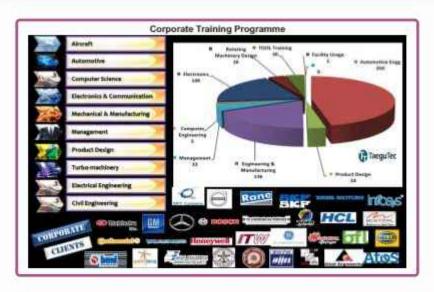
- 1.Corporate Training Programme: RUAS is well known for domain specific training program. The Corporate Training programs are customized to meet the needs of industry and academic institutions. We are very closely working with industry, research organization and also with academic institutions.
- 2.Advanced Certificate Programme: The courses under Advanced Certificate Program (ACP) are value addition courses with greater emphasis on student skill development on high-end industry standard software and hardware tools. This enables the student to uograde their academic knowledge to practical industry oriented applications.

Mechanical Courses:	Electronics Courses:		
Finite Element Analysis (FEA)	VLSI System Design		
Computational Fluid Dynamics (CFD)	Embedded System Design		
Innovative Product Development	Communication System		

3.Modular Training Programme: These courses are designed for the students / working professionals who would like to acquire skills in specific areas. Delegates can choose a single module or combination of modules at their convenient timing

Geometric modeling	Analysis	Manufacturing
CATIA	Hypermesh	CNC Milling
Unigraphics	Ansys	CNC Turning
ALIAS Studio	ICEM CFD	
	Fluent	

- 4. Fellowship Programmes: A collaborative modular training programme along with the International College of Oral Implantologists to train clinicians and graduates in preclinical and clinical implantology with exposure to advanced surgical procedures. Training will be conducted at the Advanced Learning Centre and clinical facilities of FDS, while assessment will be done by the ICOI.
- 5. Skill Training Programme: Ramaiah University of Applied Sciences, started the Skill Development and Manufacturing Centre to offers vocational courses and also for assisting in prototype development. The courses offered are CNC Turning, Milling and Finishing
- 6. Seminars / Workshops: Seminar / Workshop are offered from all faculties often and are based on challenges and new advancements in the particular field. Sessions will be handled by experts from Industry, Research Organization, in house and external Academic experts. These programs provide a forum for domain experts to share their knowledge and experiences with practicing engineers from industry and faculty and students from academia.
- 7. Proficiency Programme: Proficiency Program is offered during weekends on Science, Engineering and Management topics for the benefit of working professionals & students. Training department shares the identified modules and contents in advance with Industry & Academia. Interested individuals from these organizations can register for these modules.
- 8. Short Term Cookery Courses: These are day long to 5 day long courses offered to the interested in baking, salad making, low calorie cooking, bar tending and cocktail preparations, world cuisine and cooking for children.







### 11. Directorate of International Collaboration, Partnership Management and Public Relations

Delivering Academic Proficiency through Study Abroad Program

Studying Abroad is a sign of academic excellence in the field of education. It gives students the competence and combines various areas of interest. Study Abroad Program (SAP) assists the aspirants to internationalize themselves while earning academic credits. SAP allows the students to expand their horizon academically, culturally, and socially.

#### Why Study Abroad



RUAS-SAP are designed to create a potential future and success in a wide range of career opportunities globally. RUAS assist the students for their Study Abroad Program through its Tie-ups with Universities across globe. With this, students can acquire profound knowledge through adoption of diversified learning styles and reap a competitive edge in the job market.

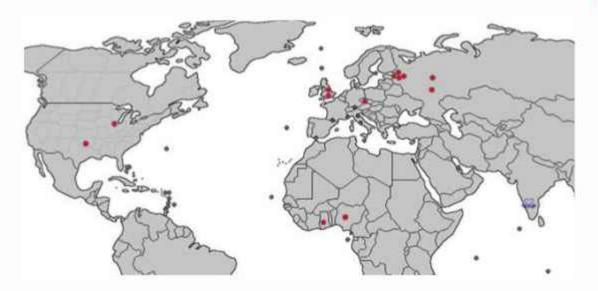
#### Directorate of International Collaborations, Partnership Management and Public Relations:

