

# Research Handbook

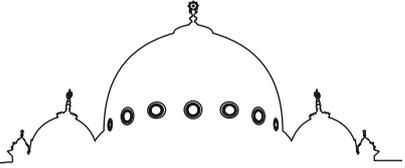
of

The Maharaja  
Sayajirao

University of Baroda



October 2020



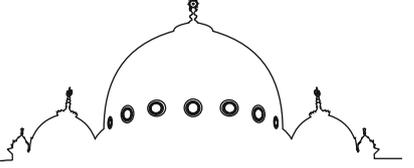
## Vision

The progress of a nation requires that its people should be educated. Knowledge is a necessity of man. It instils in him a desire to question and to investigate, which leads him on the path of progress. Education, in the broadest sense, must be spread everywhere. Progress can only be achieved by the spread of education. Cooperation is necessary to achieve any worthy end and this readiness to cooperate will not be found in people if they are not educated.

**H.H. Maharaja Sayajirao Gaekwad III**

## Mission

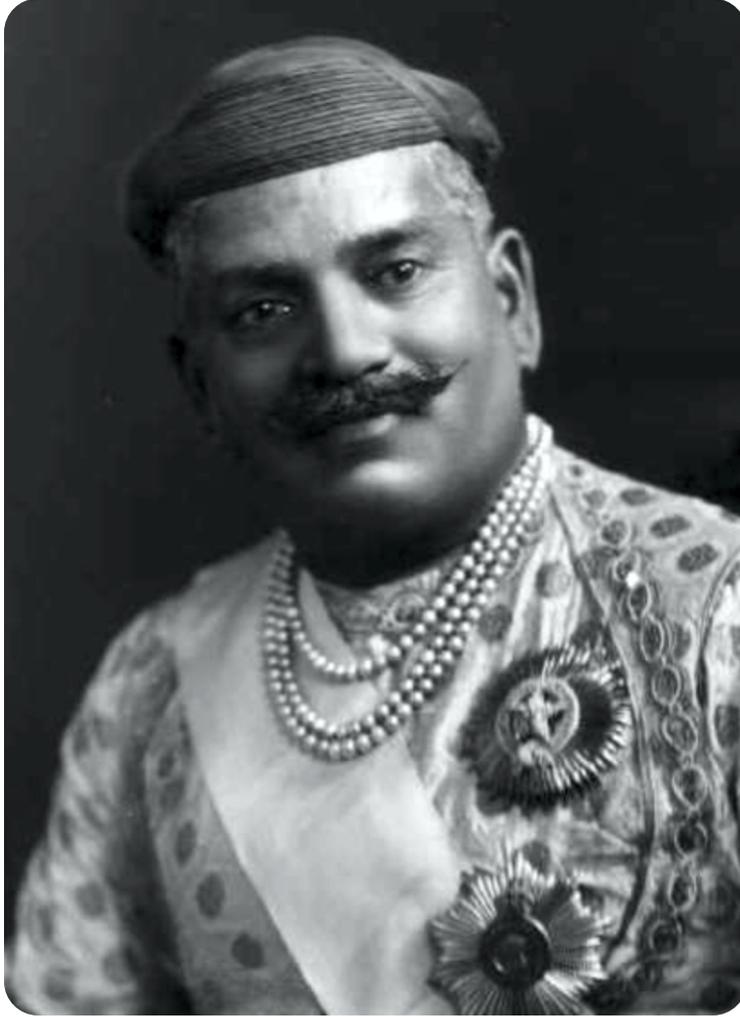
- ⇒ Promoting and enhancing high standards of teaching, learning and research for an all-round development of students.
- ⇒ Providing a learning environment that nurtures critical reflections, exchange of ideas and innovation among students to help them realize their optimum potential.
- ⇒ Increasing access to education by all sections of the society.
- ⇒ Relating knowledge to the contemporary socio-economic needs and moral concerns.
- ⇒ Building mutually enriching linkages with the society and its institutions.



क्रियाशक्त्या विना कापि ज्ञानशक्तिर्न दृश्यते ।  
तेनेवं ज्ञानशक्त्यर्थं कृतं वेश्म क्रियामयम् ॥

There is nowhere seen the power of knowledge without having the power of action; therefore, for the attainment of power of knowledge, this action prone 'home' (in form of human body) is fashioned.

(No. 11763, *Mahasubhasitasangraha*, Vol VII, Ludwik Sternbach, VVRI, Hoshiarpur, 1999, pp. 3309-3310)



**His Highness Shrimant Maharaja Sayajirao Gaekwad III**

I do not mean education merely in the sense of book-learning. There are other ways which you well understand and upon which I need not enlarge. Education is one part of the temple of knowledge and it should be available for all without restriction of cast and creed. When this has been done intelligently, we may then be able to ascertain the extent of human progress.

(Speeches & Addresses of His Highness Sayajirao Gaekwad III,  
Vol IV 1934-1938, Pub. in 1938 from Cambridge, page 773)



### MAHARAJA PRATAPSIHRAO GAEKWAD

First Chancellor, visionary ruler of the Baroda state and grandson of Maharaja Sayajirao Gaekwad III, instrumental in the establishment of MSU in 1949, founder of Baroda Cricket Association, expert horse-rider and accomplished polo player.

Tenure: 1949 - 1951



### MAHARAJA FATEHSINHRAO GAEKWAD

Second Chancellor, son of Maharaja Pratapsinhrao Gaekwad, an astute administrator, ardent sports lover and cricketer, Member of Parliament, Minister in the Government of Gujarat, Cricketer, elected twice as the president of BCCI.

Tenure: 1951 - 1988



### DR. MRUNALINIDEVI PUAR

Third Chancellor, eminent scholar in the discipline of Foods and Nutrition, Chairperson of the Foods and Nutrition programme committee of the International Federation of Home Economics (France), Member of the Advisory Committee of Rajiv Gandhi Institute of Contemporary Studies, Member of the Commission on Education and Training, IUCNNR, Switzerland, author of several books and articles.

Tenure: 1988 - 2014



### RAJMATA SHUBHANGINIRAJE GAEKWAD

Present Chancellor, graduated from Lucknow University in 1964, with Honours in History, English Literature and Economics, holds several eminent positions in Social Welfare, Healthcare, Commerce and Environment Protection organizations, President and Chairperson of greenery promotion committee of Society for Clean Environment (SOCLEEN), Member of the World Wide Fund for Nature-India and Senator of The Maharaja Sayajirao University of Baroda since 2012.

Tenure: 2015 onwards

01



Dr. Smt. Hansa Mehta  
30-04-1949 to 29-04-1958

02



Dr. Jyotindra Mehta  
30-04-1958 to 29-04-1964

03



Dr. C S Patel  
30-04-1964 to 29-04-1970

04



Shri. N K Vakil  
21-05-1970 to 30-05-1974

05



Prof. P J Madan  
01-01-1975 to 31-12-1980

06



Lord Dr. B C Parekh  
07-12-1981 to 23-11-1984

07



Dr. M N Desai  
17-04-1985 to 22-09-1987

08



Prof. R C Patel  
27-04-1988 to 14-03-1990

09



Prof. V C Shah  
04-09-1990 to 03-09-1993

10



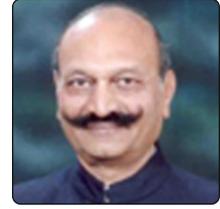
Dr. Suresh P Dalal  
13-09-1993 to 24-07-1994

11



Ms. Padma Ramchandran  
07-09-1995 to 07-09-1998

12



Dr. Anil S Kane  
07-09-1998 to 07-09-2001

13



Prof. K C Upadhyay  
18-04-2002 to 17-04-2005

14



Dr. Manoj Soni  
18-04-2005 to 17-04-2008

15



Prof. Ramesh Goyal  
22-05-2008 to 21-05-2011

16

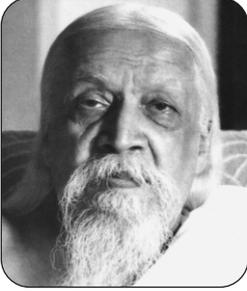


Prof. Yogesh Singh  
07-07-2011 to 29-12-2014

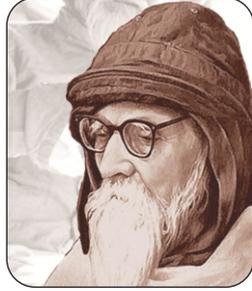
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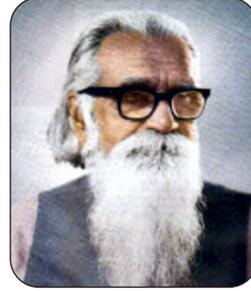
Prof. Parimal Vyas  
11-02-2016 onwards



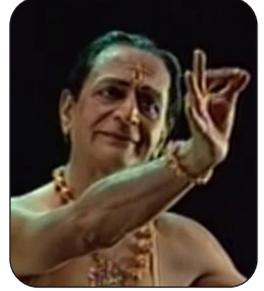
**Shri. Aurobindo**  
Principal, Baroda College



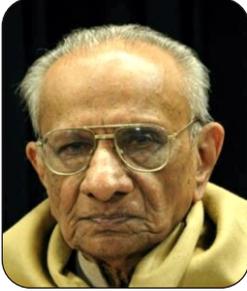
**Acharya Vinoba Bhave**  
Bharat Ratna



**Shri Kakasaheb Kalelkar**  
Padma Vibhushan



**Prof. C V Chandrashekar**  
Padma Bhushan



**Prof. R C Mehta**  
Padma Bhushan



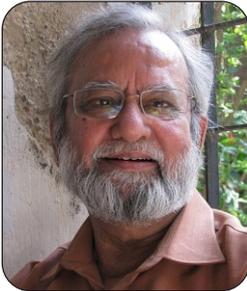
**Dr. Vijay Bhatkar**  
Padma Shri



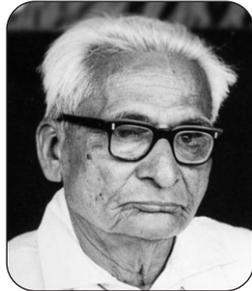
**Dr. I G Patel**  
Padma Vibhushan  
Former Governor, RBI



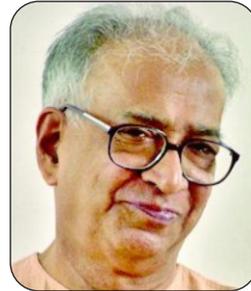
**Dr. Venkatraman  
Ramakrishnan**  
Nobel Laureate



**Gulam Mohd Sheikh**  
Padma Bhushan



**Prof. C C Mehta**  
Padma Shri



**Prof. K G Subramanyan**  
Padma Vibhushan



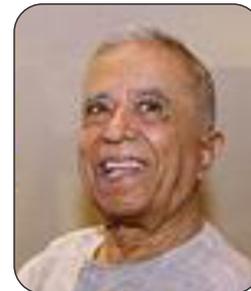
**Prof. Sankho Chaudhari**  
Padma Shri



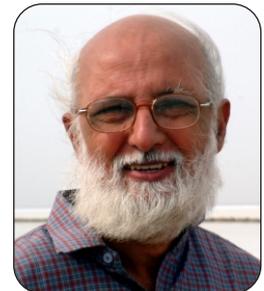
**Shri Bhupen Khakkar**  
Padma Shri



**Shri Pankaj Advani**  
Film Maker



**Shri Haku Shah**  
Padma Shri



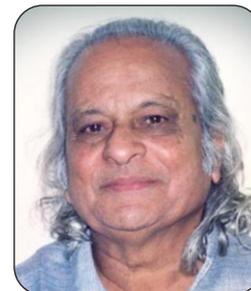
**Prof. Sitanshu Mehta**  
Padma Shri



**Smt. Hansa Mehta**  
Padma Bhushan



**Dr. Guntant Shah**  
Padma Shri



**Shri Srinivas Khale**  
Padma Bhushan



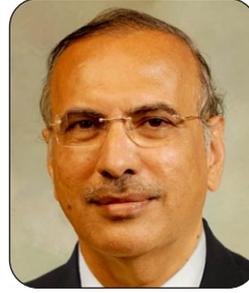
**Dr. Ajay Bhatt**  
Co-inventor of USB



**Shri Shanti Dave**  
Padma Shri



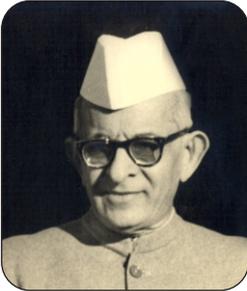
**Prof. Pramod Kale**  
Padma Shri &  
Aaryabhata Awardee



**Justice Mohit Sheth**  
Former Chief Justice  
Bombay High Court



**Shri Vishal Sikka**  
Former MD & CEO  
Infosys



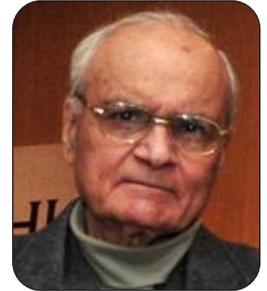
**Shri Kanaiyalal Munshi**  
Founder, Bhartiya  
Vidya Bhavan



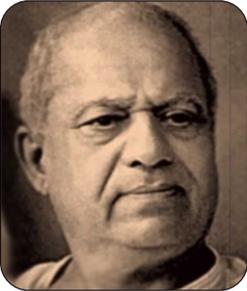
**Justice Mohit Shah**  
Former Chief Justice  
Bombay High Court



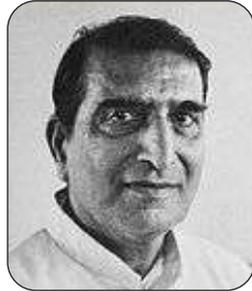
**A K Raychaudhari**  
Shanti Swaroop  
Bhatnagar Awardee



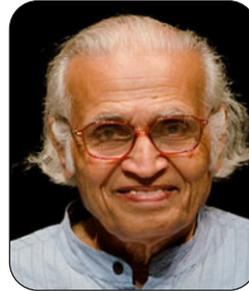
**Shri Chinmaya Gharekhan**  
Former Ambassador &  
US General of UN



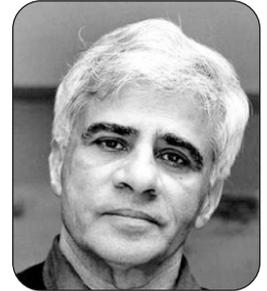
**Shri Dadasaheb Phalke**  
Father of Indian Cinema



**Shri Rajendra Shah**  
Gyanpith Awardee



**Dr. Sunil Kothari**  
Padma Shri



**Shri Vivan Sundaram**  
Padma Bhushan



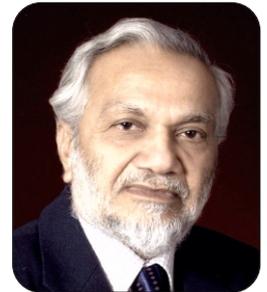
**Dr. K V Subba Rao**  
Bhatnagar Awardee



**Prof. Ganesh N Devy**  
Padma Shri



**Shri Kamlesh N Vyas**  
Chairman, AEC



**Lord Bhikhu Parekh**  
Padma Bhushan



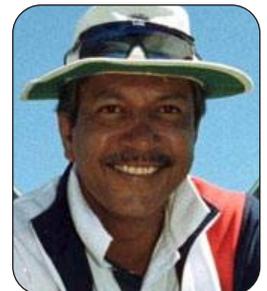
**Prof. S S Mantha**  
Former Chairman, AICTE



**Shri Sudhir Parab**  
Arjun Awardee



**Shri Kiran More**  
Arjun Awardee



**Shri Anshuman Gaekwad**  
Cricketer

## MSUB Research Handbook

### Index

I	About the Maharaja Sayajirao University of Baroda	01-11
II	Research Profile of MSUB	12-32
III	Departments of MSUB Offering Ph.D. Programmes	33-35
IV	Research Supervisors/Guides Available for supervising Ph.D.	36-42
V	Rules and Regulations for Ph.D. Programmes	43-66
VI	Research Policy of MSUB	67-74
VII	Roles and Responsibilities of Research Students and Research Supervisor(s)/Guide(s)	75-81
VIII	Academic Integrity and Prevention of Plagiarism Policy	82-89
IX	The MSU Research Grievance Committee for Students (RGCS)	90-91
X	MSUB Online portals for reporting of Research Activities	92
XI	Managing Research Projects in the University	93-101
XII	Research and Consultancy Cell – Consultancy Policy	102-119
XIII	Incentivization of Research at MSUB	120-123
XIV	Libraries in MSUB	124-126
	Appendices	127-129

## **I. About the Maharaja Sayajirao University of Baroda**

“The education of the masses is certainly very important, but my profound conviction is that the higher education, though necessarily of a small number is still more important in the present condition and circumstances of India.”

- His Highness Maharaja Sayajirao Gaekwad III

The Maharaja Sayajirao University of Baroda (MSUB) is recognized as one of the premier institutions of higher learning and research in the country. Since its inception in 1949, the University has demonstrated a keen interest and a commitment to the sustenance and promotion of an environment, favourable to the growth and development of academic excellence – a commitment that forms a part of the rich legacy of the institution.

Educational institutions which preceded the Maharaja Sayajirao University of Baroda and which went on to forming a part of its foundational legacy, included the “Baroda College”, one of the oldest centers of learning in Western India, founded in the year 1881 by His Highness Maharaja Sayajirao Gaekwad III. The enlightened ruler in the year 1909 established the “Kalabhavan”. His Highness Maharaja Pratapsinhrao Gaekwad pursued the idea of establishing a University and on the recommendation of the committee, the Government of Baroda, in its order No. (R) 169-39 dated 21st February 1949 set up the University.

The Maharaja Sayajirao University of Baroda, a State University with English as its medium of instruction is a premier unitary residential University, established on 30th April, 1949 recognized by Government of India under the Indian Universities Act, 1958 and is accredited by National Assessment and Accreditation Council with 'A' Grade with CGPA of 3.16 in the year 2016. It has one main and 6 satellite campuses, spread over 275 acres of land.

The University comprises of 98 Departments under the umbrella of 14 Faculties, 3 Constituent Colleges, 10 Institutes 18 Centers of Specialized Studies and 13 Cells, Directorates & Offices, wherein more than 44,000 students pursue higher studies under the care and supervision of more than 1450 highly qualified and experienced teaching staff.

The University has 16 Hostels, Health Centre, Sports Union Pavilion, Convocation Ground, Printing Press and Stationery Unit, Guest House as well as other academic and administrative units spread across the campus. Besides these, there are 9 Multipurpose Auditoriums, 8 well Equipped Seminar Halls, 2 Open Air Theatres, an Amphitheatre, a Play Box, an Art Gallery, an Arboretum, a Botanical Garden, several lecture theatres and Conference Rooms and an Archaeological Museum having collection of Harappan Unicorn Seals, Holy relics of Lord Buddha, Toraman, terracotta Buddha images etc. The University has an observatory for Astronomy set up in the year 1939 to promote the field of Science, which holds an 8-inch refractor telescope.

The University offers a wide range of academic programmes from early childhood to Under-Graduate and Post-Graduate levels Degrees and Diplomas as well as Ph.D., with Choice Based Credit System (CBCS) for UG & PG students enabling them to select value added subjects of their interest, other than Grants-in-Aid academic programmes. The University also offers innovative Science and Technology programmes through some cutting edge research centers like Centre for Biotechnology, Prof. Bharat Chattoo Genome Research Centre, Centre for

Molecular Genetics, Cluster Innovation Centre, Centre for Excellence in Polymer, Siemens Centre of Excellence for industry automation.