- Facilitate International exposure to its student community through summer or Winter School and Internships and Advise on Higher Studies.
- Facilitate Faculty and Doctoral Program Scholars to work with International Academic Community on Research
- Advise Indian students going abroad on International Scholarships for higher studies
- Develop Indian Students Associations of foreign Universities network
- Explore UG & PG courses on twining model options.
- · Facilitate industry interactions of the faculty members and students from the university

#### When would you be able to study abroad?

- For Undergraduate students during the end of the 6th semester (End of June for 4 weeks)
- For PG Students at the end of the first year (end of September for 4 weeks)

#### International MoUs.



#### International Collaborations

- · Coventry University, UK
- · University of Bedfordshire, United Kingdom
- · University of Illinois, Chicago
- Oklama State University, Still Waters, Oklahoma, US
- St. Petersburg State Academy of Art & Design, St. Petersburg, Russia
- St. Petersburg State University of Architecture & Civil Engineering, St. Petersburg, Russia
- · Samara State Aerospace University, Samara, Russia
- Kazan National Research Technical University, Kazan, Russia
- . St. Petersburg State University of Industrial Technologies and Design, Russia
- St. Petersburg State Polytechnic University, Russia
- · University of Pardubice, Czech Republic
- · Air force Institute of Technology, Nigeria
- · Ghana Technology University College, Ghana
- Institut Polytechnique des Sciences Avancees (IPSA), France
- UniEVANGELICA Centro Universitario, Brazil





#### 12. Directorate of Transferrable Skills & Leadership Development

This Directorate was created with the objective of integrating various annexes of MS Ramaiah University into a matrix that espouses the value and the vision of the university. True to its name, the Directorate works toward imparting transferable skills and developing leaders among the mainstays of the University which are Academics, Training and Lifelong Learning, Research, and Techno Centre. Certain initiatives worth a mention are:

- Complete shift in class-room teaching style, from being a teacher centric to participant centric style
   Workshops for better effectiveness of internal stake-holders, both administrative and academic staff
- · Training and development using theatre as a tool

Still in its infancy, the Directorate aspires to reach to the millions outside the boundary of the University as well. It has already started working towards making a global program in the form of "Study India", "Global Citizen", programmes on "Women Entrepreneurship", "Women Leadership", "Social Leadership" and many more. A visionary in its own right, the Directorate of Transferable Skills and Leadership Development is the department that celebrates versatility, creativity and above all, originality.

#### **Transferable Skills and Leadership Development**

#### Courses for UG/PG

Communication, Creative Writing, Sociology, Law, Human Rights, Foreign Languages, Society, Culture, Human Behaviour, Yoga and Spirituality, Theatre, Classical and

Student and Staff Development Programmes

- Faculty Development Programme
- Training students on Corporate Skills
- Managerial and Leadership

#### Student Clubs

Student Clubs for Debate,
 Quiz, Drama, Music,

#### Competitive Examinations

 Preparing Students for National Level Competitive

Study India Programmes

#### Study India Programmes

#### Courses offered under "Study India":

- · Indian Culture and Heritage
- Temples and Architecture
- · Living in Indian Villages
- Yoga and Ayurveda
- . South Indian Dance Forms
- Carnatic and Hindustani Music

#### "Study India", helps understand and appreciate:

- . Ancient Indian Science of Medicine
- · Indian Culture and Heritage
- Indian Temples, Sculpture, Architecture and Religious practices
- · Indian Democratic System
- . Indian Art forms in Music and Dance
- . Demographic Dividend of India

For programme fees and other details contact:

The Director

Directorate of Transferable Skills and Leadership Development Ramaiah University of Applied Sciences Bengaluru - 560054 Knowledge and skills during "Study India" will be imparted through:

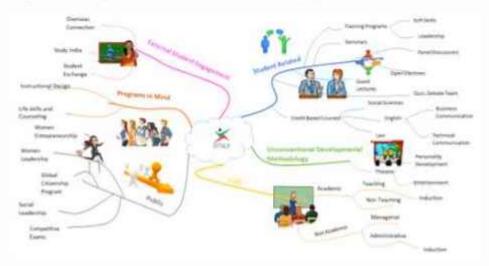
- Instructor-led training sessions
- Experiential workshops
- Experience sharing by eminent personalities from relevant domains
- Visits to places of relevant significance
- · Exposure to the intricacies of life in contemporary India
- Course notes

#### "Study India" offers:

- Hands on experience in sculpture, clay modeling, and musical instruments
- · Stay in villages, Experience local games and sport forms
- Visit to world heritage sites, temples, museums and botanical gardens
- Workshop on Ayurvedic medicines and treatment
- · Practice of yoga postures, pranayama and meditation
- Exposure to classical dance forms and classical music forms
- Interaction with luminaries in judiciary, legislature, bureaucracy, music, dance and spirituality

The program fee excludes expenses towards travel to and from India, Visa, any leisure trips outside of the curriculum, shopping expenses, individual food preferences and any other exigencies.

DTSLD was created with the objective of integrating various annexes of RUAS, into a matrix that espouses the value and vision of the University. True its name, the Directorate works towards imparting transferable skills and developing leaders among the mainstays of the University which are Academics, Training and Lifelong Learning, Research, and Techno Centre. This is achieved through credit based programs to UG / PG students, training / workshop programs for teaching and non-teaching staff, seminars, guest lectures, panel discussions and theatre based programs.



#### Certain initiatives of DTSLD, worth a mention are:

- Shift in class-room teaching style, from being a teacher-centric to participant-centric style
- Workshops for enhanced effectiveness of internal stake-holders, both administrative and academic staff
- Training and development using Theatre as a tool
- Introduction of Session Effectiveness Tracker

Courses for UG / PG

- Following Agile Methodology in the development and delivery of all programs
- The Directorate has started working towards making Global Programs in the form of "Study India", "Global Citizen", "Women Entrepreneurship", "Women Leadership", "Social Leadership" and "Political Leadership"

A visionary in its own right, DTSLD is the department that celebrates versatility, creativity and above all, originality.

Student and Staff Development | Student Clubs

#### **Programs** Technical Communication, Business Faculty Development Student clubs for Quiz, Theatre and Communication, Professional English, Job Skills Debate Sociology, Law, Human Rights, Managerial and Leadership Competitive Exams Foreign Languages, Creative Writing, Skills Yoga and Spirituality, Indian Classical Preparing students for National Level and Popular Music, Theatre, Society, Competitive exams and Civil Service Culture and Human Behavior Exams Study India Program 4 week residential program connected with Indian Culture, Society and Heritage Experiential trips and instructor led training workshops

#### 13. Directorate of Quality, Education Processes and Educational Technologies (QEPET)

The Directorate of Quality, Education Processes and Education Technologies is mandated to implement and monitor academic quality control processes that include development and review of curriculum from Board of Studies; approval of curriculum by the Academic Council; review and approval of course/module notes; review and approval of term, assignment and examination question papers; monitoring of student attendance; collection and analysis of student feedback, staff feedback, feedback from technical and administrative staff; and training of members of faculty and members of staff on academic processes.

The courses/modules are delivered using various educational technologies, the directorate studies the various modern educational technologies that are essential to be implemented in the University to enhance the learning experience of the students and recommend for implementation.

#### The objectives of the Directorate are

- 1. Implement and monitor Academic Quality Control Processes among the faculties
- Study progressive educational processes being practiced elsewhere and recommend effective teaching and learning practices for adoption by the University
- Study the trend of educational technologies for effective teaching and learning and recommend the adoption of such technologies by the University

The Directorate of Quality, Educational Processes and Educational Technologies at RUAS is committed to closely monitor the quality of educational processes of the University and implement modern educational technologies to achieve international quality in curriculum development, delivery and assessment to produce globally competitive graduates.