The University interacts extensively with the Industry and the civil society in the curriculum development and updation process. The University has signed MOU's with International Universities/Institutes like University of Cambridge, University of Laval, University of Stuttgart, University of Cornell, Ithaca, University of South Carolina, Keio University etc. for the exchange of students and teachers which adds to the enrichment of curriculum from global perspective.

The Centre for Life Long Learning and Extension offers 29 short term and 22 long terms courses on Ancient Indian studies, Art and craft, Human Social Development, Language Proficiency, Computer Education, Hotels/ Cookery, Personal Grooming etc. The All India and Central Services Training Center conducts classes for preparation of UPSC, State PSC and Staff Selection Commission pattern examination and provide guidance for exams like NDA, CDS, IB, SHO, Police, RBI and other banks.

Smt. Hansa Mehta Library is the Central Library in addition to 13 constituent libraries and 25 Departmental libraries with over 8 lakh books/periodicals and above 14000 digitized Dissertations/Theses. It has the single largest air-conditioned reading room which can accommodate about 1600 readers at a time, and the library is open to the readers 14 hours a day.

The MSU has one of the largest Hostel Campuses in western India with 12 Boys' and 4 Girls' Hostels with all modern amenities. Hostel admission is an online process from application to allotment of room to the students. The University Health Centre provides routine medical treatment to the students and staff of the University and has a physiotherapy unit, a Pathology Laboratory and Marg Counselling Centre. The University has a magnificent union pavilion overlooking a large ground which has an athletic track, a cricket ground, hockey and football fields, two tennis courts, two basketball courts, four volleyball courts, two kabaddi grounds, malkhamb, a kho-kho ground and a handball court and a swimming pool.

The University has developed student digital life-cycle under MOU with MKCL and has adopted Online Admission Application System and all faculties are brought under MSU Examination Portal (MEP) system.

Career and Counselling Center and Placement Cell looks after the placement and also imparts training to students for facing interviews, coordinating with the agencies for arranging the placements drive. The Faculty of Social work and Faculty of Management Studies have achieved 100% placement and average 65% placement is the normal trend of placement on and off campus. The Directorate of Students' Welfare disburses scholarships to the students belonging to economically weaker sections.

An Incubation Centre and Start Up Centre has been set up at the campus to encourage the spirit of innovation that provides a platform to the youth for exploration and implementation of innovative ideas and their conversion into start-up ventures. Academic, Social and Technical Events, to name few - Prerna, Paramarsh, Footprints, BBA Baazigar, Cyberia and Yuvaantas are initiatives exclusively planned and managed by the students. Office of Alumni Affairs' of the University compiles information about various alumni associations, initiates monthly interactive sessions, coordinates for Reunions, collects details of eminent alumni, Alumni

Registrations and such other activities. Xplore MSU – A Heritage Walk gained interest amongst large public. Institute of Leadership and Governance primarily focuses on training and trans-disciplinary aspects of leadership and on good studies of Governance structures, practices and processes which are highly essential today.

## MSUB Administration

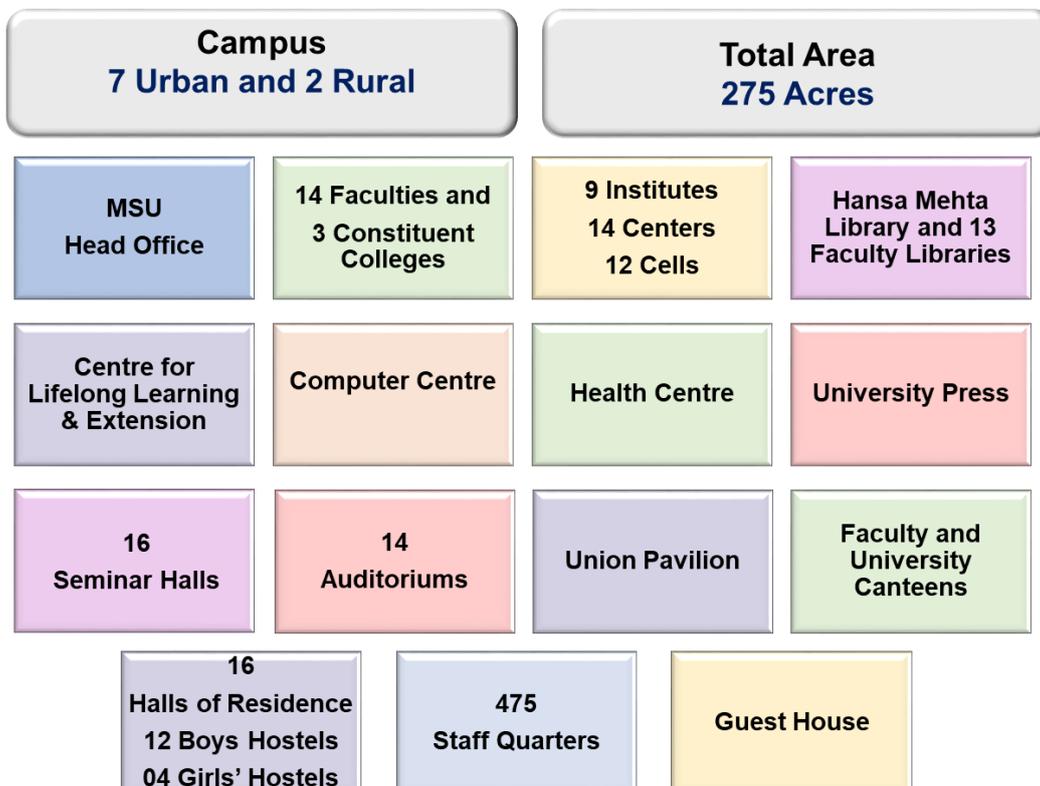
Shri. Acharya Devvrat, His Excellency, The Hon'ble Governor Gujarat & Visitor

Chancellor: Rajmata Shubhanginiraje Gaekwad  
chancellor@msubaroda.ac.in

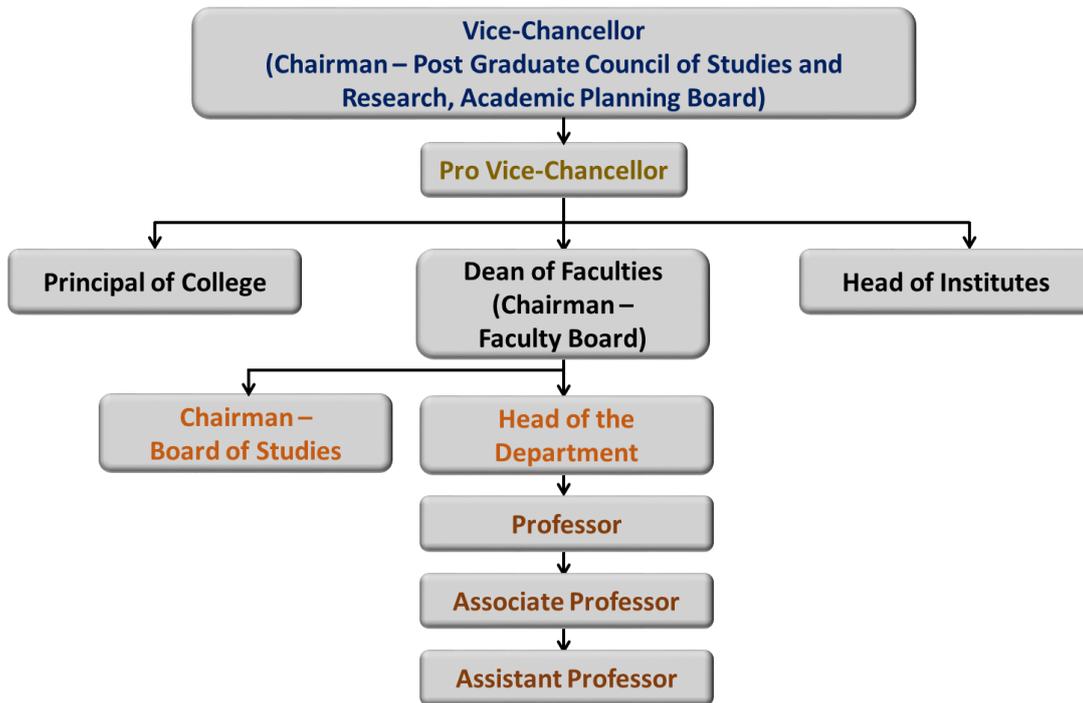
Vice-Chancellor: Prof. Parimal H Vyas  
vc@msubaroda.ac.in

Registrar: Dr. K. M. Chudasama  
registrar@msubaroda.ac.in

## MSUB Campus at a Glance



## Academic Structure of MSUB



## Faculties of MSUB

### Faculty of Arts



Prof. K Krishnan  
dean-arts@msubaroda.ac.in

### Faculty of Commerce



Professor Ketan R Upadhyay  
dean-com@msubaroda.ac.in

### Faculty of Education & Psychology



Professor R C Patel  
[dean-edupsy@msubaroda.ac.in](mailto:dean-edupsy@msubaroda.ac.in)

### Faculty of Family & Community Sciences



Professor Anjali Karolia  
[Dean-ffcs@msubaroda.ac.in](mailto:Dean-ffcs@msubaroda.ac.in)

### Faculty of Fine Arts



Shri N G Bagodi  
[bagodi.ng-ga@msubaroda.ac.in](mailto:bagodi.ng-ga@msubaroda.ac.in)

### Faculty of Journalism



Professor Niti A Chopra  
[dean-jc@msubaroda.ac.in](mailto:dean-jc@msubaroda.ac.in)

## Faculty of Law



Professor Bhavna Mehta  
dean-law@msubaroda.ac.in

## Faculty of Management Studies



Professor M N Parmar  
dean-ms@msubaroda.ac.in

## Faculty of Medicine



Dr. Hemant Mathur  
deanmcbird@msubaroda.ac.in

## Faculty of Performing Arts



Professor P B Dabhade  
dean-perarts@msubaroda.ac.in

## Faculty of Pharmacy



Professor K K Sawant  
dean-pharmacy@msubaroda.ac.in

## Faculty of Science



Professor Haribhai Kataria  
dean-science@msubaroda.ac.in

## Faculty of Social Work



Professor Jagdish Solanki  
jagdish.solanki-sw@msubaroda.ac.in

## Faculty of Technology & Engineering



Professor Arun Pratap  
dean-techo@msubaroda.ac.in

## Constituent Colleges of MSUB

### Baroda Sanskrit Mahavidyalaya



Professor R C Patel  
econtact-sm@msubaroda.ac.in

### M. K. Amin College of Arts, Science and Commerce, Padra



Dr. Tejovati S Prabhu  
principal-mkamin@msubaroda.ac.in

### Polytechnic



Dr. V H Kher  
principal-poly@msubaroda.ac.in

## Institutes of MSUB

Sr. No.	Institute	Director
1	Institute of Leadership and Governance	Advisor: Dr. Jigar Inamdar Director: Dr. Reena Bhatia director-ilg@msubaroda.ac.in
2	Oriental Institute	Dr. Sweta Prajapati director-oriental@msubaroda.ac.in
3	Institute of Fashion Technology	Prof. Anjali Karolia dean-fcs@msubaroda.ac.in
4	Institute of Hotel Management & Catering Technology	
5	The Maharaja Ranjitsingh Institute of Design	
6	Dr. Vikram Sarabhai Institute of Cell and Molecular Biology	Prof. Sarita Gupta
7	Institute of Interdisciplinary Studies	Dr. Vihas Vasu director-iids@msubaroda.ac.in
8	Water Resource Engineering Management Institute	Dr. T. M. V. Suryanarayana
9	Anchor Institute of Textiles	Prof. Bhattacharya
10	Institute of Policy Research and International Studies	Prof. Lajwanti Chatani

## Centres of MSUB

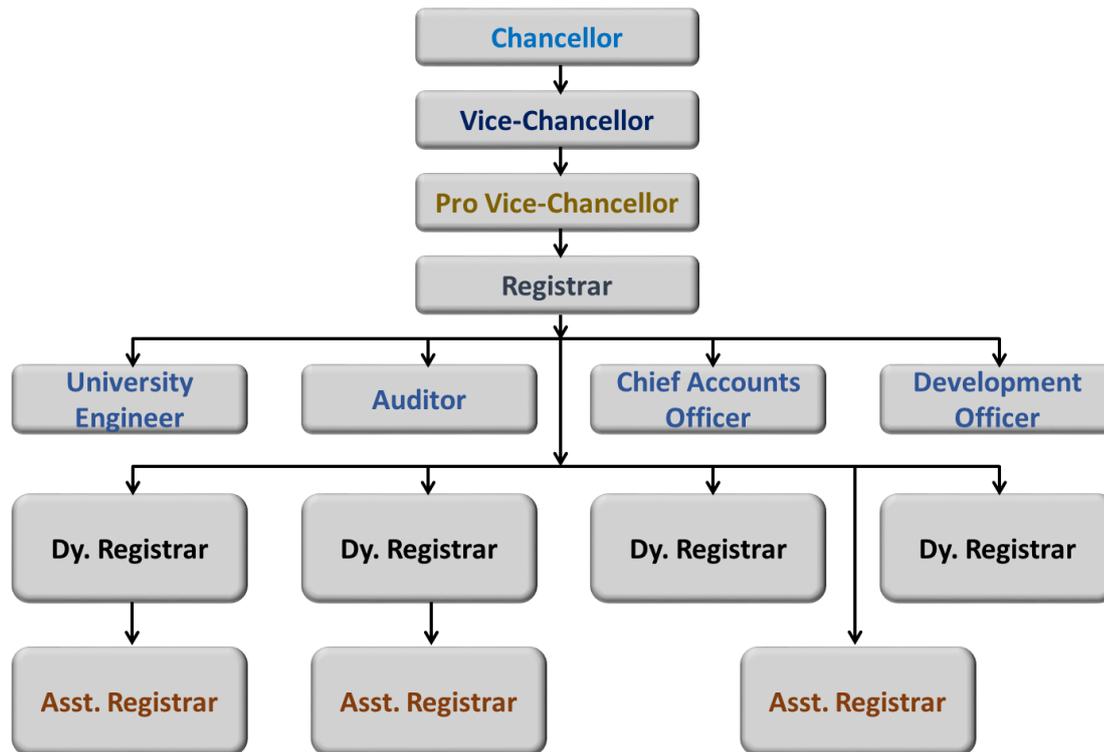
Sr. No.	Centre	Director
1	UGC Centre for Life Long Learning & Extension	Registrar, MSU Baroda
2	UGC Women Studies Research Centre	Prof. Anjali Karolia
3	UGC Centre for Advanced Studies in Education	Prof. R. C. Patel
4	Inter-University Centre for Teachers Education	Prof. R. C. Patel
5	Population Research Centre (MHFW)	Prof. V. A. Kalamkar
6	Centre for Canadian Studies (Niti Ayog)	
7	GOI Cluster Incubation Centre	
8	Prof. Bharat Chattoo Genome Research Centre	
9	Nutrition Counselling Centre (WHO)	

10	Centre for Urban Studies	Prof. Adhya Saxena
11	All India Central Services Training Centre	Director: Prof. Surjit Mukherjee
12	Computer Centre	Director; Prof. Apurva Shah
13	Student Facilitation Centre	
14	Management Development Centre	Prof. Uma Iyer
15	Centre for Intellectual Property Rights	Director: Prof. Bhavana Mehta
16	Siemens Centre of Excellence in Industrial Automation	
17	Centre of Excellence in Polymers	
18	Centre of Excellence in Material Science and Nano- polymeric Materials	

### Cells and Offices of MSUB

Sr. No.	Centre	Director
1	Internal Quality Assurance Cell	Dr. B. S. Chakrabarty
2	Office of International Affairs	Prof. Dhanesh Patel
3	Research and Consultancy Cell	Prof. A. Bedekar
4	Director of Alumni Affairs and Donor Relations	Dr. Sanskruti Mujumdar
5	Directorate of Higher Payment	Prof M. N. Parmar
6	Directorate of Student Welfare	Prof. Rameshwari Pandya
7	Communication Cell	Prof. Hitesh Raviya
8	Equal Opportunity Cell	
9	Office of Career Advancement for Students	Prof. Ranjan Aiyer
10	Office of Corporate Affairs	Prof. Bhavana Mehta
11	Shri Sayaji Prasthan	Dr. Bansidhar Sharma
12	Women's Grievance and Counselling Cell	Prof. Adhya Saxena
13	Human Resource Development Cell	

## Administrative Structure of MSUB



## Administrative Sections of MSUB

Academic and Exam Section:

Mr. Darshan Maru (Deputy Registrar)  
dr-exam@msubaroda.ac.in

Accounts Section:

Ms. Neeta Dhar (Chief Accounts Officer)  
cao@msubaroda.ac.in

Administration Establishment Section (ADE):

Mr. Amit Jani (Deputy Registrar)  
dyr-ade@msubaroda.ac.in

Administration of Meeting Section (ADM):

Mr. Mayank Vyas (Deputy Registrar)  
mayank.vyas-legal@msubaroda.ac.in

Audit Section:

Ms. Vidisha Shah (University Auditor)  
vidisha.shah-audit@msubaroda.ac.in

Legal Cell/RTI Cell/B.C. Cell:

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## II. Research Profile of MSUB

MSUB has identified key areas of research and focused on these areas in the last decade. This has resulted in increased research output which can be witnessed in the form of research publications, patents, copyrights, research funding and Consultancy. The key areas of research at MSUB is show in Table 1.

Table 1: Key Areas of Research at MSUB

Faculty of Arts	
Department	Thrust Areas
Economics	Issues in Environmental Finance
	Environmental Governance
	International Finance
	Evaluating the Efficiency of International Development Institutions
	The Political Economy of Development Policies
	Sustainable Development
	Social Policy for Economic Development
	Gender Issues and Development
	Spatial Disparities and Economic Development in India
	Corporate Social Responsibility
	Health Sector-Issues and Emerging Challenges
Sanskrit	Veda
	Vedanta
	Vedic, Classical and Modern Sanskrit Literature
	Vyakaran
	Purana
	Alamkara Sastra
	Nyaya
	Sanskrit and Indian Music
	Manuscriptology
Traditional Sanskrit	Jyotisastra (Bhalit evam Siddhant)
	Sahitya Sastra (Kavya sastradi)
	Vyakaran Sastra
	Vedic Sahitya (Brahman Granth, Aranyakas, Upanishad, Kalpasutradi)
	Vastusastra
	Dharmasastra
	Bharatiya Prachya Vidya
Hindi	Prachin Kavya
	Madyakaalin Kavya
	Aadhunik Sahitya-Gadya and Padya
	Hindi ke Sahityakar aur unki rachanao par shodh karya
	Aadhunik Vimarsh-Dalit Vimarsh, Nari Vimarsh, Aadivasi Vimarsh,Kinnar Vimarsh
	Pravasi Sahitya, Lok Sahitya
	Bhartiya aur Paschatya Kavyashastra aur Bhasha Vigyan
	Hindi Bhasha ki Vaishvik Paridhi, Rajbhasha Hindi
Gujarati	History of Gujarati Literature
	Criticism

	Gujarati Folk Literature
	Comparative Literature
	Literature and Cinema
	Dalit Literature
	Feminism
	Pedagogy of Literature
Linguistics	Linguistics
English	English studies in India
	English Language Teaching, learning and Testing
	Comparative Literature
	Translation Studies
	Indian English Literature
	Commonwealth Literature
	Canadian Literature
	European Literature
	Diaspora Studies
	Gender Studies
	Historiography of Literature
	Critical Theories
	English for Specific Purposes (ESP)
	Academic Writing
Archaeology and Ancient History	South Asian Archaeology
	Prehistory
	Early Food Producing Societies
	Historical Archaeology of India
	Artefact Analysis and Interpretation
	Archaeological Sciences
	Heritage Studies
	Ancient Crafts and Technology
	Art and Architecture
	Epigraphy and Numismatics
	Cultural Landscape Studies
History	Medieval South Asian Studies
	Social, Cultural and Economic History of South Asia
	Pre-modern and Modern South Asia
	Social, Cultural and Economic History of Modern South Asia
	Gender Studies
	Environmental History
	Transport History
	History of Western India with special reference to Princely States
	Business History
	History of Science and Technology
	History of Media
	Agrarian History
	History of Freedom Movement
Philosophy	Indian Philosophy
	Social Philosophy

	Ethics
	Comparative Religion
Political Science	Political Theory/Thought
	International Relations
	Indian Government and Politics
	Regional Cooperation
	Foreign Policy
	Gender Studies
	Justice and Democracy
Marathi	Folk Literature and Regional Folk Literature
	Cultural Studies
	Women's Literature
	Comparative Literature
	Literature and Local History
	Dalit Literature
	Muslim Marathi Literature
	Jain Marathi Literature
	Translation Studies
	Sociology of Literature
Library and Information Sciences	Health/Medical Informatics
	Digital Humanities
	Open Educational Resources (OER)
	E-publishing

<b>Faculty of Commerce</b>	
<b>Department</b>	<b>Thrust Areas</b>
Accounting and Financial Management	Financial Accounting
	Cost Accounting
	Management Accounting and International Accounting
	Direct and Indirect taxes
	Tax Accounting
	International Taxation
	Personal Tax Planning
	Taxations Policies and Reforms.
	Funds Management
	Corporate Finance
	Personal Finance
	International Finance
	Venture Capital Financing
Financial Mathematics	
Commerce and Business Management	Promoting Research and Doctoral Studies in the area of National and Regional Priorities
	Organizational Productivity and Effectiveness
	Corporate Governance, Corporate Social Responsibility and Environmental Consciousness (People, Planet and Profitability)
	Organizational Challenges and Sustainability
	Creativity-Innovation-and Technology Management
	New Knowledge creation and dissemination across the Social Systems
	Societal Structures-Dynamics and Its managerial Implications.

Commerce and Business Management	Culture-Sub Culture- Cross Culture and its Implications for Organizations
	Dimensions of Entrepreneurship and New Venture Creation
	Legal Environmental Framework and its Implications
	Demographic Structures and Dynamics
	Human Development, Welfare and Social Security
	International Studies and Global trends in various functional areas of Management
	Policies and Programme for conservation and enhancement of Ecosystem
	Mental and Physical health and Recreational Programmes
	Public Policies-Economic and Infrastructure development-Citizens' Behavior-and Governance Issues
	Individual and Collective Values-Behaviors and its Implications
	Digital Marketing
	Content Marketing
	Consumer Behaviour & Marketing Strategies
	Conversational Marketing
	Customer Satisfaction Measurement
	Customer Experience Management
	Social Media Marketing
	M-Commerce
	Customer Relationship Management
	Marketing strategy
	Product and brand management
	Relationship marketing
	International marketing
	Equal Employment Opportunity
	Strategic HR Management ,Planning and Retention
	Recruiting and Labor Markets
	Talent Management
	Performance Management and Appraisal
	Total Rewards and Compensation
	Managing Employee Benefits
	Risk Management and Worker Protection
	Employee Rights and Responsibilities
	Union/Management Relations
	Employer Branding
Employee Engagement	
High Performance Work Systems	
Role Design, Job Evaluation and New Age Organisations	
Competency Mapping and Assessment	
Cross Cultural Management and Leadership	
Knowledge Management	
Human Resource information System	
Virtual organisation and E- HR Practices	
Spirituality and Human Development	
Organisation Employees's Mental health and wellbeing	
Business Economics	Macro Economics including Macro Development Economics
	Open Macroeconomics including Business Process Outsourcing, Globalization Issues, Capital Flows and Currency Movements

	Applied Econometrics
	Monetary Economics
	Banking and Financial Institutions
	Economics of Human Resources including Economics of Health and Education
	Economics of Business Environment
	Environmental Economics.
	Land Economics including Urban and Rural Development and Planning
	Core Business Economics
	Industrial Economics including Economics of infrastructure, Small Business and MSMEs
	Economics of Infrastructure
	Public Finance and Fiscal Economics
	Regional and Local Economic Development Issues
	Capital Market Issues
	Household Economics including Economics of Household Finance.
Banking and Insurance	
Co-operative Management and Rural Studies	Co-operative issues and developments.
	Agriculture, Taxation, Food security and allied activities.
	Poverty, Financial Inclusion Rural banking, NBFC, Micro-Finance modes of Rural Finance.
	ICT and E-governance for Rural development.
	Corporate Social Responsibility and Sustainable Development.
	Rural Marketing and dimensions.
	Educational, Health and Transformation.
	Rural Employment, Rural Human Resource Development and Training, Rural Entrepreneurship and Women Empowerment.
	Evaluation of development projects.
	Issues related to Rural and Urban Development study.

<b>Faculty of Education and Psychology</b>	
<b>Department</b>	<b>Thrust Areas</b>
Education	Teacher Education
	Educational Technology
	Education of the disadvantaged group
	Sports Psychology
	Educational Leadership
	Educational Administration and Governance
	Policy Research in Education
	Comparative International Education
	Women in Educational Management
Psychology	Clinical
	Industrial
	Counseling
	Cognitive
	Educational

<b>Faculty of Fine Arts</b>	
<b>Department</b>	<b>Thrust Areas</b>
Museology	Intangible & Tangible Cultural Studies

	Conservation of Cultural Properties
	Heritage Management
	Documentation and Exhibition

<b>Faculty of Family and Community Sciences</b>	
<b>Department</b>	<b>Thrust Areas</b>
Foods and Nutrition	Maternal & Infant Young Child Nutrition
	Adolescent & School health & Nutrition
	Food insecurity, Mapping & spatial analysis, affordability & sustainability of diets
	Food Fortification
	Behavior change communication
	Non communicable disease prevention & management
	Workplace wellness & Nutrition
	Reducing High fat, high sugar, high salt in diets
	Food Security Act & its impact on nutrition
	Preconception Nutrition
	Dual burden of malnutrition & double duty actions for their prevention & management
	Reaching the unreached (studies on tribal, Street children, orphanages etc.)
	Inborn errors of metabolism
	Food labeling
	Chrono nutrition
	Sustainable & safe food systems
	Nutrition health Economics : selecting low cost high impact interventions
Nutrient drug interactions	
Nutrigenomics	
Functional foods in health & disease	
Foods and Nutrition	Entrepreneurship for healthy diets & nutrition, startups & innovations, Glycemic Index, Glycemic Load and Satiety Index Studies of Foods.
	Pro & Prebiotic foods & their role
	Nutrition in various types of sports for performance & recovery Sports Nutrition
	Functional foods in sports nutrition
	Role of functional foods
	Role of supplements
	Preventive Geriatrics & Gerontology
For School & Workplace Wellness programs, Geriatric homes & hospitals, its role & benefits	
Extension and Communication	Rural Resurgence in Developing Countries
	Extension Management
	Project Management in Dev Sectors
	Extension Models
	Extension Administration
	Development Comm Strategies
	Designing & Development Comm Strategies
	Development Communication Methods – Usage, Barriers
	ICT Applications for Development
	Social & Behavior Change Communication
	Theories of Development
Dev Comm. -Challenges & Perspectives	

	Life Skill Education
	Life Skill education -Theories
	Models of Lifelong learning
	Evaluation of agencies working for LLL
	LLL communication Strategies
	Analysis of Life Long education programmes
	Project Designing for an enterprise
	Analysis of Existing models of entrepreneurship dev and its management
	Entrepreneurship training for various target groups
	ICT application in enterprise development and its management
Clothing and Textile	Apparel Technology
	Sustainable design with minimum wastage and cutting technologies for garments
	Fashion Marketing and Management
	Design development and Innovation in garment design
	Museum Studies (Textiles)
	Nanotechnology for Textile finishing
	Newer fibers for sustainable development
	Wet processing using sustainable and environmentally friendly technologies.
	Product development with traditional crafts for their viability and sustenance
	Design development with newer materials
Family and Community Resource Management	Decision Making,
	Management Process,
	Energy Mgt. ,
	Time Mgt. ,
	Goals, Values, Standards & Attitudes,
	Stress Mgt.
	Conflict Mgt.,
	Coping Strategies,
	Savings ,Investments & Insurance,
	Expenditure patterns,
	Budget,
	Finance Mgt.,
	Communication,
	Motivation,
	Family Life Cycle,
	Mgt. of Household & Community Work.
	Residential & Commercial Designing,
	Kitchen Designing,
	Housing,
	Service Area Designing,
	Lighting,
	Designing for people with Special needs,
	Green & Net Zero Buildings,
Landscape and Garden Designing,	
Furniture Design,	
Work Station Designing ,	
Ergonomic Designing,	

	Vastu Shasta,
	Feng Sui,
	Surface Treatments,
	Building Materials,
	Acoustics,
	Temperature
	Art & Design, Product Design & Development,
	Interior Accessorises
	Sustainable Designing,
	Use & Evaluation of Designing Soft wares’.
	Consumer Problems
	Consumer Redressal
	Consumer Awareness
	Consumer Education
	Consumer Rights & Responsibilities
	Consumerism
	Marketing Mgt.
	Sales & Promotion
	Social Media& Consumer
	Entrepreneurship Mgt.
	Consumer Satisfaction.
	Buying Practices & Guides
	Equipment Design & Evaluation
	Equipment Performance
Family and Community Resource Management	Use, Care & Maintenance
	Labour Saving Equipments & Technologies
	Eco –friendly Practices
	Environmental Problems & Challenges
	Environment Conservation & Protection
	Sustainable materials & Development
	Environment Policies & Regulations
	Rain Water Harvesting,
	Solar Energy
	Indoor Air Quality Analysis
	Household Wastes & it’s Management
	Renewable Energy
	Tourism Mgt.
	Travel Mgt.
	Event Mgt.
	Banquet Mgt.
	Front Office Operation Mgt
	Food Service & Safety Mgt.
	Bakery & Confectionery Mgt.
	Catering Mgt
Housekeeping Mgt.	
Health , Hygiene & Sanitation	
Soft Skills & Personal Grooming & Hygiene.	

	Cognitive Ergonomics
	Ergonomics regarding Physical Environment
	Ergonomics regarding Human Factor Applications
	Workplace Design Ergonomics
	Consumer Ergonomics
	Furniture Ergonomics
	Office Ergonomics
	Kitchen Ergonomics
	Anthropometry
	Occupational Health.
	Recruitment
	Training & Development
	Performance Appraisal
	Leadership,
	Communication
	Organisational Structures
	Organisational Mgt.
	Decision Making
Human Development and Family Studies	Indic Concepts
	Culture and Religion
	Happiness
	Self and Identity
	Cross-cultural and Indian Perspectives on Moral Development
	Engendering Indic, Dharmic Frameworks for Work, Family and Leadership
	Kindness and Compassion: Life-span Perspective
	Human Development and Family Life: Indic Perspectives, Traditional Texts
	Alternative Models for Living -Sustainability
	Culture, Sustainability, Food Choices and Markets: Traditional and Modern Eating Practices
	Gender Equity in Human Development
	CSR Partnerships in Early Childhood Education (ICDS)
	Entrepreneurship and Business Principles in Education
	National Education Policy (NEP) 2020
	Values Education
	Vocational Education
	Sex Education
	Human Rights
	Positive Youth Development
	Well-being
	Life skills
	Civic Engagement and Volunteering
	Cultivating Karma Yoga Practices in Work and Family Life
	Work-Life Balance
	Mindfulness Programs for Preschool & School Teachers, Higher Education, Workplaces, Families
	Policies and Programs for Older Population
Issues of Aging in India	
Elderly Care and Concerns	

	Friendships
	Intimate /Romantic Relationships
	Parenting
	Singlehood
	Challenges in Adult Life: Interface with Divinity (Divorce, Terminal illness etc.)

<b>Faculty of Journalism and Communication</b>	
<b>Department</b>	<b>Thrust Areas</b>
Journalism and Communication	Core Communication Concepts and Perspectives
	Development Support Communication
	Scope of Media Applications: Print, Radio, Television, New Media
	Trends in Advertising and Media Management
	Communication and Media Policies
	Communication and Society
	The Evolving Digital Landscape
	E-governance
	Media and Gender Intersection
	Media and Culture

<b>Faculty of Law</b>	
<b>Department</b>	<b>Thrust Areas</b>
Law	International Law
	Family laws and Society
	Environmental Law
	Law and Technology
	Artificial Intelligence: Legal, Ethical and Moral issues
	E - Governance
	Law and Health
	Gender Justice in Digital Age
	Transformative Constitutionalism
	Constitutional Law
	Intellectual Property Law
	Commercial Laws & Global trends
	Criminology and Penology
	Common Law
National Security	

<b>Faculty of Management Studies</b>	
<b>Department</b>	<b>Thrust Areas</b>
Management Studies	Managing for Shareholder Value Creation
	Financial Reengineering
	Mergers and Acquisitions
	Strategic Financial Management
	Monetary Policy and Fiscal Policy
	Financial Institutions and Markets

	Exchange Rate Policy
	Agricultural Economics
	International Economic Stratagems
	HRM: Personnel Management, HRD, IR, Compensation Management
	Organisation Behaviour : Leadership, Motivation, conflict management, management functions.
	Corporate Governance: Board structure and process, disclosures, responsible business behaviour, sustainability.
	General Management - Any contemporary subject which can be multi-disciplinary with above subjects and any other branch of management.
	Consumer issues
	E Commerce
	M Commerce
	Service Marketing
	Retail Management
	Artificial Intelligence in Marketing

Faculty of Performing Arts	
Department	Thrust Areas
Vocal	Ancient to Modern musical vocal traditions. Classifications, Historical aspects
	Style of performing, style of teaching learning, different forms of presentations.
	Traditional teaching and learning system, Modern system of Music education, Mat. Sampradays , Banis, Gharana , Institutional Education, University educations , Impacts & outputs
	Various vocalists, their styles and their contribution to the field.
	Various Musical genres for different cultures of the world, their historic roots, rituals and their scientific justifications and studies
	Manufacturing of Musical Instruments, Traditional manufacturing to commercial productions and various aspects of manufacturing and production in regards to materials, Quality, and Trading.
	Scientific Study of application of Vocal Music to Yoga, Psychology, Multitasking capacities. Human Anatomy, mind and behaviour and various psychological aspects.
	Vocal Music application to other popular Professions of society, change in perspective, holistic development.
	Application of vocal music teaching to basic , primary to Higher education level as a subject in form of developmental tool, and its impact on students on various level.
Instrumental	Ancient to Modern musical Instruments. Classifications, Historical aspects
	Style of performing, style of teaching learning, different forms of presentations.
	Traditional teaching and learning system, Modern system of Music education, Mat. Sampradays , Banis, Gharana , Institutional Education, University educations , Impacts & outputs
	Various instruments & their noted performers, their styles and their contribution to the field.
	Various Musical Instruments their relation to various culture of the world , rituals and their scientific justifications and studies
	Manufacturing of Musical Instruments, Traditional manufacturing to commercial productions and various aspects of manufacturing and production in regards to materials, Quality, and Trading.
	Scientific Study of application of Instrumental Music to Yoga, Psychology, Multitasking capacities. Human Anatomy, mind and behaviour and various psychological aspects.
	Instrumental Music application to other popular Professions of society, change in perspective, holistic development.
	Application of Instrumental music teaching to basic , primary to Higher education level as a subject in form of developmental tool, and its impact on students on various level.
Tabla	- Historical Aspects of Percussion Instruments
	-Percussion instruments and its therapeutic applications.
	-Aesthetical Aspects of Percussion Instruments
	-Indian Percussion Instruments and its Global Scenario
	-Study of Archaeological evidences of Percussion Instruments in India
	- Study of Indian Treatise in reference to Percussion Instruments

Dance	Study of endangered dance forms.
	Benefit of dance education for mentally challenged children.
	Historical Aspects of Ancient Dance forms.
	Dance and its therapeutic applications.
	Aesthetical Aspects of various Gharanas/Banis.
	Indian Classical Dance and its Global Scenario
	Study of temple sculptures and dance.
	Study of various texts and Manuscripts with reference to dance.
	Interrelationship of visual Arts and Dance.
	Interrelationship of various Performing
	Dance as medium for reliving stress.
Dance and child psychology	
Dramatics	Impact of Visual art on Education
	Education through Performing Arts
	Psychological aspect of learning through Visual arts
	Natyashashtra by Bharatmuni & Sanchar Siddhanta
	Theatre & Management.
	Bhartiya approach for development stage of human beings as an Individual / Group / Society / Nation.
	Traditional teaching and learning system, Modern approach to theatre studies
	Theatre & Anthropology.
	Theatre Architecture & Space Design
	Costume & Fashion Technology Design.
	Actor's Training Methodology & Body
	Anatomy – Nervous System.
Constitutional & Fundamental Framework of Media.	

Faculty of Pharmacy	
Department	Thrust Areas
Pharmacy	Formulation Development and Optimization of IR, SR and MR dosage forms
	Solubility, Stability and Bioavailability enhancement approaches
	Formulation Development of: New Drug Delivery Systems
	Controlled and targeted Drug Delivery systems
	Micro and nanoparticulate drug delivery systems
	Impurity profiling
	Analytical and bioanalytical method development and validation
	Molecular modeling and Computer Aided Drug Design
	Synthesis of Novel Therapeutic Moieties
	Pharmacological, molecular and toxicological screening of New Therapeutic Moieties and Herbal extracts
	Pharmacodynamic and pharmacokinetic studies on novel formulations
	Extraction, screening and standardization of Herbal Drugs and extracts

Faculty of Science	
Department	Thrust Areas
Botany	Remote sensing of ecological aspects of forest covers
	Plant Ecology, Ecophysiology and Remote Sensing
	Cytogenetics, Cytotaxonomy, and Biodiversity

	Plant Tissue Culture , in vitro morphogenesis, micropropagation
	Developmental Biology , Plant Anatomy and Fungal Biotechnology
	Plant Ecology and Pollution Ecology
	Plant functional genomics, Plant developmental biology, Programmed cell death in plants
	Cytogenetics and Molecular Biology
	Coastal Ecology and Remote Sensing
	Angiosperms Taxonomy, Phytochemistry
	Structural and developmental botany, Angiosperm taxonomy, Pteridophyte taxonomy
	Plant Behavior, Ethnobotany
Computer Applications	Cloud Computing
	Sustainable and Green Computing
	Autonomic Computing
	Internet of Things
	Block-chain and Trusted Computing
	Machine learning
	Artificial Neural Networks
	Deep Learning
	Image Processing
	Data Mining
Environmental Studies	Climate Change
	Biological Tools for Cleaner Production of Technology
	Sustainable Management of Natural Resources
Geography	Applied Remote Sensing and GIS
	Climate Change
	Disaster Management Studies
	Environment Management
	Health and Diseases Studies
	Landscape Planning
	Regional Development and Planning
	Urban Planning and Smart Cities
Water Resource Management	
Microbiology (Microbiology)	Environmental Microbiology
	Antimicrobial Resistance
	Host – Pathogen Interactions
	Plant associated microbes
	Microbial enzymes and other products
	Genetic engineering of microbes
	microbes for industrial and environmental applications
	Probiotic microorganisms
	Plant-microbe interactions
	plant pathology
	Biological control
	Microbial biofilms
	Microbiological assessment and testing of ethnobotanical products
	Biological Effluent treatment
	Food Microbiology
Genomics and Bioinformatic analysis of microbial genomes and metagenomes	

Microbiology (Biotechnology)	Immuno-oncology
	Clinical Biomarkers Exploration
	Drug Targets Identification, Validation
	efficacy/toxicity screening Immuno metabolomics
	Autoimmunity: Disease pathogenesis
	Biotechnological approaches for Agricultural Industrial and environmental applications
	cell culture and expression systems for engineered products
	Diagnostic Platforms
Cell and Molecular Biology	Stem Cell Research and Disease Pathogenesis
Zoology	Toxicology
	Cancer and Nutrition
	Neurobiology
	Wildlife Biology
	Chronobiology
	Regeneration
	Fisheries Biology
	Metabolic Physiology and Endocrinology
	Biodiversity
	Entomology
Physics	Condensed Matter Physics
	Nuclear Physics
	Materials Science
	Bio-Physics

Faculty of Social Work	
Department	Thrust Areas
Social Work	Public Health and Community Participation.
	Social Aspects of New Education Policy 2020.
	Women Empowerment and Gender Equity Policy.
	Sustainable development goals 2030.
	Unorganized Labour in the Social Security sector.
	Socio Economic and cultural development of Marginalized Segment (SC/ST/OBC) of Indian Society.
	Social Development through (Samajik Samrasta).
	Indianization and Bhratyakaran of Social work education and Profession.
	Status of Startups and Skill Initiatives in making mightier India.
	Correctional administration in Government Programmes.
	Industrial Policy
	HR in Digital Era
	Sustainable Development Goals and CSR
	Diversity and Inclusion at Workplace
	Technology Embedded Society
	Public Health & Development
	Climate Change, Environment and SDG
	Leadership in Global Market Economy
Youth, Entrepreneurship and Skill Development	

	Rural Transformation and Development
	Transformative HR
	Social Work and Governance
	OD & OB
	Quality of Worklife.