#### Major activities of the QEPET:

- 1. Organize Review of Teaching Material, Assignments and Question Papers
- Collect Student Feedback forms from Examination and Assessment section, Analyze Student Feedbacks and create consolidated report
- Collect Faculty Feedback forms from Examination and Assessment section, Analyze Faculty Feedback and create consolidated report
- 4. The consolidated feedback forms of student feedback and faculty feedback is required to be submitted to the Dean of the respective Faculties to initiate corrective actions
- Present the consolidated reports during Staff-Student Consultative Committee meetings, SAB, PAB and Academic Staff Performance Appraisal Committee meeting
- Collect Student Exit Feedback forms from Examination and Assessment section, prepare consolidated report and present the same during the meetings of University Performance Review Committee and Academic Programme Planning and Review Committee
- 7. Chief-Quality Control (Academics) to act as the Chair of Programme Quality Assessment Committee
- Report the findings of Programme Quality Assessment Committee to the University Performance Review Committee on annual basis





## 14. Teaching and Learning Resources

RUAS has created state-of-the art teaching and learning resources for effective delivery and active learning by the students.





































































#### Software Available

#### Mechanical, Automotive, Aeronautical and Civil Engineering

CATIA

UGNX

AUTODESK COMPLETE SUITE

**TEAM CENTRE** 

ALTAIR HYPERWORKS

ANSYS

ABACUS

FE-SAFE

MSC ADAMS

RICARDO WAVE AND VECTIS

LS-DYNA

MATLAB

AME SIM

DFMA

**ERP NAVIGATOR** 

PREACTOR 10

SIMIO SERVER

CAPSMILL, CAPSTRUN

ARENA

SOLID CAST

CES

STADDPRO

On board diagnostics (OBD) Tester

#### **Electronic, Electrical and Computer Science**

MATLAB

DS-5

KEIL

ADVANCED SYSTEM DESIGN 2011.1

EM PRO

SYSTEM VIEW

XILINX ISE VIVADO

EMPIRE 3D

CADENCE

RVDS

DE-2 QUARTUS MP LAB IDE

NI MULTISIM

NI LABVIEW ANSYS Maxwell ANSYS Simplorer

#### **Artand Design**

Autodesk Sketchbook Pro 2014

Autodesk Sketchbook Designer 2014

Autodesk AutoCAD2014

Autodesk Alias Automotive 2014

Autodesk Maya 2014

Autodesk 3DS Max 2014

Autodesk Showcase Professional 2014

Autodesk Mould flow Insight Advanced 2014

Autodesk 360

Corel Draw Suite V18

Corel Painter

Pinnacle Studio 19

#### Management and Commerce

Microsoft Project 2013

**ERP Navigator** 

SPSS

Tally 99

#### Science and Humanities

MATLAB

#### **Dental Sciences**

Dolphin Imaging Premium

VISTA SCAN & PRACTO

CBCT

3-MATIC

#### Pharmacy

Turbo C

IR Solutions software

Euro Chrome software

PCP Disso v2 - Drug release Kinetic studies

software

Graph Pad Prism - ver. 4.0 software

CAMAG - HPTLC SYSTEM - SWITZERLAND (Thin

layer Chromatography - WINCAT'S software)

#### MICRO IMAGELITE-OLUMPUS

BIOVIS – Image Capture Software (Particle size analyzer - Professional software to control complicated experiments, quantify the data, and visualize the results)

NIVIQUE DAS SYSTEM (ECG, BP, TISSUE CONTRACTION—INCREASED USE OF DRUG)

ExPharma—Animal Simulation Software
MICROMEDEX—DRUG INFORMATION SOFTWARE
(Micromedex Solutions provide a single source of clinical information — from need-to-know drug,

pediatric, disease, lab, and toxicology)
TOPCAT - Drug Design - Auxiliary software

#### Hospitality Management and Catering Technology

Fortune NEXT 6i Professional Orell language software

#### **General Software**

eScan Antivirus Microsoft Office 2013 (full package) LibSoft Ver. 9.0.0 Front Page University Management System (Custom Built)
Tally 9 multi user accounting package
Saral Pay Pack Advanced Multi User
Acc Pac (Accounts Software)
Bar Coding Software