<b>Faculty of Technology and Engineering</b>	
<b>Department</b>	<b>Thrust Areas</b>
Applied Chemistry	Liquid crystals
	Polymers
	Organic synthesis
	Surfactants
	Mesoporous materials
	Applied Chemistry
	Ionic Liquid
	Nanocomposite & Designed Materials
Applied Mathematics	Wavelets & image processing/signal processing
	Mathematical modelling of lubrication theory
	Numerical analysis
	Mathematical control theory & its applications
	Soft computing techniques in medical science
	Dynamical systems
	Special functions
	Speech recognition
	Time series analysis
	Fuzzy dynamical systems
	Applied Mathematics
	General theory of relativity
	Orbital dynamics
	Fractional calculus
	Fractional differential equations
	Wavelet Analysis
BioMathematics	
Industrial Mathematics	
Optimization	
Applied Mechanics & Structural Engineering	Structural Engineering
	Geotechnical Engineering
	Earthquake Engineering
	Pile & Piled raft foundation
	Composite Structure
	Structural health Assessment
Applied Physics	Optical Science and Applied Optics
	Condensed Matter Physics
	Nanoscience and Technology
	Optoelectronics
	Theoretical Physics and Simulations

Architecture	Architecture & design pedagogy for sustainable development
	Building construction & management for affordable built spaces
	Health, Safety, technological advances & elements of future architecture and planning
	Climate change & approaches to architecture & planning
	Impact evaluation of development projects
	Disaster risk management & development
	Image of the city & smart city development
	Environment psychology & built environment
	Urban and regional development policies & governance
	Heritage conservation & development strategies
	Architecture criticism & Post occupancy analysis
Chemical Engineering	Extraction of heavy Metals
	Fine particles synthesis
	Phase Equilibrium Thermodynamics
	Plastic waste management
Civil Engineering	Reaction Engineering
	Hydraulic Structures
	Water Resources
Computer Science & Engineering	Environmental Engineering
	Agricultural prediction for optimizing quality of crop using Machine Learning
	Summarisation of Natural Language text content using NLP
	Real-time system design and Application
Electrical Engineering	IOT based application for health and hygiene
	Power Electronics and drives
	Improved power quantity converters
	Active power filters
	Multipulse converters
	Multilevel inverters
	Resonant converters control systems
	Artificial intelligence
Machine Learning applications for control	
Mechanical Engineering	CAD/CAM/CAE
	Robotics & automation
	Dynamics of Machines
	Composite manufacturing & analysis
	Meshless methods
	Solar energy
	Jet propulsion
	Refrigeration & Air Conditioning
	Additive manufacturing, etc.
Metallurgical & Materials Engineering	Process Metallurgy
	Physical Metallurgy
	Advanced Materials
	Corrosion Engineering
	Welding Technology
Textile Chemistry	Computational Metallurgy & Materials Engineering
	Development in Environmentally Wet Processing

	Extraction, Application & Evaluation of Natural Dyes on various Textile Fibers
	Application of enzymes in various Textile Processing
	Developments in special Wet Processing for value Addition to textile
Textile Engineering	Technical Textile
	Composites
	Coating & Lamination
	Geotextile
	Medical Textile
	Polymer nanocomposites
	Shape weaving
	Filtration
	Hybrid yarns
	Winding
Water Resource Engineering Management Institute	Water Resources Engineering
	Irrigation water Management
	Climate Change Impacts on Water Resources
	RS & GIS application in Water Resources & agriculture
	On Farm Irrigation Systems

Researchers from MSUB published 926 articles in Peer-reviewed Journals in 2018-19 and out of which 353 were in Journals Indexed in Scopus/Web-of-Science (Table 2). In the same duration Researchers from MSUB also made more than 1000 presentations in Conferences (Table 3)

Table 2: Publications in Peer-reviewed Journals by Researchers of MSUB in 2018-19

Faculty of Arts	118
Faculty of Commerce	138
Faculty of Education and Psychology	24
Faculty of Family and Community Science	55
Faculty of Fine Arts	10
Faculty of Law	21
Faculty of Management Studies	4
Faculty of Medicine	2
Faculty of Performing Arts	17
Faculty of Pharmacy	31
Faculty of Science	251
Faculty of Social Work	7
Faculty of Technology and Engineering	187
Polytechnic	13
Oriental Institute	6
Department of Physical Education	8
Faculty of Journalism and Communication	5
M. K. Amin College	29

Number of publications in Peer Reviewed Journals and Conference proceedings  
**926**

Number in SCOPUS  
**353**

Table 3: Presentations in Conferences/Workshops/Seminars by Researchers of MSUB in (2018-19)

Faculty of Arts	138
Faculty of Commerce	86
Faculty of Education and Psychology	49
Faculty of Family and Community Science	185
Faculty of Fine Arts	67
Faculty of Law	19
Faculty of Management Studies	5
Faculty of Medicine	1
Faculty of Performing Arts	109
Faculty of Pharmacy	29
Faculty of Science	165
Faculty of Social Work	39
Faculty of Technology and Engineering	96
Polytechnic	12
Oriental Institute	22
Department of Physical Education	10
Faculty of journalism and Communication	3
M. K. Amin College	19

Number of presentations in Conferences and other performances  
**1054**

Number of presentations in International Conferences  
**410**

Number of presentations in National Conferences  
**414**

Research output from MSUB is also visible and relevant which can be seen from the Impact factor of the Journals in which they were published (Table 4) as well as the citations received by them (Table 5).

Table 4: Journal Impact Factor of Publication from MSUB

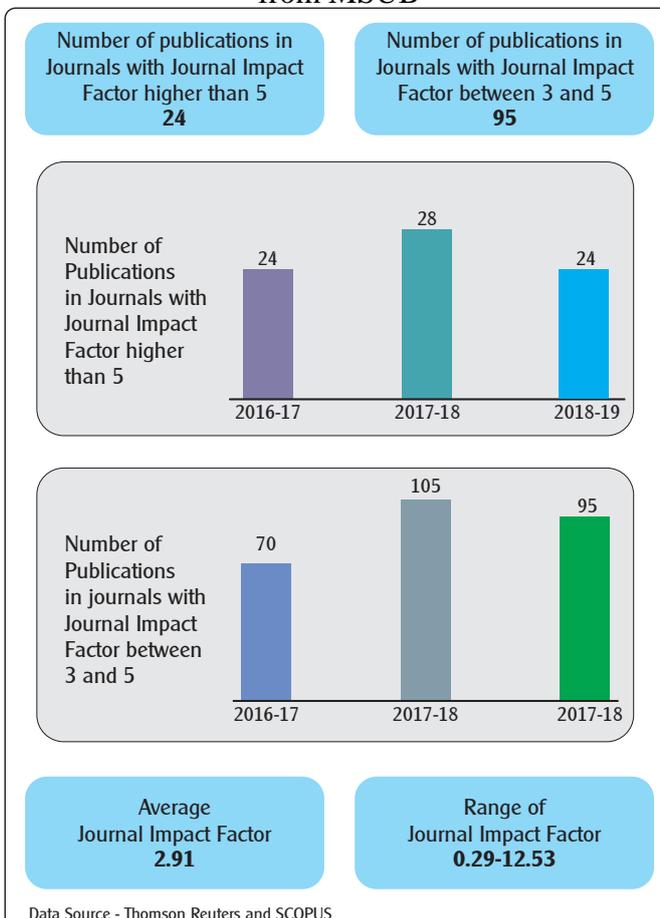
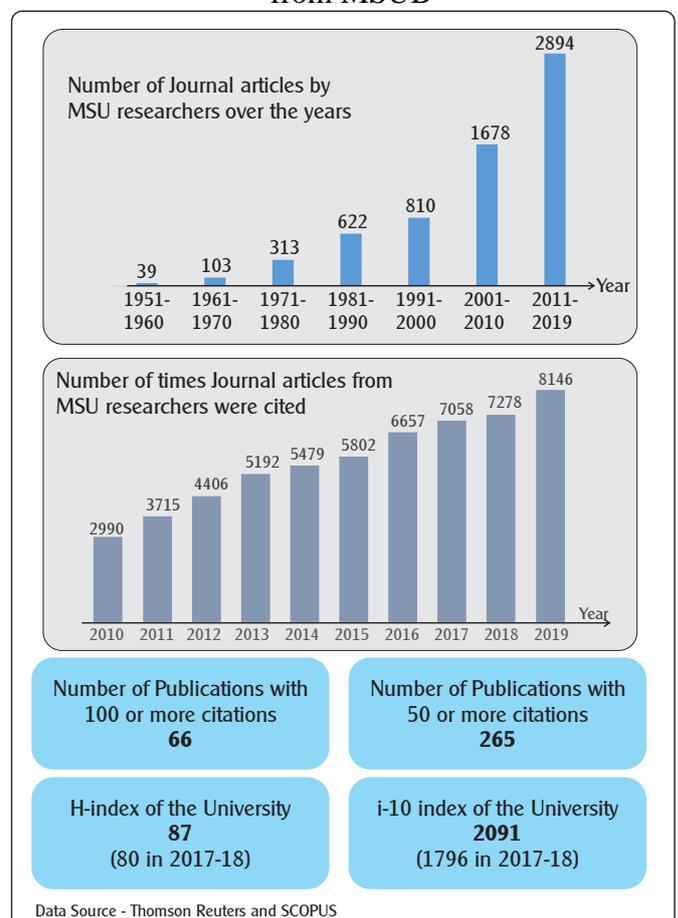


Table 5: Citations for Research Publications from MSUB



Applied Research from MSUB resulted in an increase of Sponsored Research Projects (Table 6) as well as prestigious Institutional and Departmental research grants like DST-PURSE (Phase I and II), DBT-ILSPARE, DST-FIST, UGC-DRS, CAS and DSA (Table 7)

Table 6: Details of Sponsored Research Projects in MSUB (2018-19)

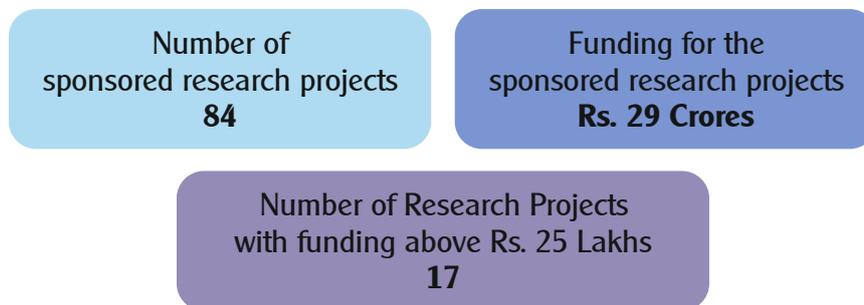
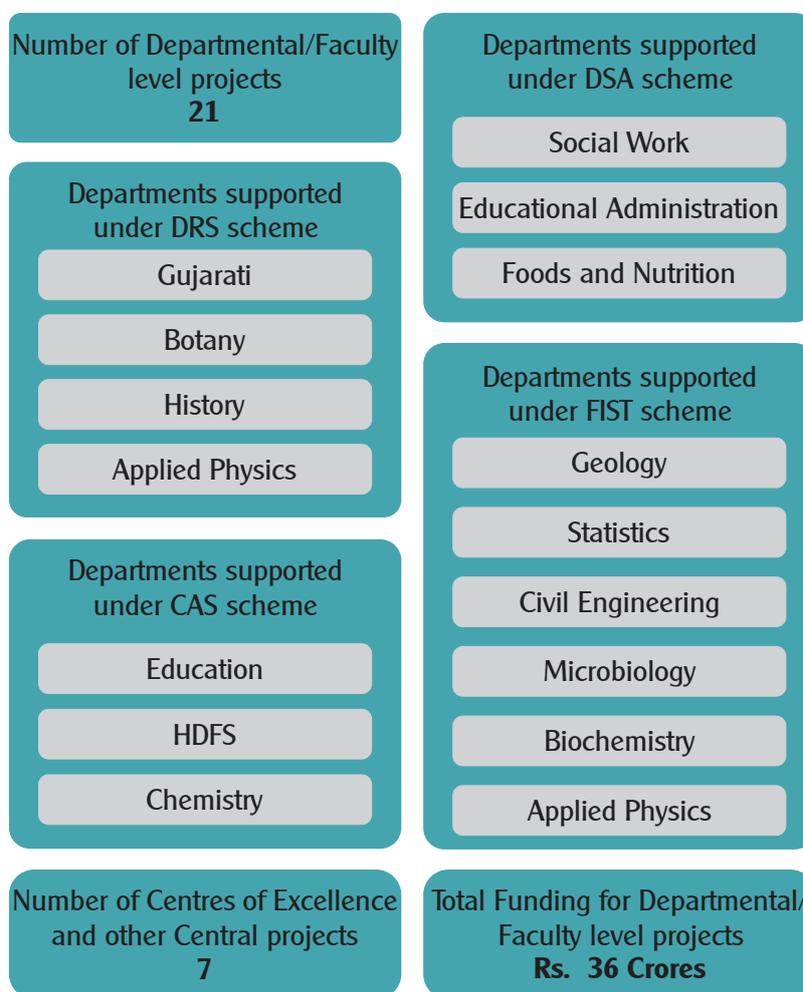


Table 7: Details of Institutional and Departmental Research Projects at MSUB (2018-19)



Researchers at MSUB also has active collaborations with Universities/Institutes/Industries from India and abroad (Table 8), which can be seen from the collaborative research publications, projects and patents. MSUB also provides Exchange scholarships to Students and teachers through tie ups with International bodies.

Table 8: Active Research collaborations with other Institutes/Universities/Industries

<p><b>National Collaborations</b> with IIT, ISSER, IISc, NCBS, NCL, TIFR, BARC, RRCAT, PRL, IPR, NITs etc</p>	<p><b>International Collaborations</b> with Cambridge Uni, Laval Uni, Stuttgart Uni, Kieo Uni, Durham Uni, Leicester Uni etc</p>
<p><b>Scholarships</b> For mobility to European Partner Universities for Interdisciplinary Research</p>	<p><b>Industrial Collaborations</b> Siemens, SunPharma, GSFC, L&amp;T, ONGC, HICS etc.</p>

Research from MSUB in Cutting edge areas led to many Institutes/Industries from India and abroad, showing interest to collaborating and working with researchers from the University, which resulted in MoUs for Academic, Research and Exchange activities (Table 9).

Table 9: MoUs between MSUB and other Institutes/Universities/Industries

<p>MOUs with International Universities/Institutes/Industries <b>28</b> (2017-19)</p>	<p>MOUs with National Universities/Institutes/Industries <b>72</b> (2017-19)</p>
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Table 10 enumerates the significant international MoUs signed by the MSUB in the areas of academics and research in the last 5 years

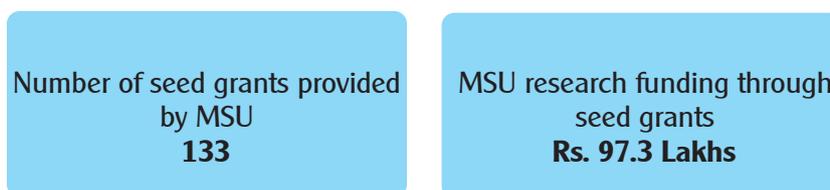
Table 10: Significant International MoUs signed by MSUB in the last 5 years

Sr. No.	Organizations Involved in MOU with the Maharaja Sayajirao University of Baroda	Purpose of MoU
1	University of Yaounde I. Cameroon	Establishing cultural and Scientific exchanges
2	The Sheridan College Institute of Technology and Advanced Learning, Canada	Shaping the future of our society in the fields of Arts, Business, Community Services, Health etc
3	National Education Foundation (NEF)-USA	Setting up of Skill Development Centre
4	SUMY State University (SUMY, UKRAINE)	Academic Exchange of Research & Teaching Staff etc.
5	Erasmus Plus, Spain	Exchange of Students/Faculty members
6	INSA Rouen, France	Collaborative research and teaching.
7	Hope (The Leprosy Mission Canada) (Markham, Ontario)	Biomarkers for early detection of leprosy using comparative transcriptomics
8	East Carolina University	For inclusion as a partner University in the online course ‘Global Understanding’
9	University of Education, Schwaebisch Gmuend, Germany	Academic and research collaboration
10	University of Education Weingarten, German	Academic and research collaboration

11	European University of Viadrina, Frankfurt (Oder) German	Faculty and Student Exchange
12	University of Bsnabrueck Germany	Faculty and Student Exchange
13	HICS Company, Seoul, South Korea	Research and Academic Cooperation and exchange in area of optical imaging and applications
14	Cultural and Scientific Agreement with Western Caroline University	Cultural and Scientific Agreement
15	The Hyogo Prefectural Government, Japan	for Mutual Cooperation, Academic Exchange.
16	DE MONTFORT University LEICESTER, UK	To increase the collaborative programs and interaction.
17	R2STOP Research Funding Agreement (RFA) effect:hope (The Leprosy Mission Canada) (Markham, Ontario)	Genomic markers for pathological variants and transmission of leprosy bacilli.
18	Cultural, Educational and Scientific Cooperation between University of Durham, UK	Collaborative research programmes and student exchanges.
19	USF, TEMPA, USA	Joint research projects , Exchange and training of students,
20	Minnesota State, St.Cloud State University.	Promoting the exchange of undergraduate and postgraduate students.
21	The Universidade De Vigo (Spain)	Exchange Students
22	Ecole Nationale Superieure Des Beaux-Arts	Inter-institutional exchange programme.
23	Instituto Superior Technico (Portugal)	Promoting the exchange of undergraduate and postgraduate students.
24	Arbonaut Limited, Finland	To enhance the research capability of the two institutions.
25	University of Abuja, UofA, Nigeria.	To enhance the research capability of the two institutions.
26	University of Hyogo, Kobe, Hyogo	Exchange of staff members and the exchange of students.