#### PACE-Grant

Autodesk Sketchbook Pro 2014
Autodesk Sketchbook Designer 2014
Autodesk AutoCAD2014
Autodesk Alias Automotive 2014
Autodesk Maya 2014
Autodesk 3DS Max 2014
Autodesk Showcase Professional 2014
Autodesk Moldflow Insight Advanced 2014
Autodesk 360
LSTC LS Dyna
Ansys
Mentor Graphics
Altair-Hyperwork









#### 16. Staff Resources

RUAS has classified its staff members into:

- 1. Officers of the University
- Members of Faculty Teaching and Research Staff
- 3. Project Staff Working on Research & Consultancy projects
- 4. Training Staff- Staff involved in training work
- Technical Support Staff- Staff working in the laboratories/workshops/studios/clinics/ICT/Library/Garden
- 6. Administrative Staff-Involved in Administrative work
- Office Support Staff (Office Assistants and Drivers)
- Security and Housekeeping

The Teaching and Research faculty members have qualification as per UGC norms, experienced, technology savvy and student loving. Many of these members of faculty act as Proctors at Undergraduate level, Project supervisors and Research supervisors at Postgraduate and Ph.D. levels and take responsibility for shaping up the careers of the students. RUAS maintains a staff student ratio of 1:15 at Undergraduate level and 1:9 at the Postgraduate level. The professors publish research articles in reputed journals, present research findings in reputed conferences and symposia and periodically attend staff development programs to keep themselves updated and undertake sponsored research, consultancy and training work with reputed industries and business organisations to keep themselves relevant to the present day requirements of society.



Staff interacting with the Members from PACE (Partners for the Advancement of Collaborative Engineering Education)



Staff Interacting with members of University of Paradubice, Czech Republic



Staff representing student work to the members of University of AVEIRO



Staff interacting with Russian Delegates from Kazan National Research Technical University (KNRTU-KAI)



Staff Interacting with Rector and Members – Ghent University, Belgium



Staff interacting with Russian Delegates from St. Petersburg State University of Architecture and Civil Engineering, Russia



Staff interacting with France Delegates from Ecole des Ponts ParisTech



Members of Faculty involved in Subject Assessment Board Meeting



Staff Participating in Training of Board of Studies Members



Members of Faculty participating in Staff Development Programme

#### 17. Student Life at RUAS

#### Accommodation

The University has created Hostels on its campuses. More than 20% of its students are accommodated in the campus hostels. The students can opt for twin bed or single bed accommodations. Since there are limited numbers of accommodations outstation students like to stay in the campus hostels are required to contact student welfare office for accommodation at the time of initiating their admissions. However, those students do not get campus accommodation will be facilitated by the student welfare office to get accommodation in the surrounding areas of the campus.





#### Mess and Cafeteria

Students who would like to avail mess facilities available in the hostels. The mess serves both vegetarian and non-vegetarian food in the south Indian style. However, there are number of cafeteria on the campuses and in the surrounding area which serve food, snacks and beverages to everyone's taste.









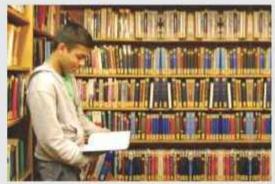




#### Leisure

Novels, Story books, Magazines, News Papers are available in the student reading rooms. Internet, Music System and TV facilities are available in the student lounges. Interested students can spend their leisure times in various hobby clubs and dance and music halls.





#### **Sports and Games**

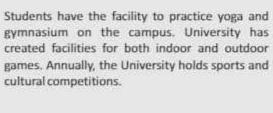








cultural competitions.







#### **Competitions and Exhibitions**









Students are encouraged to take part in various technical competitions at the University and Inter University levels.

#### Internships and Placements

The placement office of the student affairs directorate is committed to assist the students to get internships during the course and placements after the completion of the course.





#### Excursions





The student affairs directorate conducts tours and excursions periodically. Students interested can take part in trekking, excursions and tours.

#### Health Care

Students can avail health care facility with M.S. Ramaiah Teaching Hospital. Every student taking admission with the University is required to be a member of health care scheme of the University created for the purpose of student health care.