MSUB also provides seed grant to newly appointed Assistant Professors (through the Research and Consultancy Cell) especially in the area of Humanities and Social Sciences to kick start their research career (Table 10).

Table 10: Seed-Grant instituted by MSUB



Applied research from MSUB also resulted in the increased number and revenue of consultancy projects (Table 11), in the recent years. This also led to Industries setting up laboratories in MSUB.

Table 11: Details of Consultancy Projects (2108-19)



### III. Departments of MSUB Offering Ph.D. Programmes

Sr. No.	Faculty	Ph.D. Programmes offered
1	Arts	Ph.D. in Economics
2		Ph.D. in Traditional Sanskrit
3		Ph.D. in Persian
4		Ph.D. in Urdu
5		Ph.D. in Russian
6		Ph.D. in German
7		Ph.D. in Hindi
8		Ph.D. in Gujarati
9		Ph.D. in English, English Language & Literature
10		Ph.D. in Sociology
11		Ph.D. in Archaeology, Ancient History and Culture
12		Ph.D. in History
13		Ph.D. in Philosophy
14		Ph.D. in Political Science
15		Ph.D. in Economics
16		Ph.D. in Marathi
17		Ph. D in Linguistics
18		Ph.D. in French
19		Ph.D. in Lib. & Inf. Science
20	Commerce	Ph.D. in Business Economics
21		Ph.D. in Accounting and Financial Mgt.
22		Ph.D. in Banking & Insurance
23		Ph.D in Co-operative Management & Rural Studies
24		Ph.D. in Commerce and Business Management
25	Management	Ph.D. in Management Studies
26	Law	Ph.D. in Law
27	Education and Psychology	Ph.D. in Education
28		Ph.D. in Psychology

Sr. No.	Faculty	Ph.D. Programmers offered
29	Fine Arts	Ph.D. in Museology
30		Ph.D. in Art –History & Graphic Arts
31		Ph.D. in Painting
32		Ph.D. in Applied Arts
33		Ph.D. in Sculpture
34	Performing Arts	Ph.D. in Dance (Kathak)
35		Ph.D. in Music (Instrumental)
36		Ph.D. in Dramatics
37		Ph.D. in Music – Vocal
38		Ph.D. in Tabla
39	Social Work	Ph.D. in Social Work
40	Science	Ph.D. in Physics
41		Ph.D. in Chemistry
42		Ph.D. in Botany
43		Ph.D. in Bio-Chemistry
44		Ph.D. in Zoology
45		Ph.D. in Microbiology
46		Ph.D. in Geology
47		Ph.D. in Mathematics
48		Ph.D. in Statistics
49		Ph.D. in Environmental Studies
50		Ph.D. in Geography
51	Family and Community Sciences	Ph.D. in Foods and Nutrition
52		Ph.D. in Extension and Communication
53		Ph.D. in Clothing and Textile
54		Ph.D. in Family and Community Resource Management
55		Ph.D. in Human Development and Family Studies
56	Technology and Engineering	Ph.D. in Civil Engg.
57		Ph.D. in Mechanical Engg.
58		Ph.D. in Metallurgical & Material Engg.
59		Ph.D. in Electrical Engg.
60		Ph.D. in Chemical Engg.

Sr. No.	Faculty	Ph.D. Programmes offered
61	Technology and Engineering	Ph.D. in Applied Physics
61		Ph.D. in Applied Chemistry
63		Ph.D. in Architecture
64		Ph.D. in Applied Mathematics
65		Ph.D. in Computer Science & Engineering
66		Ph.D. in Textile Chemistry
67		Ph.D. in Textile Engineering
68	Pharmacy	Ph.D. in Pharmacy
69	Medicine	Ph.D. in Anatomy,
70		Ph.D. in Physiology
71		Ph.D. in Bio-Chemistry
72		Ph.D. in Medicine
73		Ph.D. in Preventive Social Medicine
74		Ph.D. in Psychiatry
75		Ph.D. in Skin & V.D
76		Ph.D. in Radiology
77		Ph.D. in Pulmonary Medicine
78		Ph.D. in Pathology
79		Ph.D. in Microbiology
80		Ph.D. in Pharmacology
81		Ph.D. in Forensic Medicine
82		Ph.D. in IHBT
83		Ph.D. in Surgery
84		Ph.D. in Orthopedics
85		Ph.D. in ENT
86		Ph.D. in Ophthalmology
87		Ph.D. in Anesthesiology
88		Ph.D. in Emergency Medicine
89		Ph.D. in Obstetrics & Gynecology
90		Ph.D. in Pediatrics
91		Ph.D. in Physiotherapy
92		Ph.D. in Plastic Surgery
93		Ph.D. in Nursing

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## V. Rules and Regulations for Ph.D. Programmes

### O.Ph.D.1 Eligibility criteria for admission to Ph.D. Programme

**1.1.** Candidates for admission to the Ph.D. Programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate without including the grace mark procedures or its equivalent grade 'B' in the UGC 7- point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.

**1.2.** A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/SEBC (Non-creamy layer)/Differently-abled and other categories of candidates as per the decision of the Government of Gujarat and other Statutory bodies, as applicable, from time-to-time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

Provided further that, if in spite of the above relaxation, the seats allotted for SC/ST/SEBC (Non-Creamy layer)/Differently-Abled categories remain unfilled, a Special Admission Drive shall have to be launched, for that particular category within one month from the date of closure of admissions of General Category. It shall have to be ensured that most of the seats under these categories are filled.

**1.3.** Candidates who have cleared the M.Phil. Course-work with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) and are on the way to successfully completing the M.Phil. Degree shall be eligible to proceed to do Research work leading to the Ph.D. Degree in the same Institution in an integrated programme. A person whose M.Phil. dissertation has been evaluated and the viva voce is pending may be admitted to the Ph.D. Programme of the same Institution; Candidates possessing a Degree considered equivalent to M.Phil. Degree of an Indian Institution, from a Foreign Educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions, shall be eligible for admission to Ph.D. Programme.

- 1.4. Related/Conjunct subject(s) shall be recommended by the concerned Departmental Research Committee (DRC), and approved by the Faculty-level Research Committee. Such introduction of Related/Conjunct Subject(s) must be reported to the Council of Post-Graduate Studies and Research and the Syndicate through the concerned Board of Studies. Such introduction of Related/Conjunct Subject(s) shall have to be proposed by the department concerned to respective Departmental Research Committee (DRC).
- 1.5. Notwithstanding anything contained hereinabove, whenever any candidate, after possessing requisite qualification of marks not less than 55% in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) in certain subject, applies for joining the Ph.D. Programme under the subject different from or not related to his/her post-graduation or an allied subject (Related/Conjunct Subject) under the Faculty/College/Institution, he/she may be permitted to join Ph.D. Programme in the desired subject upon recommendation from the Departmental Research Committee (DRC) and approval from the Faculty-level Research Advisory Committee (FLRAC). Such cases must be reported to the Council of Post-Graduate Studies and Research and the Syndicate for information. The application for this purpose shall have to be made by the interested candidate to the concerned Faculty. Such cases must be reported to the Council of Post-Graduate Studies and Research and the Syndicate for information.
- 1.6. Notwithstanding anything contained hereinabove, a person intending to register for the Ph.D. Degree of this University, working in a National Laboratory or an Institution outside the University area, recognized by this University for the purposes of imparting guidance and Research is eligible to register for Ph.D. Programme by virtue of having the requisite qualifying degree of this or any University, or an equivalent qualification having marks not less than 55% in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed). Such applications must be addressed to the concerned Departmental Research Committee (DRC), for consideration and approval by the Faculty-level Research Advisory Committee (FLRAC). Such cases must be reported to the Council of Post-Graduate Studies and Research and the Syndicate for information.
- 1.7. Joint Ph.D. Programmes can be offered subject to the Memorandum of Understanding with the collaborating Institution and the University that is approved by the Syndicate of the University.

#### **O.Ph.D.2 Duration of the Programme:**

- 2.1. Ph.D. Programme shall be for a minimum duration of Three [03] years, including course Work and a maximum duration of Six [06] years.
- 2.2. A Research Scholar intending to extend the period of Ph.D. registration beyond the Three [03] years/Six [06] consecutive Semesters from the date of registration/enrollment, and intends to continue the research work shall be required to apply for extension of Ph.D. registration to the Deputy Registrar (Academics), in prescribed format through the Guide for research degree, the Head of the Department and Dean/Principal/Director of the recognized Institution at least Three (03) months before the expiry of the Registration period.

- 2.3.** Deputy Registrar (Academics) may permit such application of extension up to a maximum period of Three (03) Years/Six (06) Semesters for Ph.D. Programme at once. A Research scholar who has so extended the period for Ph.D. registration, shall be required to submit the Ph.D. Thesis within this extended period of Three (03) Years/Six (06) Semesters from the first date of registration/enrolment.
- 2.4.** The Synopsis of the Ph.D. Thesis can be submitted after a minimum period of Two (02) Years from the date of Ph.D. registration/enrollment along with the prescribed fees to be deposited to the Deputy Registrar (Examinations) through the Guide for research degree, the Head of the concerned Department and the Dean of the concerned Faculty.
- 2.5.** Before submission of the Synopsis, a research scholar needs to present the Synopsis before the Departmental Research Committee (DRC), at most One (01) month before the submission of the Synopsis. The Synopsis must be submitted to the Deputy Registrar (Academics) within One (01) month from the date of presentation before the Departmental Research Committee (DRC), with necessary amendment(s)/correction(s), if any, suggested by the Departmental Research Committee (DRC), as the case may be.
- 2.6.** The minimum time limit for submitting the Ph.D. thesis shall be after Thirty (30) months from the date of Ph.D. registration/enrollment along with prescribed fees for submission of Ph.D. Thesis.
- 2.7.** However, the Ph.D. Degree notification shall be issued only after completion of Three (03) Years from the date of registration/enrollment. The Research scholar registered for the Ph.D. degree shall be required to present an open seminar in the department, at least twice in a year to review the progress of the research work.
- 2.8.** The Women Research scholars and Research scholars with Disability (more than 40% disability) may be allowed a relaxation of two years for Ph.D. Programme in the maximum duration. In addition, the women research scholars may be provided Maternity Leave/Child Care Leave once in the entire duration of Ph.D. studies for up to 240 days. Such leave period be not taken into account to count the aforesaid maximum duration of the Ph.D. Programme subject to production of necessary documentary evidences.
- 2.9.** Notwithstanding the provision contained hereinabove in the O.Ph.D.2.2 and O.Ph.D.2.3, the Vice-Chancellor, in Special Cases, may permit the Research Scholar to submit the Synopsis and/or the Ph.D. thesis late by granting necessary renewal. Such Research Scholar is required to pay the necessary additional fees for Ph.D. Programme for each additional Year(s)/Semester(s) or a part thereof. Such action taken by the Vice-Chancellor shall be reported to the Syndicate through the Council of Post-Graduate Studies and Research for information and noting.
- 2.10.** The Research scholar registered for Ph.D. Programme shall be required to pay the tuition and other fees as prescribed from time-to-time for all the terms from the date of registration/enrollment up to the date of submission of the thesis on production of Six-monthly Progress Report. However, submission of Six-monthly Progress Report shall not be required once the Synopsis is submitted by the Research scholar.

### **O.Ph.D.3 Procedure for Admission to Ph.D. Programme and Progression of Study**

- 3.1.** The University shall admit Ph.D. students through an Entrance Test conducted by The Maharaja Sayajirao University of Baroda. The Candidate who fulfils the conditions as stated in O.Ph.D.1, and has qualified in the National/State Level Eligibility Test or the Tests such as UGC-CSIR/NET/GSET/GATE/GPAT/DBT/ICMR/ICAR/JRF/NBHM/DST-INSPIRE/Teacher Fellowship Tests etc. or such other Eligibility Tests of National Level, as recognized equivalent thereto by Vice-Chancellor or has passed M.Phil. Programme shall be exempted from appearing in the Ph.D. Entrance Test conducted by The Maharaja Sayajirao University of Baroda.
- 3.2.** The candidates otherwise fulfilling the requirements as stated in O.Ph.D.1 but have not qualified in the National/State Level Eligibility Test or the Tests such as UGC-CSIR/NET/GSET/GATE/DBT/ICMR/ICAR/JRF/Teacher Fellowship Tests etc. shall have to qualify in the Ph.D. Entrance Test (PET) of The Maharaja Sayajirao University of Baroda in the concerned subject.
- 3.3.** The offer and conduct Ph.D. Programme, shall:
  - 3.3.1.** Decide on an annual basis a predetermined and manageable number of Ph.D. scholars to be admitted depending on the number of available Guide for research degree and other academic and physical facilities available, keeping in mind the norms regarding the Research scholar: Teacher ratio (as indicated in O.Ph.D.-IV-17), laboratory, library and such other facilities;
  - 3.3.2.** The concerned teacher may inform about the availability of positions for Ph.D. students through the Dean to the University and the same shall be advertised half yearly and such announcement shall have posted on the University website.
  - 3.3.3.** Notify well in advance on the institutional website and through advertisement in at least two (2) National Newspapers, of which at least one (1) shall be in the regional language, the number of seats for admission, subject/discipline-wise distribution of available seats, criteria for admission, procedure for admission, examination center(s) where entrance test(s) shall be conducted and all other relevant information for the benefit of the candidates;
  - 3.3.4.** Admission to the Ph.D. Programme shall adhere to the National/State-level reservation policy, as applicable.
- 3.4.** The admission shall be based on the criteria notified by the University, keeping in view the guidelines/norms in this regard issued by the UGC and other statutory bodies concerned, and taking into account the reservation policy of the Central/State Government from time-to-time.
- 3.5.** Notwithstanding anything contained hereinabove, a person working in a National Laboratory or an Institution outside the University area recognized by this University for purposes of giving guidance for Research and intending to register for the Ph.D. Degree of this University shall forward the application in the prescribed form for

admission. Such person complying to the eligibility criteria as stated in O.Ph.D.1 and O.Ph.D.3 hereinabove is eligible for such admission by virtue of having a qualifying degree of this or any University, or an equivalent qualification having marks not less than 55% in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed). The application form duly completed and signed by the recognized Guide for research degree shall be sent through the Head of the Laboratory or the Institution to the Dean of the Faculty concerned of this University.

- 3.6.** The University shall admit candidates for Ph.D. by a two-stage process through:
- 3.6.1.** An Entrance Test shall be qualifying test with qualifying marks as 50%. The syllabus of the Entrance Test shall consist of 50% of Research Methodology and 50% shall be Subject specific.
- 3.6.2.** A Virtual/Physical interview/viva-voce to be organized by the Departmental Research Committee. The candidates are required to discuss their Research proposal/Research interest/area through a presentation before a duly constituted Departmental Research Committee.
- 3.6.3.** The interview/viva voce shall also consider the following aspects, viz. whether:
- 3.6.3.1. The candidate possesses the competence for the proposed research;
- 3.6.3.2. The research work can be suitably undertaken at the Faculty/ College/Department/Institution/Centre;
- 3.6.3.3. The proposed area of research can contribute to new/additional knowledge.
- 3.7.** A student has to pay Yearly fees/Half-yearly fees, as prescribed from time-to-time, and in force, for admission required under relevant ordinances. The student shall apply for admission to the University only after obtaining the Certificate of eligibility on production of the required documents and the prescribed fees. On receipt of the completed application for registration and the prescribed fees, the University will issue a Registration Certificate showing the name of the research scholar, the date of registration, the title of research and the year in which the research scholar is entitled to submit the Thesis.
- 3.8.** The Department, Faculty and the University shall maintain the list of all the Ph.D. registered students on the website on year-wise basis. The list shall include the Name of the registered research scholars, Topic of the research, Name of the Guide for research degree/Co-guide, Date of registration/enrollment.
- 3.9.** A research scholar for Ph.D. degree after the registration shall be required to work for a minimum period of two years under the guidance of a Guide for research degree. All those research scholars who have been permitted to work in Recognized Laboratories/Institutions etc. shall also be required to work under the Guide for research degree/Co-guide for a minimum period of two years.

- 3.10.** Employees who are in-service in any other recognized University/College/Research institute/Industry/Organization etc. in India and have a minimum of three years teaching/research experience, will be considered for registration to Ph.D. degree only if they get 'No Objection Certificate' from the parent organization.
- 3.11.** Permanent teachers/Temporary teachers/Employee of this University shall be required to submit the 'No Objection Certificate' from the concerned Dean of the Faculty/Principal of the College/Head of the Institution to the effect of his/her Research work shall not adversely affect the teaching assignment/administrative assignment of the concerned faculty/college/institution.
- 3.12.** The research scholar under essentially required conditions may apply to the Departmental Research Committee to accord the permission to undertake the research work for maximum of 12 months in the Institute of the Co-guide. The same may be ordinarily permitted by the Departmental Research Committee to undertake the research work for maximum of 12 months. Any extension shall require the prior approval of Departmental Research Committee.
- 3.13.** A research scholar, in case of essentiality, may apply for the 'Change of Title for Ph.D. Thesis to the Departmental Research Committee through his/her Guide for research degree. The Departmental Research Committee (DRC) may, after suitable academic consideration, recommend the application appropriately to the Faculty-level Research Advisory Committee (FLRAC), which is empowered to approve such applications. The information to this effect shall be required to be submitted by the concerned Dean of the Faculty to the Deputy Registrar (Academics) for making the necessary changes in the University records.
- 3.14.** Guide for research degree may propose the cancellation of Ph.D. registration in the event of the research scholar is not exhibiting/showing satisfactory progress to the Departmental Research Committee. The recommendations of Departmental Research Committee (DRC) will be suitably considered by Faculty-level Research Advisory Committee (FLRAC), which shall be empowered to cancel the registration of a research scholar. Such action shall be required to be resolved and reported to the Deputy Registrar (Academics) through Dean of the Faculty/Principal of the College/Head or Director of the Institute for making the necessary changes in the University records.
- 3.15.** A research scholar may propose for withdrawal of his/her Ph.D. registration, for whatsoever reason(s), to the Departmental Research Committee. The recommendations of Departmental Research Committee (DRC) will be suitably considered by Faculty-level Research Advisory Committee (FLRAC), which shall be empowered to cancel the registration of a research scholar. Such action shall be required to be resolved and reported to the Deputy Registrar (Academics) through Dean of the Faculty/Principal of the College/Head or Director of the Institute for making the necessary changes in the University records.

#### **O.Ph.D.4 Eligibility criteria and Allocation of the Guide for research degree, Co-Guide, Self-Guide and Number of Ph.D. scholars permissible per Guide for research degree**

Only full time regular Teacher of The Maharaja Sayajirao University of Baroda shall act as Research Guide (Guide for research degree). However Co-Guide can be allowed in interdisciplinary areas from other departments of the University or from other related institution with the approval of Faculty-level Research Advisory Committee (FLRAC) and with due information to the Syndicate through the Council of Post-Graduate Studies & Research for noting.