#### Social Service and Social Responsiveness Programme

Every student of the University is required to spend 3 full days every year on social service programmes organised by the University.



#### What our Alumni and Visitors Say?

It was a great experience to pursue the course at MSRSAS. The course content as well as the different approach of evaluation made the course challenging. Unlike traditional method of examinations which are only theory based and does not really test the practical knowledge, the assignments for the modules were really challenging and really test the understanding of the concepts.

The entire course has laid in me a strong foundation of concepts in various areas of computers and has stimulated my way of approaching a problem and finding the solution to it. The course has also enhanced my discipline and conviction to learn after a long 7 year gap. I am very satisfied with he entire course and I thank MSRSAS and Coventry for giving me this opportunity to learn and strengthen my knowledge.

#### Anupama Anand (CSN PT2010)

My Master's program from MSRSAS has broadened my knowledge and opened the horizon in engineering and management to guide and lead an organization with confidence and zeal. I have attached my contribution to Volvo Buses India from my learning's taken from MS Ramaiah School of Advanced Studies. The uniqueness about my project which I have taken has given a reduction of 54% in process time reduction which is unique by any industrial standard in manufacturing. In other words productivity improvement can go up to a maximum of 100% since the production can be doubled. Generally productivity improvements are between 10% to 15%.

## Cyril G. Xavier (EMM PT 2010), Chief Operating Officer, Spheros Motherson Thermal Systems Limited, Noida, India

To complete a three year degree, while working full time is no easy feat. There will be deadlines, to meet at work, and after a very taxing working week, studying during the weekend, is a tough choice. However, while I started my Masters in Computer Science and Networking at MSRSAS, I found the topics interesting.

## Working on the assignments and the final year project, was intellectually challenging, and it changed my outlook towards studying.

The facilities provided by MSRAS were always top notch. Studying and attending lectures were a pleasure due to the ambience in the study rooms. The course structure, contents and subjects which are part of Computer Science and Networking where well etched to my needs and my current working experience. Attending this course has immensely helped me better my day to day work.

Labs and testing are the make or break part of any curriculum. The supportive lab faculties and state of the art labs made studying more pleasurable, as there is no better way to learn than to get hands-on experience. For a part time student like me, MSRSAS was a great opportunity to complete my dream of getting a Master's Degree. Thank You MSRSAS!

#### Mumshad Muhammed (CSN PT10), EMC2

Very good initiative by MSRSAS and a good form of industry & academic interaction. Event was really good. Would like to attend such events or sessions in near future. Seminar organized in professional manner.

#### Participant, attending "Unsteady Phenomena in Turbomachinery and Combustion System"

We are very happy with the course content covered and detailed explanation provided. Thank you.

Project Engineer, MAN Diesel and Turbo India Ltd. attending "I C Engines"

#### Excellent!!!

"A truly well planned facility that will help Surgeons train in a proper scientific manner!! Congrats & Best Wishes to Dr Sundaresh and his dedicated team"

#### Dr Anant Joshi, Renowned Arthroscopic Surgeon, Mumbai, India

#### A fantastic experience!!!

Tribute to the vision of the man who thought of this facility

Padmashree Dr Yash Gulati, Director & HOD in Orthopaedics, Joint Reconstruction & Spine Surgery BLK Super Specialty Hospital, New Delhi

"I had a great time at MSRCHM. I still love keeping in touch with the College. A few years back Facility Management Career was quite unconventional, yet today I find many hotel management graduates having a lucrative career in this field. As Vice President of my company, I owe a great deal of my success to my alma mater and have provided employment to many from my college."

#### MANJIT SINGH, (BATCH: 1996-99), VICE PRESIDENT, JONES LANG LASALLE MEGHRAJ

A visit full of imaginative training and educational methods for practical engineers. I am impressed with the range and depth of studies undertaken. The model used for training must have greater applicability throughout engineering training.

#### Prof. William Wakeham, Vice Chancellor, University of Southampton, UK

To solve the worlds environmental and development problems, we need innovators and designers that your institution is training. Keep up the good work.