- 4.1.** Any Professor of the University with at least five Research publications in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences shall be deemed as recognized as Guide for research degree. (Provided that he/she holds a Doctoral Degree or Equivalent research publications) in the respective subject, without referring their cases to the Council Post-Graduate Studies and Research and the Syndicate. However, such Professor shall be required to inform in writing their willingness to offer the services as Guide for research degree to the University. Their applications shall have to be forwarded through the Dean of the Faculty upon recommendation from the Head of the concerned department and the Faculty-level Research Advisory Committee (FLRAC) with all necessary documentary evidences about aforesaid criteria for their Research Publications.

Provided that in areas/disciplines where there are only a limited number of journals in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences are available or no such journals are available as such, the University may relax the above condition for recognition of a person as Guide for research degree with reasons recorded in writing. Such a case shall be reported to the Syndicate through the Council of Post-Graduate Studies and Research.

- 4.2.** Any Associate Professor/Assistant Professor of this University with a Ph.D. degree and at least two Research publications in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences may be recognized as Guide for research degree in the respective subject, without referring their cases to the Council Post-Graduate Studies and Research and the Syndicate. However, such Associate Professor/Assistant Professor shall be required to apply in writing their willingness to offer the services as Guide for research degree to the University. Their applications shall have to be forwarded through the Dean of the Faculty upon recommendation from the Head of the concerned department and the Faculty-level Research Advisory Committee (FLRAC) with all necessary documentary evidences about aforesaid criteria for their Research Publications.

Provided that in areas/disciplines where there are only a limited number of journals in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences are available or no such journals are available as such, the University may relax the above condition for recognition of a person as Guide for research degree with reasons recorded in writing. Such a case shall be reported to the Syndicate through the Council of Post-Graduate Studies and Research.

4.3. Provided further that for the applicants applying for recognition as guide for the research degree from the Faculty of Fine Arts and Faculty of Performing Arts, the existing stipulations as per the Syndicate resolution number 22 dated 29/11/2013 and Syndicate resolution number 32 dated 27/12/2013 shall remain effective.

4.4. The criterion for recognition as Guide for the research degree and that for Post-Graduate teacher under the Faculty of Medicine shall be as follows:

**4.4.1. Criterion for the Guide for research degree:**

The criterion for recognition as Guide for the research degree of the teachers of Faculty of Medicine shall be as per the guidelines of Medical Council of India Regulations, 2000 – (Amended up to May, 2013) as below:

“Ph.D. Degree may be instituted in all subjects wherever recognized postgraduate qualification in medical subjects are awarded by the concerned Universities subject to fulfillment of the following guidelines:

- A. Ph.D. shall be awarded only after completion of M.D. or M.S. or P.G. Diploma or M.Sc. in medical subjects.
- B. The period of training for Ph.D. shall be two years for candidates who possess M.D./M.S./P.G./Diploma in Three (03) Years for candidates with M.Sc. (Medical subjects).
- C. For starting Ph.D. course, the institution concerned shall have the following facilities namely:
  - (i) Adequate facilities for experimental medicine and experimental surgery;
  - (ii) Ancillary Departments, adequately equipped and well-staffed as prescribed for Postgraduate departments;
  - (iii) Adequate facilities for advanced research work and laboratory investigations in the departments of Biochemistry, Physiology, Microbiology, Histopathology, Radio-diagnosis etc.

A guide for the Ph.D. degree (Guide for research degree) shall have not less than fifteen year’s teaching and research experience after obtaining his post-graduate qualification and shall also have not less than Ten [10] Years post-graduate teaching experience as a faculty member.”

**4.4.2 Criterion for the Post-Graduate teacher:**

Each Clinical Unit, under the different departments of the Medical College, Baroda is considered as a whole for purposes of registration of Post-Graduate students and imparting instruction for the post-graduate courses. (While the Head of such a Unit should share the responsibility for post-graduate instruction with other recognized teachers of the Unit, he should have overall responsibility of certifying attendance statement, dissertations, etc.)

- A. Professor in each full-time department be deemed recognized as a University Post-Graduate teacher for imparting instruction for the Post-graduate courses.
- B. Post-graduate teacher in any subject should have 8 years of teaching experience out of which 5 years should be as the Assistant Professor and above.
- C. A teacher who is not holding a Medical Post-Graduate degree shall not be allowed to guide a Post-Graduate student for the Medical degrees.

4.5. A permanent teacher working in this University and is having required eligibility for registration for the admission to the degree of Doctor of Philosophy as defined under O.Ph.D.1 and also having at least five Research publications in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences, may apply to the council of Post-Graduate Studies and Research through proper channel, for **self-guide**. Provided further that the recognition for the self-guide for the research degree shall be awarded only if there do not exist any recognized Guide for the Research degree in the concerned department.

4.6. Every recognized Guide for research degree must be attached to the Faculty/Institution of this University, and the recognition will continue so long as one answers the designation on the basis of which the recognition was granted, till the date of retirement and/or if the services of such Guide for research degree is continued as per the UGC's scheme.

The Faculty-level Research Advisory Committee (FLRAC) is empowered to allow to extend/continue the guide-ship of such Guide for research degree either for those already registered research scholars or for remaining period of the services, as the case may be. Those Guide for research degree whose services are extended under the scheme of statutory bodies will be permitted for registration of new research scholars within the First year of newly extended period within the aforesaid stipulation. Such action shall be required to be reported to the Deputy Registrar (Academics) through proper channel for making necessary changes in the University records and is to be reported to the Syndicate through the Council of Post-graduate Studies and Research for noting.

4.7. In case of the topics which are of inter-disciplinary in nature, and where the Department concerned feels that the expertise in the Department has to be supplemented from outside, the Departmental Research Committee may recommend a **Co-guide** for research degree, with the approval of the Faculty-level Research Advisory Committee (FLRAC). Such application for recognition of the Co-guide shall be granted by the Vice-Chancellor and reported to the Syndicate for information through the Council of Post-Graduate Studies and Research upon such terms and conditions as may be specified and agreed upon.

4.8. Further, when a research scholar registered under a guide of any subject in any department may request permission to have a **Co-guide** from any National Laboratory or Research Institution outside the University or from any other department/faculty within this university. Such request shall be considered by the Faculty-level Research Advisory Committee (FLRAC) of the Faculty.

4.9. The Departmental Research Committee, on the recommendation of the Guide for research degree, may recommend the scholars of eminence, outside the Department/Faculty/University, who shall be residing in India or abroad, as **Co-guide** from the Institution recognized for imparting the Research studies or any Institution with repute.

- 4.10.** The allocation of Guide for research degree/Co-guide for a selected Research scholar shall be decided by the Department concerned depending on the number of scholars per Guide for research degree, the available specialization among the Guides for research degree/Co-guide and research interests of the Research scholars as indicated by them at the time of interview/viva voce.
- 4.11.** The Departmental Research Committee shall have to recommend the application for **Co-guide** to the University through the Faculty-level Research Advisory Committee (FLRAC). The recognition of Co-guide shall be as per the stipulated rules as specified in the present O.Ph.D.4 and recognition letter shall be issued by the University.
- 4.12.** The following shall be the guidelines to which the Council of Post-graduate studies and Research will give due consideration while recognizing External Co-guide(s) (Persons from Outside the University) for research degree as qualified for guiding research scholars for Ph. D. Degree:
- 4.12.1.** Any person from Institutions/Laboratories or Research Institution / Industry / Government Department / Institution etc. be deemed recognized Co-guide(s) for research degree for guiding Ph.D. research scholars without referring their cases to the Council of Post-Graduate Studies and Research and the Syndicate, provided such persons are from Scientific / Technical / Managerial / Administrative / Government cadre and having Ph.D. degree in the respective subject. However, such person shall submit a formal application in the prescribed form to the University for recognition as a Co-guide.
- 4.12.2.** He/She has obtained the Ph.D. Degree;
- 4.12.3.** He/She should have obtained Master's Degree with at least 55% having consistently good academic record or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by the Ministry of Education, and the degree of Ph.D. has been accorded equivalence by AIU, New Delhi.
- 4.13.** Every-recognized Co-guide must be permanent employee of the Institution/Laboratory and the recognition will continue so long as one answers the designation on the basis of which the recognition was accorded and is in the employment of the same Institution. However, if such a Co-guide has guided for Four Terms or more and if he/she is willing to continue after leaving the Institution/Laboratory recognized by this University, his/her application in this matter will be favourably considered by the University.
- 4.14.** The Guide for research degree must ensure that the co-guide(s) should maintain the active academic interaction with the University.
- 4.15.** Viva-voce examination of the Research scholar will be held in concerned University Department/Faculty. However, Vice-Chancellor is empowered to take appropriate decision in exigency conditions, on case-to-case basis.

**4.16.** In the case of a student registered in this University working under a recognized Co-guide for research degree from recognized Institutions outside the university or he/she being the Self-guide, the Dean of the concerned Faculty, in consultation with Head of the concerned Department will act as coordinator for establishing liaison between the Research scholar, the Co-guide or the self-guide, as the case may be, the Department concerned and the University. The following are the responsibilities of the coordinator for such purpose:

**4.16.1.** The Coordinator needs to ensure that the Research scholar comes to the University department at least twice a year to present the progress of the research work done during the year to the concerned Departmental Research Committee.

**4.16.2.** Coordinating for the appointment of External Examiner.

**4.16.3.** The Coordinator, in case of a self-guide shall take follow up with the External Examiner for the evaluation reports / correction(s) / clarification(s) / suggestion(s) related to the evaluation reports.

**4.16.4.** Coordinator must ensure verification of the incorporation of the suggested corrections by the self-guide.

**4.16.5.** Coordinating with the External Examiner and the self-guide for the Open Public Viva-voce (Open defense) Examination.

**4.16.6.** Coordinator need to authenticates and forward the reports on the Open Public Viva-voce (Open defense) Examination of the self-guide.

**4.17.** Number of Ph.D. Scholars Permissible Per Guide and Co Guide(s) for Ph.D. Research Degree:

**4.17.1.** A Guide for research degree who is a Professor/Co-guide, at any given point of time, cannot guide more than Eight [08] Ph.D. scholars. The new vacancy for afresh Ph.D. Registration will be created in proportion to the Ph.D. Notification of those students who have registered under the respective Guide for research degree.

**4.17.2.** An Associate Professor/Co-guide as Guide for research degree can guide up to a maximum of Six [06] Ph.D. scholars. The new vacancy for the fresh Ph.D. Registration will be created in proportion to the Ph.D. Notification of those students who have registered under the respective Guide for research degree.

**4.17.3.** An Assistant Professor as Guide for research degree can guide up to a maximum of four [04] Ph.D. scholars. The new vacancy for the fresh Ph.D. Registration will be created in proportion to the Ph.D. Notification of those students who have registered under the respective Guide for research degree.

- 4.18. Change of a Guide for research degree/Co-guide:** A research scholar desirous of changing the Guide for research degree shall apply to the Faculty-level Research Advisory Committee (FLRAC) through both the existing Guide for research degree and the proposed Guide for research degree, Head of the concerned Department. Faculty-level Research Advisory Committee (FLRAC) is empowered to act on such application with the reason(s) to be recorded in writing. Such action shall be required to be reported to the Deputy Registrar (Academics) through proper channel for updating in the University records.

Provided that in the cases of retirement of a Guide for research degree or death of a guide or long leave or prolonged sickness of a guide or the cases of similar nature, a research scholar may apply to the Faculty-level Research Advisory Committee (FLRAC) for changing the Guide for research degree. FRAC is empowered to act on such application with the reason(s) to be recorded in writing. Such action shall be required to be reported to the Deputy Registrar (Academics) through proper channel for updating in the University records.

- 4.19.** In case of relocation of an Ph.D. scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the scholar intends to relocate provided all the other conditions in these regulations are followed in letter and spirit and the research work does not pertain to the project secured by the Parent institution/Guide for research degree from any funding agency. The scholar will however give due credit to the parent guide and the University/Institution for the part of research already done.

- 4.20. Equivalence for Ph.D.:** As per AICTE Notification dated 01/03/2019, the person of eminence wishing to become the Guide for research degree not holding the Ph.D. degree but have;

- 5 Research publications in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences with the criteria that each Journal having a cumulative impact index of not less than 2.0, with incumbent as the main author and all 5 publications being in the authors' area of specialization;  
OR
- An incumbent should have obtained at least two patents;  
OR
- An incumbent contributed to the increased productivity in the place of work recognized at State or National level or elected as a Fellow of any of the National academies

However, the administrative procedure of providing such equivalence for Ph.D. shall be devised by the University.

- 4.21. Withdrawal of recognition for Guide for research degree/Co-guide:** Notwithstanding anything contained hereinabove in O.Ph.D.4, the Syndicate may, at any time, on the recommendation of the Council of Post-Graduate Studies and Research shall be empowered to withdraw the recognition of a Guide/Co-guide for research degree.

**O.Ph.D.5 Course-work: Credit Requirements, number, duration, syllabus, minimum standards for completion, etc.**

- 5.1. The course-work shall be treated as prerequisite for the award of Ph.D. degree.** All research scholars admitted to the Ph.D. Programme shall be required to complete the course-work prescribed by the Faculty/College/Department/Institute/Center during the initial one or two semesters.
- 5.2.** The credits assigned to the Ph.D. course-work shall be a minimum of 08 credits and a maximum of 16 credits.
- 5.3.** Faculty/College/Department/Institute/Center level Four [04] credits shall be assigned to one or more courses on Research Methodology which could cover areas such as Quantitative methods, Computer applications, Research ethics and Review of published research in the relevant field, training, field work, etc. Other shall be advanced level courses for preparing the research scholar for Ph.D. degree.
- 5.4.** All courses prescribed for Ph.D. course-work shall be in conformity with the credit hour instructional requirement and shall specify content, instructional and assessment methods. They shall be duly approved by the concerned Faculty-level Research Advisory Committee (FLRAC) upon recommendation by the Departmental Research Committee (DRC).
- 5.5.** The Faculty-level Research Advisory Committee (FLRAC)/Departmental Research Committee (DRC)/Institute-level Research Advisory Committee (ILRAC) shall suggest courses related to the subject within and outside the department, equivalent to at least 6 credits (1 credit = 15 hours of teaching) in the relevant area. This Faculty/Department/Institute level course-work may also include other specialized areas of studies, based on the need of approved research topic for the studies, which the Guide for research degree considers necessary and that the Research scholar must acquire the proficiency in these areas as well.
- 5.6.** The Faculty-level Research Advisory Committee (FLRAC)/Departmental Research Committee (DRC)/Institute Level Research Advisory Committee (ILRAC), where the scholar pursues the research work, shall prescribe the course(s) to him/her, as stipulated under O.Ph.D.6 herein under, for the research scholar.
- 5.7.** A research scholar having completed the Pre-Ph.D. course-work from another university and moving to The Maharaja Sayajirao University of Baroda, shall be exempted from the course-work. The credits so obtained shall be treated at par with the credits of this University. However, such a research scholar will have to appear in the University Entrance Examination (PET) as applicable to Fresh Candidates directly registering for Ph.D.

- 5.8.** Candidates already holding M. Phil. degree and admitted to the Ph.D. Programme, or those who have already completed the course-work in M.Phil. and have been permitted to proceed to the Ph.D. Programme (including integrated Ph.D. Programme, if any), may be exempted by the Faculty-level Research Advisory Committee (FLRAC)/Institute Level Research Advisory Committee (ILRAC) from the Ph.D. course-work.
- 5.9.** Grades in the course-work, including Research methodology courses shall be finalized after a combined assessment by the Faculty-level Research Advisory Committee (FLRAC) and the Department/Institute Level Research Advisory Committee (ILRAC). The certification of the final grades in prescribed format shall be communicated to the University, by the concerned Dean of the Faculty/Director of the Institute by informing the Research scholar concerned and the Guide for research degree.
- 5.10.** The Ph.D. scholar has to obtain a minimum of 55% of marks in the prescribed Grade Point Scale (or an equivalent grade/CGPA in a point scale wherever grading system is followed) and Structure of the University in the course-work in order to become eligible to continue in the respective Programme and submit the dissertation/thesis, as the case may be.

#### **O.Ph.D.6 The Departmental Research Committee, the Faculty-level Research Advisory Committee (FLRAC), and their functions**

- 6.1.** There shall be a **Departmental Research Committee (DRC)** for each Ph.D. scholar. The constitution of this committee is as under:
- Dean of the concerned Faculty – Chairperson
  - Head of the concerned department – Co-chairperson
  - Guide for Research Degree – Convener
  - An Expert from the concerned subject [As nominated by Vice-Chancellor] – Member
  - One Professor [Must be a Guide for Research Degree] – Member
  - One Associate Professor [Must be a Guide for Research Degree] – Member
  - One Assistant Professor [Must be a Guide for Research Degree] – Member

*Note: Where the Guide for research degree is also the Head of the Department concerned, then a senior teacher of the Department concerned who is a recognized Guide for research degree be included in Departmental Research Committee (DRC). Where the Guide for research degree is both Head of the Department and Dean of the Faculty concerned, then two such teachers of the Department concerned is included in the Departmental Research Committee (DRC). If the Department concerned does not have the required number of such teachers, then such number of senior teachers who are Guide for research degree from “other related Department(s) of the Faculty/University” concerned be included in the Departmental Research Committee (DRC) so that in any given situation, the Departmental Research Committee (DRC) consists of not less than two other such teachers in addition to the Guide for research degree.*

The Departmental Research Committee (DRC) shall meet at least once every three months, and submits the proceedings to the Dean of the concerned Faculty. The proceedings of Departmental Research Committee (DRC) shall be required to be placed before the concerned Boards of Studies as well as Faculty-level Research Advisory Committee (FLRAC) as defined herein under for information and noting about the actions within its empowerment.

This Committee shall have the following responsibilities:

- i. To review the research proposal and finalize the topic of research.
  - ii. To guide the research scholar to develop the study design and methodology of research and identify the course(s) that he /she may have to do so.
  - iii. To periodically review and assist in the progress of the research work of the research scholar.
  - iv. To hold the interview and viva-voce for the Research scholar intending to join Ph.D. and recommend the area of research based on the review of research proposal;
  - v. To recommend the Guide for research degree as per the area of research of the applicant;
  - vi. To recommend the application of research from the candidate to undergo the research work under the interdisciplinary subject/subject not related with the qualifying post-graduate degree;
  - vii. To recommend the conjunct/related subject(s) for the concerned department;
  - viii. To suggest, recommend and prescribe the subjects and areas of Departmental Level Course-work;
  - ix. To review the progress of research work periodically upon the presentation from research scholar and assist in the progress of the research work of the research scholar/self-guide;
  - x. To recommend the cases of researcher wherein the title of Ph.D. need to be altered/changed, on merit of an application;
  - xi. To vet, scrutinize and recommend the applications for the Co-guide from within the University or outside the University under a recognized Institution for imparting the Research work or an Institution of repute, if need be, and dealt with the extension of research-work outside the University;
  - xii. To attend the Open Public Viva-voce (Open defense) and recommend the critique, if any;
  - xiii. To review/examine ethical issues involved in undertaking research on the topic, it's methodology plan of the research scholar and suggest changes required (if any), as applicable.
  - xiv. To undertake such other duties, as recommended and entrusted upon, in order to elevate the research standards from time-to-time.
- 6.2.** A research scholar shall appear before the Departmental Research Committee (DRC) once in six months to make the virtual/physical presentation of the progress of the research work for evaluation and further guidance. The six monthly progress reports shall be submitted by the Departmental Research Committee (DRC) to the University with a copy to the research scholar.
- 6.3.** In case the progress of the research scholar is unsatisfactory, the Departmental Research Committee (DRC) shall record the reasons for the same and suggest corrective

measure(s). If the research scholar fails to implement these corrective measures, the Departmental Research Committee (DRC) may recommend to the Faculty-level Research Advisory Committee (FLRAC) with specific reasons for cancellation of the registration of the research scholar.