#### Dr. Kanedh Yumkella, Director General, UNIDO, Vienna

In a short span, an excellent institution for training and R & D in several technology areas has been started. It has excellent potential for further growth.

#### Dr. R. Chidambaram, Principal Scientific Advisor to Govt. of India

#### Admission to the University

#### Selection of Programme and Course

Students are advised to choose the programme and the course after carefully reading this prospectus and making enquires with the concerned faculties.

#### **Eligibility Criteria**

The eligibility criterion for each of the programme is given in programme regulations available on the University website.

#### Selection of students

Students are selected based on admission policy specified by the University.

#### Course Fees

The course fee to be paid will be notified on the University website at the time of calling for admission.

#### Admission Period

Students can contact Director Admissions from the month of January of the year. The admissions will be closed by the end of July every year.

#### Academic Year

The academic year starts from the second week of August every year.

#### Admission to Foreign Students

Foreign students are required to have the minimum qualification as specified by the Faculty and also should have proof of having proficiency in English language. The foreign students are required to pay the fee in USD.

For Admissions please contact:

#### **Director Admissions**

University House, Gnanagangothri Campus, New BEL Road, M S R Nagar, Bangalore-560 054. Karnataka, INDIA.

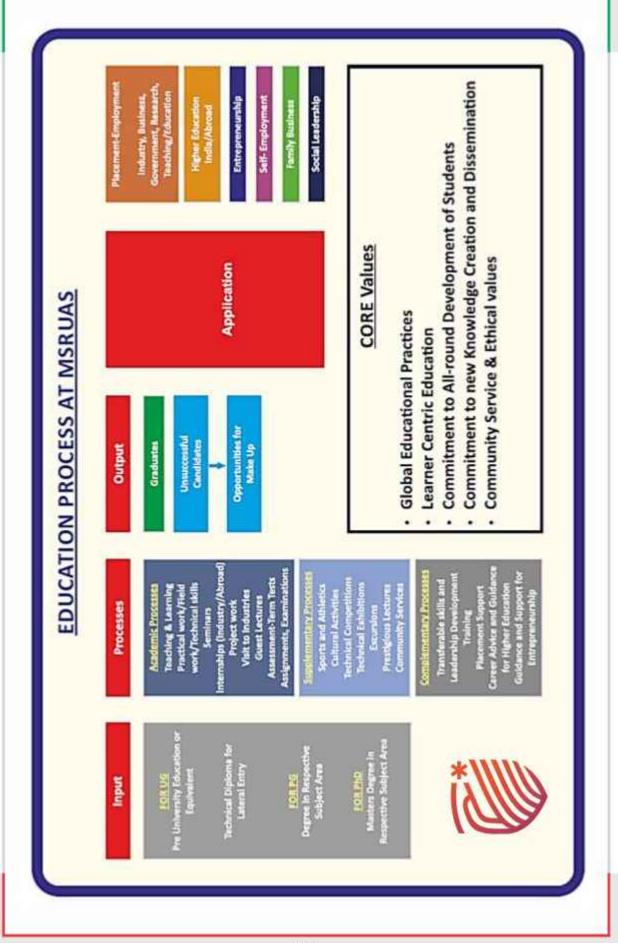
Ph: 91-80-4536 6666 | Fax: 91-80-4536 6677

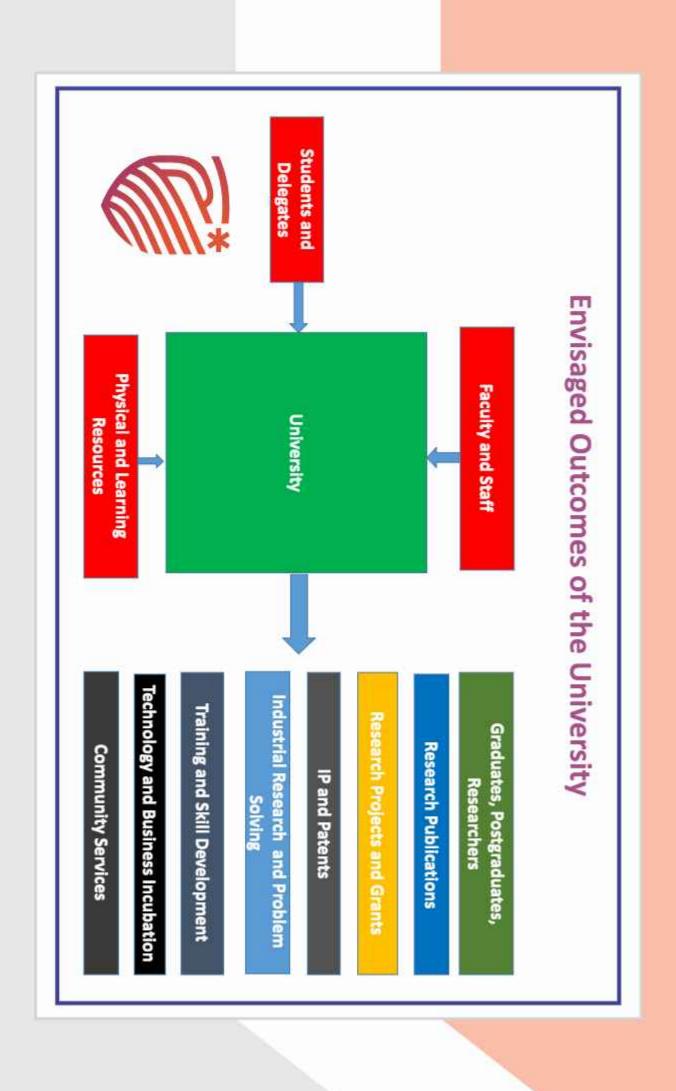
E-mail: director.admissions@msruas.ac.in / Website: www.msruas.ac.in

#### Annexure-1

## **Open Electives for Undergraduate Programmes**

		Courses - Semester 7		Courses - Semester 8	
Faculty	Department	Course Code	Course Title	Course Code	Course Title
	DAAE	OET401	Automotive Technology	OET451	Introduction to Aircraft Systems
i	DCE	O£T402	Building and Interior Planning	OET452	Sanitation and Waste Management
	DCSE	OET403	Development of Mobile Apps	OET453	Data Management and Analysis
FET	DECE	OET404	Fundamentals of Telecommunication	OET454	Electronic Devices and Appliances
	DEEE	OET405	Renewable Energy Systems	OET455	Electrical Devices and Appliances
	DMME	OET406	Computer Aided Design	OET456	Energy, Ecology and Environment
		OAD401	Textiles and Fashion Design	OAD451	Physical Model Making
		OAD402	Sketching and Painting	OAD452	Interior Design
FAD I	DID			OAD453	Art , Culture and Short Film Making
Ħ	DMS	OMC401	Contemporary Management Practices	OMC451	Personal Finance
FMC	DCOM	OMC402	Innovation and Entrepreneurship	0MC452	Digital Marketing and e -Commerce
	Physics	OSH401	Physics in Everyday Life	7 3	
	Chemistry	OSH402	Chemistry of Batteries and Fuel Cells	OSH452	Beauty of Chemistry
FSH	Mathematics	OSH403	Mathematical Reasoning		
FDS	FDS	ODS401	Promotive Oral Health Care	ODS451	Dental Equipment and Technology (Dental Engineering)
FPH	FPH.	OPH401	Herbal Drugs	OPH451	OTC(Over the Counter) Medicines
FHMCT	FHMCT	OHM401	Hospitality at Home	OHM451	Art and Science of Cooking
DTSLD		OTL401	German Language	OTL451	Applied Popular Music
		OTL402	Yoga and Spirituality	OTL452	Fundamentals of Political Science
	DTSLD	OTL403	Theatre for all	OTL453	Society, Culture and Human Behavior
		OTL404	Creative Writing	OTL454	French Language







www.msruas.ac.in

## **Ramaiah University of Applied Sciences**

University House, Gnanagangothri Campus, New BEL Road, MSR Nagar, Bengaluru - 560 054. KARNATAKA, INDIA

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Email: uas@msruas.ac.in