**6.4.** There shall be a **Faculty-level Research Advisory Committee (FLRAC) (FRAC)** at the Faculty Level for Ph.D. scholars. The constitution of this committee is as under:

- Dean of the Faculty – Chairperson
- Heads of the departments – Members
- Two Experts from the concerned subject [As nominated by Vice-Chancellor] – Members
- Two Guides for research degree from the concerned faculty (As nominated by Vice-Chancellor) – Members
- Two Professors [Must be a Guide for Research Degree] (As nominated by Vice-Chancellor) – Members
- One Associate Professor [Must be a Guide for Research Degree] – Member
- One Assistant Professor [Must be a Guide for Research Degree] – Member

The FRAC shall meet at least once every four months, and submits the proceedings to the Deputy Registrar (Academics) for placing the same before the meeting of the concerned Faculty or the Council of Post-Graduate Studies and Research, as the case may be.

**Note: Those faculties having single department/subject, shall have the FRAC only.**

This Committee shall have the following responsibilities:

- i. To vet, scrutinize and approve the applications for the Guide for research degree as per the criteria laid down in the present Ordinance Ph.D.;
- ii. To vet, scrutinize and recommend the application for Co-guide received from the Departmental Research Committee (DRC) to the University;
- iii. To vet, scrutinize, approve and report the application for Research work under Interdisciplinary subject/subject not related with the qualifying post-graduate degree;
- iv. To consider the recommendation of Departmental Research Committee (DRC) with regard to ‘Change of the Title for Ph.D. Thesis’; approve the same on merit of the case and report the same to the University;
- v. To consider, approve and report the matters related with the cases of cancellation/withdrawal of Ph.D. Registration intended by either the Guide for research degree or the Research scholar, as the case may be;
- vi. To consider and approve the applications for change of the Guide for research degree, upon merit of the application and on case-to-case basis, and report the same to the University;
- vii. To consider and approve the Departmental Level Course-work as prescribed and recommended by Departmental Research Committee (DRC);
- viii. To consider, accept and report the applications of continuation of Guide for research degree after retirement from the University;
- ix. To finalize the grades of the Departmental Level Course-work in consultation with the concerned department;

- x. To recommend the manes of the External Examiners in those subjects/departments wherein the specific board of studies and/or subject do not exist;
- xi. To oversee the overall research activity of the Faculty as a whole periodically and to undertake such other duties, as deem fit, in order to elevate the research standards of the faculty from time-to-time.

### **O.Ph.D.7 Evaluation and Assessment Methods, Minimum Standards/Credits for Award of the Degree**

- 7.1.** Upon satisfactory completion of course-work, and obtaining a minimum of 55% of marks in the prescribed Grade Point Scale and Structure of the University (As prescribed in O.Ph.D.5.10) the Ph.D. Scholar shall be required to undertake research work and produce a Synopsis on completion of Two (02) Years (Extendable up to a maximum period of Four (04) Years) from the date of Ph.D. registration.
- 7.2.** The Research scholar, after submission of the synopsis, shall require to submit the Ph.D. thesis within a maximum period of ONE [01] year, failing which he/she need to propose for an additional period of extension, not beyond the Three [03] years/Six [06] Semesters – within the maximum permissible limit as stipulated under O.Ph.D.2. An application of extension must be forwarded through the Guide for research degree, the Head of the Department and the Dean of the Faculty/Director of the Institute, upon the recommendation of the Departmental Research Committee (DRC)/Institute-level research advisory Committee. Such application may be duly considered and permitted by the Deputy Registrar (Academics) within the stipulated period of Ph.D. registration within O.Ph.D.2.
- 7.3.** At most One (01) month prior to the submission of the Ph.D. Synopsis, the Research scholar shall make a presentation before the Departmental Research Committee (DRC)/Faculty-level research Committee (FLRAC)/Institute-level Research Advisory Committee (ILRAC), which shall also be open to all faculty members and other research scholars. The feedback and comments obtained from them may be suitably incorporated into the Ph.D. Thesis in consultation with the Departmental Research Committee (DRC).
- 7.4.** The thesis can be submitted at any time during the year, after the prescribed period in this Ordinance.
- 7.5.** The Ph.D. Thesis shall be written in English language, or otherwise when its subject matter is related to or based on a Modern European or Indian Languages, it may be written in the relevant language.
- 7.6.** The thesis shall be submitted through the Guide for research degree, Head of the Department and the Dean of the Faculty/Director of the Institute along with a certificate signed by the research scholar and the Guide for research degree within a period as stipulated under O.Ph.D.3.

- 7.7.** The Board of Studies concerned shall recommend a list of at least Eight [08] Examiners for evaluation of Ph.D. Thesis. In case of those subjects, where there does not exist any board of study, the concerned Faculty-level Research Advisory Committee (FLRAC)/Institute-level research Committee is empowered for submission of names of External Examiners as specified hereinabove.
- 7.7.1.** Two [02] Examiners shall be preferably from the outside country and 06 shall be from within the country, out of which not more than 02 shall be from within the State of Gujarat.
- 7.8.** Vice-Chancellor of the University is empowered to relax this requirement, upon the academic considerations on case-to-case basis, for which the reasons to be recorded in writing, and shall be reported to the Syndicate through the Council of Post-Graduate Studies and Research.
- 7.9.** It is desirable to have the External Examiners preferably from University Departments/Reputed Institutions/Premier Institutes, and she/he should preferably an Associate Professor/Professor.
- 7.10.** External Examiner once appointed by Hon'ble Vice-Chancellor and assigned the responsibility to act as Evaluator for Ph.D. thesis, his/her name should not be recommended by the concerned board of study for another period of One (01) Year again. The format for the recommendation of the Panel of External Examiners must include certification for this criterion. Certification to the fulfillment of this criterion shall be obtained from the Chairman/Chairperson of the concerned board of study/Head of the department/Coordinator for the research work. In extra ordinary circumstances, Hon'ble Vice-Chancellor is authorized to relax this condition.
- 7.11.** The panel of External Examiners shall be recommended by the Guide for research degree directly to the office of the Deputy Registrar (Academics), The Maharaja Sayajirao University of Baroda, Vadodara. The same will be placed for due consideration before the concerned Board of Studies at its meeting. The same will be finalized at the meeting itself and submitted in a sealed envelope to the Office of the Deputy Registrar (Academics), The Maharaja Sayajirao University of Baroda, Vadodara. Guide for research degree, while recommending the list of Examiners, shall have to ensure that the Examiners are well below the superannuation age (i.e. 62 Years, as of now, as amended from time-to-time by the Government of Gujarat). Concerned Guide(s) of research degree shall also be invited during the meeting of Board of studies as an invitee member or he/she shall have to be included in the chain of circulation while consideration for finalization of the Panel of External Examiners, if he/she is not the member of respective Board of studies, as the case may be.
- 7.12.** In case, if the Board of studies is not likely to meet, the Panel of External Examiners shall be recommended by circulation among all the members of the concerned Board of studies. The Chairperson-Board of Studies/Head of the concerned department/Director of the Institute shall finally submit the sealed envelope of the Panel of External Examiners to the Office of Deputy Registrar (Academics), The Maharaja Sayajirao University of Baroda. Deputy Registrar (Academics) may to permit such a proposal of allowing the finalization of the Panel of examiners through circulation.

- 7.13.** The Ph.D. scholars must publish at least One [01] Research paper in the journals listed in UGC CARE Reference List, SCOPUS Listing or WEB of Sciences and make Two [02] Paper presentations in Conference(s)/Seminar(s) before the submission of the Ph.D. Thesis for adjudication, and submit the evidence for the same in the form of a Hard Copy and/or Soft Copy [Scanned Copy] with clear evidence for the same in the form of Presentation Certificate(s) and/or Reprint(s) if available, otherwise Acceptance letter from the Publisher/Editor, with own undertaking in writing that he/she shall submit the Presentation Certificate(s) and/or Reprint(s) before the conduct of Open Public Viva-voce (Open defense) Examination or actual release of Notification for conferring award of degree of Ph.D.
- 7.14.** Before submission of Ph.D. Thesis, each research scholar shall be required to fulfil the requirements prescribed by the Post-Graduate Council of Studies and Research of The Maharaja Sayajirao University of Baroda, Vadodara with respect to detection of plagiarism and any other forms of Academic Dishonesty.
- 7.15.** The Ph.D. Thesis while submitted for evaluation, shall be accompanied with the original report of the anti-plagiarism software approved by The Maharaja Sayajirao University of Baroda, Vadodara, an undertaking from the Research scholar and a Certificate from the Guide for research degree attesting to the originality of the work, vouching that there is no plagiarism and no other Academic dishonesty and that the work has not been submitted for the award of any other Degree/Diploma of The Maharaja Sayajirao University of Baroda, Vadodara, or to any other University/Institution as the case may be.
- 7.16.** Guidelines for the requirement of number of Research publications before submission of Ph.D. Thesis, as issued by The Maharaja Sayajirao University of Baroda, Vadodara, and amended from time-to-time and displayed on the official website of the University shall be required to be complied with by the Research scholars.
- 7.17.** The Ph.D. Thesis shall be submitted in Spiral bound/Soft bound/Book type bound form along with a soft copy [in PDF Format] as per the required format along with the following attachments:
- 7.17.1.** 02 copies of the 'Abstract' (Other than the Synopsis) shall be submitted in prescribed format to the Deputy Registrar (Academics), The Maharaja Sayajirao University of Baroda, Vadodara. The Research scholar and the Guide for research degree shall jointly verify and ensure that the contents of the softcopy are as per the prescribed format.
- 7.17.2.** The research scholar shall submit **02 copies** of the Ph.D. Thesis along with Softcopies (In MS-WORD and/or PDF) (In 03 separate CDs) (02 for External Examiners + 01 Proof of Submission) and produce an acknowledgement of the receipt of Deputy Registrar (Examinations), The Maharaja Sayajirao University of Baroda, Vadodara to the Guide for research degree and the Dean of the concerned Faculty and/or Director of the concerned Institution to the Deputy Registrar (Examinations), The Maharaja Sayajirao University of Baroda, Vadodara.

**7.17.3.** The Ph.D. Thesis shall include a Certificate of the Guide for research degree and a Declaration by the Research scholar that the research work reported in the Ph.D. Thesis has been carried out by the Research scholar himself/herself and that the material from other sources, if any, is duly acknowledged.

**7.17.4.** The softcopy of the Executive summary of the Ph.D. thesis consisting of the Table of contents, the brief Research methodology, the Key findings, Conclusions, and the Recommendations/Suggestions etc. along with the Bibliography and Webliography for hosting the same on the website of the University website for a period of 10 days.

Following modality will have to be followed by the Office of Examination section after forwarding the Ph.D. thesis for evaluation:

7.17.4.1. The Executive summary will be uploaded on the University website on every 10<sup>th</sup>, 20<sup>th</sup> and the 30<sup>th</sup> day of respective month.

7.17.4.2. If no suggestions/comments are received within the period of 10 days after hosting of the research work, the same will be recorded in the case.

7.17.4.3. As soon as the Joint final consolidated report on the Open Public Viva-voce (Open defense) Examination is received from the Guide for research degree and the External Examiner(s), Hon'ble Vice-Chancellor is authorized for the acceptance of the thesis for the Ph.D. degree.

7.17.4.4. The Office of Examination section immediately notifies the Ph.D. Notification of the concerned Research scholar, after due administrative formalities.

Note: If the 10th day/20th day/30th day of respective month fall on the holiday – or in the month of February; the next working day will be considered for hosting of the aforesaid submission.

**7.18.** The Ph.D. Thesis shall be presented in accordance with the following specifications:

**7.18.1.** The paper used for printing shall be of A4 size.

**7.18.2.** Printing shall be in a standardized form on both sides of the paper and in 1.5 line spacing.

**7.18.3.** A margin of 1.5 inches shall be on the left hand side.

**7.18.4.** The card for cover shall not be more than 330 GSM.

**7.18.5.** The title of the Ph.D. Thesis, Name of the Research scholar, Degree, and Name of the Guide for research degree, Details about Name of the concerned Faculty as well as Department or Institute, and the Month and Year of submission shall

be required to be printed on the Title Page and the Front Cover of the final Ph.D. Thesis as the case may be.

- 7.19.** The Vice-Chancellor shall nominate Two [02] External Examiners for evaluation of Ph.D. Thesis from among the names (preferably Professors or equivalent in ranks) recommended by the Council of Post-Graduate Studies and Research upon the preparation of the panel of examiners by the relevant Board of Studies/Institute-level Research Advisory Committee (ILRAC).
- 7.20.** In case of a Self-guide or the case where there does not exist any Guide for research degree, such cases will be addressed by the Dean of the Faculty in consultation with the Head of the concerned department. In case a Self-guide happens to be the Head of the department, a senior Professor of the department or a senior Professor from the Faculty will be assigned the responsibility to coordinate and arrange for the Open Public Viva-voce (Open defense) Examination with the help of at least one of the two External Examiner.
- 7.21.** The Ph.D. Thesis submitted by a Research scholar shall be evaluated by the Guide for research degree and at least Two External Examiners, who are not in the Employment of The Maharaja Sayajirao University of Baroda, Vadodara and/or Recognized Research Institution, of whom one examiner preferably should be from outside the Gujarat State/Country.
- 7.22.** The External Examiners shall submit the detailed report on the evaluation of the Ph.D. Thesis and clear recommendations as per the prescribed format.
- 7.23.** The Open Public Viva-voce (Open defense) Examination of the research scholar to defend the Ph.D. Thesis shall be conducted only if the evaluation reports of both the External Examiners are satisfactory and include a specific recommendation for conducting the Open Public Viva-voce Examination.
- 7.24.** If the External Examiners ask for certain clarifications, before giving their clear recommendation, the Guide for research degree may get in touch with the Research scholar to obtain the required information, and communicate the same to the External Examiner. In such cases, where the External Examiners reserve their recommendations and suggest an Open Public Viva-voce (Open defense) Examination and if the research scholar satisfies the Viva-voce committee [The Guide for research degree and the External Examiner (Chairperson) present], on the points raised by the two External Examiners.
- 7.25.** If one of the External Examiner of the Ph.D. thesis reports that the Ph.D. thesis, is unsatisfactory and does not recommend Open Public Viva-voce (Open defense) Examination, the Deputy Registrar (Examinations), The Maharaja Sayajirao University of Baroda, Vadodara shall forward the Ph.D. Thesis to another External Examiner, as nominated by Vice-Chancellor, from out of the approved panel of examiners. Provided further that when it is decided to appoint third External Examiner the copies of the reports of both the External Examiners, favourable as well as adverse, be sent to the third External Examiner for the perusal, without disclosing the identity of earlier External Examiners.

- 7.26.** The Open Public Viva-voce (Open defense) Examination shall be held only if the report of the latest External Examiner is satisfactory. If the report of the latest External Examiner is also unsatisfactory, the Ph.D. Thesis shall be rejected and the Research scholar shall be declared ineligible for the award of the Ph.D. Degree.
- 7.27.** If both the External Examiners consider that the thesis is unacceptable for the award of the Ph.D. Degree, Open Public Viva-voce (Open defense) Examination test of the Research scholar shall be not be conducted, and the Reports of all the External Examiners shall be placed before the Syndicate. The decision of the Syndicate shall be final for non-award of the Ph.D. degree, as the case may be.
- 7.28.** After the receipt of the reports as prescribed herein under, the Open Public Viva-voce (Open defense) Examination shall be proposed by the Guide for research degree by inviting one of the External Examiner (preferably the nearer distant External Examiner) who have evaluated the Ph.D. Thesis [In case of Virtual Open Public Viva-voce (Open defense), the Guide for research degree must invite both the External examiners for attending the virtual Public Viva-voce (Open defense)].
- 7.29.** The Physical Open Public Viva-voce (Open defense) Examination, based among other things, on the critiques given in the evaluation report, shall be conducted by the Guide for research degree and at least One of the External Examiner [In case of Virtual Open Public Viva-voce (Open defense), the Guide for research degree must invite both the External examiners for attending the virtual Public Viva-voce (Open defense)]. Public Viva-voce (Open defense) shall be open to be attended by the members of the Departmental Research Committee (DRC), all members of the Department/Faculty/Institution, other research scholars and other interested experts/researchers as the case may be.
- 7.30.** Open Public Viva-voce (Open defense) Examination of the Thesis:
- 7.30.1.** The Open Public Viva-voce (Open defense) Examination shall be chaired by the External Examiner and in presence of the Guide for research degree.
- 7.30.2.** If the External Examiner is unable to remain present at the time of the defense, the Vice-Chancellor, on the recommendation of the Guide for research degree and the Dean of the Faculty concerned, shall appoint a senior Guide for research degree to act as the Chairperson for the Open Public Viva-voce (Open defense) Examination of the Ph.D. Thesis. In case, the Guide for research degree is not available, the Vice-Chancellor shall appoint one of the senior Guide for research degree on the recommendation of the Dean of the Faculty concerned to act as an Internal Examiner for the Open Public Viva-voce (Open defense) Examination of the Ph.D. Thesis.
- 7.30.3.** The day, date, time and the place for the Open Public Viva-voce (Open defense) Examination of Ph.D. Thesis shall be notified by the Dean of the Faculty/Director in case of an institution, at least three days in advance.

Normally, the Open Public Viva-voce (Open defense) Examination of the thesis shall be arranged in the University Department. In exceptional cases, the Vice-Chancellor may allow the Open Public Viva-voce (Open defense) Examination to be conducted at a Place of Research outside the campus of The Maharaja Sayajirao University of Baroda, Vadodara. In such a case, the procedure and norms for the conduct of Open Public Viva-voce (Open defense) Examination, payments, etc. shall be as laid down by the The Maharaja Sayajirao University of Baroda, Vadodara.

**7.30.4.** Other members and Research scholars from the department/faculty, the members of Departmental Research Committee (DRC), and such other interested experts/researchers may also attend the same.

**7.30.5.** Dean of the concerned Faculty will coordinate and invite the member of the Council of Post-Graduate Studies & Research of concerned constituency while organizing the Open Public Viva-voce (Open defense) Examination, in consultation with the Internal Guide and the Head of the concerned department.

**7.30.6.** All Open Public Viva-voce (Open defense) Examination must be undergone in the Videography. Deans of the concerned Faculty shall be required to preserve, store and maintain the safe custody of the footage of Open Public Viva-voce (Open defense) Examination separately for each research scholar. These footages are primarily not required to be forwarded to the university, but the same may be provided on demand basis.

In case of any dispute, the Dean of the Faculty concerned shall take an appropriate decision.

**7.31.** In order to have the academic enrichment the members of the Council of Postgraduate Studies & Research recommends that the External Examiner visiting the department will be invited to deliver at least one lecture/interaction with the Students, Research Scholars and Staff members. Extra remuneration may be paid from the budget head of 'Academic Activity Fee' of the concerned Faculty.

**7.32.** After the successful completion of the Open Public Viva-voce (Open defense) Examination both the Guide for research degree and the External Examiner (Chairperson) shall prepare a joint final consolidated report on the Open Public Viva-voce (Open defense) Examination [In case of Virtual Public Viva-voce (Open defense), both the External examiners, through an email to the Guide for research degree] and certify that all suggested changes have been incorporated along with the reply given to the queries raised by the External Examiner in the written form, signed and accepted by the members of the Viva-voce Panel as well as the list of the persons attended the Open Public Viva-voce (Open defense) Examination in respect of the award of the Ph.D. degree immediately after the Open Public Viva-voce (Open defense) Examination is over.

- 7.33.** In case the Open Public Viva-voce (Open defense) Examination is not satisfactory, the examiners may unanimously recommend with reasons that a fresh Open Public Viva-voce (Open defense) Examination of the Ph.D. Thesis be organized within a period of not less than one month. If the Open Public Viva-voce (Open defense) Examination is still not satisfactory, the panel for Viva-voce Examination would record the reasons for the same and may recommend the resubmission of the Ph.D. Thesis with suggested changes or recommend the rejection of the Ph.D. Thesis, as the case may be.
- 7.34.** Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree(s), The Maharaja Sayajirao University of Baroda shall submit an electronic copy of the Ph. D. thesis to the INFLIBNET, for hosting the same so as to make it accessible to all Institutions/Colleges.
- 7.35.** Prior to the actual award of the degree, The Maharaja Sayajirao University of Baroda shall issue a Provisional Certificate to the effect that the Degree has been awarded in accordance with the provisions of these UGC Regulations, 2016.
- 7.36.** Award of degrees to research scholars registered for the Ph.D. Programme on or after July 11<sup>th</sup> 2009 till the date of Notification of these regulations shall be governed by the provisions of the UGC (Minimum Standards and procedure for Awards of M.Phil / Ph.D Degree) / Regulation 2009.
- 7.37.** An honorarium @ ₹4000/- each shall be paid for evaluation of the Ph.D. Thesis, the Guide for research degree as well as Co-guide, if any. In addition, each Examiners conducting the Open Public Viva-voce (Open defense) Examination, including the Co-guide, if any, shall be paid ₹1000/- as the honorarium.

## VI. Research Policy of MSUB

### Policy Statement

The M.S. University of Baroda, Vadodara is committed to conducting its research activities in accordance with the seven principles of selflessness, integrity, objectivity, accountability, openness, honesty and leadership and is responsible for ensuring that all research is carried out in conformity with the accepted principles. The university expects all those engaged in research to adopt the highest achievable standards in the conduct of their research. This means exhibiting impeccable scientific integrity and following the principles of good research practice. These principles are applicable to ALL, whether they are employees of the institution, honorary or guest scientists or students, and irrespective of the sources of their funding, or their area of research.

This document provides guidelines on good practice in research and is intended for all staff (hereafter called as researchers), including persons with honorary positions, visiting positions, and students carrying out research at or on behalf of the Institution. This document outlines key elements of good research practice, underlying the principles that should be taken into account while planning and conducting research, and while recording, reporting and applying results.

### General Principles

Good Research Practice (GRP) is essentially an attitude of mind. It is about the way in which research is planned and executed, the results are recorded and reported, and the benefits are disseminated, applied and exploited.

GRP can only be achieved if researchers at all levels are trained and supervised properly in a research culture that encourages frank discussion and debate. Research team leaders are responsible for seeing that a constructive atmosphere prevails and must ensure that researchers have the appropriate training and experience to carry out their duties as effectively as possible.

Supervision and checking are integral part to ensure the quality of research practice. Steps that may be needed to supervise GRP include monitoring of training and supervision of new researchers and of continuing professional development, regular checks on data recording and notebooks, and occasional checks on the day-to-day conduct of experiments.

### Research Integrity

Researchers should be honest, accurate and transparent in respect of their own actions in research and their responses to the actions of other researchers. This applies to the whole range of research work including designing of experiments, generating and analyzing data, applying for funding, publishing results, and when peer reviewing the work of other researchers. The direct and indirect contributions of colleagues, collaborators and others should be acknowledged. Researchers are accountable to the society, their profession, the institutes where the research is taking place, the staff and students involved and in particular, the sponsoring bodies. Researchers are expected to understand and apply the following principles:

Plagiarism, deception, or the fabrication or falsification of results is regarded as serious disciplinary offence. All researchers are expected to refer and adhere to the Academic Integrity Policy of the University.

The university is committed to managing such issues and the policy for this is given separately in the document “Academic Integrity Policy”.

### **Conflict of Interest**

A conflict arises when a person's judgment concerning a primary interest, such as scientific knowledge could be unduly influenced by secondary interest, such as financial gain or personal advancement. Researchers must pay as much attention to perceived and potential conflicts of interest as to actual conflicts. How one is perceived to act influences the attitude and action of others, and the credibility of scientific research at large. Researchers should declare and manage any real or potential conflicts of interest, both financial and professional. Areas of potential conflict include:

- Where researchers have an existing or potential financial interest in the outcome of the research
- Where there is a private or private practice benefit significantly dependent upon the outcome of research
- Where the researcher's professional and personal gain arising from the research may be more than might be usual for research

### **Planning the research**

All research projects should be conceived, designed and implemented according to the highest standards.

Clear documentation of the rationale for the study and any subsequent modifications, either in laboratory note books or in project files. Each key document and any changes should be signed with date by the researcher responsible to establish the provenance of the study and protect intellectual property rights.

Adherence to current safety practices and ethical standards. Securing all necessary ethical and regulatory approvals.

Assessment of resources needed to ensure the study is viable within the available means. Economy in use of resources, for example not purchasing more reagents than are needed for the planned sample size and regular review to determine when to stop the experiments.

Regular review of progress so that new findings can be taken into account and project plan modified accordingly

### **Institutional Ethics Approval**

The legal and ethical requirements relating to human participants, animals and personal information should be familiar to each person involved in the study and they should know to whom to turn for advice. All research must have the approval of the Institutional Ethics Committee.

Equipment used to generate data should be suitable for the purpose, of appropriate design and of adequate capacity. It should be calibrated and serviced regularly by trained staff so that the performance is optimal and the results can be trusted.

A standard operating procedure (SOP) should be maintained for each piece of equipment. There should be easily accessible instructions for the safe shutdown of equipment in case of emergency.

SOP should be documented for all routine methods to ensure that data are collected consistently. SOP should be written in simple language, readily accessible and ideally in a standardized format.

There should be clarity at the outset of the research programme as to the ownership and use of, wherever relevant:

- Data and samples used or created in the course of research
- The results of the research

The responsibility and procedures for the storage and disposal of data and samples should be made clear at the commencement of any project. Any research collaboration agreement relating to the research should contain some clauses describing necessary arrangements. Researchers should keep clear and accurate records of the procedures followed and the approvals granted during the research process, including records of the interim results obtained as well as the final research outcomes. This is necessary not only as a means of demonstrating proper research practice, but also in case questions are subsequently asked about either about the conduct of research or the results obtained. Properly maintained note books may be used in evidence when establishing ownership of inventions.

Data should be stored in a way that permits complete retrospective audit, if necessary. Data should be stored safely, with appropriate contingency plans. Original data/images should be recorded and retained. This is particularly important when data/images are subsequently enhanced. Both original and enhanced data/images should be stored. Over-enhancement or over-interpretation of images must be resisted. Confidentiality is also important if there is a potential for commercial exploitation.

Retention of accurately recorded and retrievable results is essential for research. Primary research data must be retained in their original form within the institute. Researchers who are leaving the institute and would like to retain data for personal use must get permission from their team leader or head of department. Publication of data does not negate the need to retain source data.

All raw data should be recorded and retained in indexed laboratory notebooks with permanent binding and numbered pages or in an electronic dedicated note book. Machine printouts, questionnaires, chart recordings, autoradiographs etc. which cannot be attached to the main record should be retained in a separate ring-binder/folder that is cross indexed with the main record. Records in note books should be entered as soon as possible after the data are collected. Recorded data should be identified by the date of the record and/or date of collection. Supervisors should regularly review and “sign-off” notebooks of researchers to certify that records are complete and accurate. Computer generated data should be backedup regularly; duplicate copies should be held on a disc in a secure but readily accessible archive. Wherever feasible, a hard copy should be made of important data. Copies of relevant software, particularly the version used to process electronic data, must be retained along with the raw data to ensure future access.

### **Openness**

The aim in disseminating research is to increase knowledge and understanding: its purpose should not be primarily to seek publicity for the researcher or the institute or the sponsor. Whilst recognizing the need for researchers to protect their own academic and where appropriate their intellectual property rights (IPR), the institute encourages researchers to be as open as possible in discussing their work with other researchers and with the public.

Once the results have been published, the University expects researchers to make available relevant data and material to other researchers, on request, provided that this is consistent with any ethical approvals and consents which cover the data and materials, and any intellectual property rights in them. Procedures for managing the transfer of material in and out of the institute are outlined separately. It is recognized that

publication of some results of research may need to be delayed for a reasonable period pending protection of any intellectual property arising from the research. Any such periods of delay in publication should be kept to a minimum and this should normally be no more than 3 months.

Researchers should be careful when discussing work that is not complete or has not been published, particularly if it has not undergone peer review. Exchange of confidential information by e-mail is not recommended, especially if patent applications are anticipated.

### **Professional guidance and legislation**

Where available, the university expects all researchers including students, trainees etc. to observe the standards of research practice set out in guidelines published by scientific and learned societies, and other relevant professional bodies.

All researchers should be aware of the legal requirements, which regulate their work noting particularly health and safety legislation and data protection.

### **Leadership and cooperation**

The Head of the university and senior colleagues should ensure that a research climate of mutual cooperation is created in which all members of a research team are encouraged to develop their skills and in which the open exchange of ideas is fostered.

### **Supervision**

The university needs to ensure that appropriate training and direction of research and supervision of researchers is available.

### **Training**

The university will plan periodic workshops or courses to enable students and researchers to understand and adopt best practices in research as quickly as possible. Supervisors should encourage students and colleagues to attend relevant courses whenever offered as a part of their overall career development.

Use of materials requiring statutory registration such as radioisotopes, pathogenic and GM organisms  
Data management  
Using animals for experiments  
Regulations involving human subjects.

### **Primary data/samples/equipment**

Data generated in the course of research should be kept securely in paper or electronic format, as appropriate. Back-up records should always be kept for data stored on a computer.

Researchers should report any changes in the direction of sponsored research to the sponsor or any other relevant body. Best practice would be to discuss any change in director of the research with the sponsor prior to its implementation.

### **Collaboration**

Research is increasingly collaborative, involving individuals from different disciplines and from institutions within and beyond India. In establishing research collaborations researchers should be mindful of the University's policies and guidelines, as well as funder, legal and regulatory requirements, and ensure that research partners and their employing institutions are able to meet the required standards of research conduct. There needs to be clear agreement on and articulation of the standards and

frameworks that will apply to collaborative work. This is particularly important in relation to the provenance of intellectual ideas and ownership of research outcomes as well as the specific conditions under which these may be shared. All parties should be clear about their respective roles and responsibilities within the collaboration, which should be set out in any formal collaboration agreement. The Office of International Affairs at MSU can advise and has various model agreements for use in such collaborations.

For further details, it is encouraged to read and refer <https://wcrif.org/>.

### **Intellectual Property**

Researchers must inform the Intellectual Property Cell (or the Coordinator of the program and Director) of any intellectual property rights that may arise from externally funded research and also inform the sponsor, if they so request. Institution's policies for managing intellectual property are listed on website.

### **Dissemination and publication of results**

The university encourages publication of and dissemination of results of high quality research, but believes that researchers must do this responsibly and with an awareness of the consequences of any such dissemination in the wider media.

Researchers should take into account the following guidance when publishing or disseminating their research or research findings including any plans they may have to publish or publicize research at conferences or web sites.

- The sponsor should be notified in advance when the research might be published, publicized or disseminated
- Researchers should make every effort to make sure research is peer reviewed prior to it being published, publicized or disseminated. If research is placed in the public domain before peer review has been undertaken, the researcher must make this clear in any publicity.
- All funding sources must be acknowledged in any publication or publicity.
- Results of research should be published in an appropriate form, usually as papers in refereed journals.
- Any one listed as an author on a paper should accept responsibility for ensuring that he or she is familiar with the contents of the paper and can identify his or her contribution to it. The practice of honorary authorship is unacceptable.
- The contributions of formal collaborators and all others who directly assist or indirectly support the research should be both specified and properly acknowledged.
- Work should normally be published as a coherent entity rather than a series of small parts, unless there is a legitimate need to demonstrate first discovery by publishing preliminary data.
- Quality rather than quantity is paramount; the proliferation of multi-author papers to increase quantity should be discouraged.
- Authors must not publish the same data in different journals.
- If an error is found that degrades the worth of published findings, the principal author must take efforts to publish a correction as soon as possible.
- Where the findings are found to be in serious doubt, a retraction should be published speedily.

- Where fraud is suspected it should be dealt with the procedure dealing with “Misconduct in research”.

### **Authorship**

In general, authorship credit must be taken only for work one has performed or to which one has substantially contributed.

- Any publication(s) based on the MPhil dissertation/PhD thesis should have the student as the principal first author and research guide as the second author.
- For research projects:
  - The order of authorship credit should be according to the relative contribution of each individual. In general, the name of the principal contributor is stated first, and the other names will follow in the order of decreasing contribution.
  - All collaborators should decide as early as possible the tasks involved and the responsibility that each individual will take as well as the level of authorship credit (first author, second author).

### **Ethical Compliance Checklist**

[*Publication Manual of the American Psychological Association*. (2019). (7<sup>th</sup> ed.). Washington D.C.: APA].

[insert checklist]

### **Sources of information**

- IISER, Pune
- The Office of Research Integrity, USA
- MRC Good Research Practice
- University of Cambridge Good research practice
- WT/DBT India Alliance – Guidelines on good research practice

## **Institutional Research Ethics Committee (IREC)**

All research involving human subjects must be cleared by the Institutional Research Ethics Committee (IREC) of each Faculty.

These boards/committees are constituted to safeguard the welfare and rights of the research participants who participate in any research conducted under the auspices of the University. The (IREC) is responsible to ensure that all research is conducted in accordance with the ethical standards applicable to that particular discipline/field of study.

The (IREC) is responsible for reviewing all research involving human participants, prior to its initiation, with the objective of protecting the welfare, rights, and privacy of the participants.

The roles and responsibilities of the IREC outlined below are adapted from the Ethical Guidelines for Biomedical Research on Human Participants (Indian Council of Medical Research, 2006).

### **Responsibilities of the Institutional Research Ethics Committee (IREC)**

The primary responsibility of the IREC are to ensure that all ethical aspects of research proposals are competently and objectively reviewed. The IREC is required to provide necessary advice related to all aspects of the welfare and safety of the research participants. The IREC must ensure that the universal ethical values and standards and international scientific standards are expressed in terms of the local community (Indian Council of Medical Research, 2006).

### **Composition of the Committee**

The composition of the IREC should be interdisciplinary and multisectoral. It should have the following members. A quorum of 60 percent members will be required to make a decision on a particular research.

The committee is to be constituted as follows:

1. Chairperson
2. One medical scientist
3. One clinician
4. One legal expert
5. One ethicist
6. One social scientist
7. One psychologist
8. One educationist
9. One statistician
10. One philosopher
11. One environmentalist
12. One representative of a non-governmental voluntary agency
13. One layperson from the community
14. Member Secretary

In addition to the IREC, a Department Research Ethics Committee (DREC) needs to be formed comprising of the head of the department, all PhD research guides, and one external expert member from the IREC.

### **Terms of Reference (TOR)**

- Prior to initiation of the research, each proposal should be reviewed in terms of possible risks to participants and the provisions made to ensure privacy, confidentiality and justice.

- The tenure of the IREC should be for a period of three years.
- All committee members must equip themselves with the ethical standards required in a particular discipline/field of study.
- If required, other subject experts may be co-opted for review of research proposals on specific topics.
- The IREC will meet twice in an academic year, preferably once each semester to review the research proposals of the faculty and students.
- The IREC has the authority to approve, disapprove, monitor, and require modifications in all research activities that fall within its jurisdiction as specified by the University.
- A guideline of the ethical aspects to be considered should be made available to each committee member.
- Each external member will receive an honorarium as per University rules.

### **Standard Operating Procedure**

A three-tier procedure will be followed:

1. Presentation of master's and doctoral research proposals by the students before the Department Research Committee (DRC) to review the technical aspects.
  2. Presentation of research proposals by the students/research guides before the DRC of the respective Departments in the presence of an External Expert member selected from the IREC for ethical review.
  3. A department representative (who is a member of the IREC) will present the proposals in the IREC for final approval. In case of Doctoral students, the presentation of research proposals will be done by the students in the presence of the research guide, after completion of the necessary in-house technical presentations in their respective Departments.
- The Member Secretary will be responsible to arrange a meeting of the IREC.
  - The Principal Investigator of the Project/Research Guide/Research Student will be responsible to incorporate any changes suggested in the ethical aspects of the proposal.

### **Links to Relevant References**

American Sociological Association (ASA) *Code of Ethics* (2018, June).

[https://www.asanet.org/sites/default/files/asa\\_code\\_of\\_ethics-june2018.pdf](https://www.asanet.org/sites/default/files/asa_code_of_ethics-june2018.pdf)

Indian Council of Medical Research (ICMR). (2006). *Ethical Guidelines for Biomedical Research on Human Participants*. New Delhi: ICMR

<https://s.docworkspace.com/d/AOVAB1zYqrc2sYPWrNqdFA>

National Academy of Psychology (NAOP), India. *Ethical Principles for Psychologists*. Adopted unanimously by the Executive Committee of the NAOP on 13 December 2010 (in accordance with the Universal Declaration of Ethical Principles for Psychologists by the International Association of Applied Psychology in Berlin on July 26, 2008).

<https://docs.google.com/viewer?a=v&pid=sites&srcid=bmFvcGluZGhLm9yZ3x3d3d8Z3g6MTQ5YTUzNTQyOWMxZjZhNA&pli=1>

Universal Declaration of Ethical Principles for Psychologists *Adopted by the Assembly of the International Union of Psychological Science in Berlin on July 22nd, 2008.*

<https://www.iupsys.net/about/governance/universal-declaration-of-ethical-principles-for-psychologists.html>

## VII. Roles and Responsibilities of Research Students and Research Supervisor(s)/Guide(s)

Academic research towards an advanced degree (MPhil or PhD) is a collaborative venture involving the research supervisor/guide and the research student. Both need to be aware of their roles and responsibilities so that the research process is implemented in a pleasant, intellectually stimulating and productive manner. This would contribute towards bringing out the best potential of the student and result in quality research that makes significant contribution to knowledge.

### A. Roles and Responsibilities of the Research Students

#### (a) Personal Responsibility as a Researcher and Doctoral Candidate (or) Student (or) Research Scholar

##### **It shall include following:**

- To read and respond to communications from the supervisor/Guide and any other official communication by the University;
- To accept ultimate responsibility for completion of the agreed research proposal on agreed time, by following deadlines and adhering to proposed time schedule.;
- To complete initial registration and any subsequent re-registration as required and to comply with all relevant immigration requirements in the case of international research student/scholar;
- To know and familiarise own self with Statutes, Ordinances, Resolutions and Minutes of Syndicate/Senate/Post Graduate Council of Studies and Research/ Board of Studies/Concerned Faculty Board etc. concerning conduct of research, academic administration, registration, examinations, as well as the Code of Ethics for the conduct of research
- To develop research plan that will enable submission of the Ph.D Thesis for examination within the relevant maximum registration period
- To accept responsibility and fulfilment of provisional eligibility, final eligibility, migration and other such compliances for registration as per ordinances for Ph.D. /M.Phil. degree and Resolutions of Post Graduate (PG) Council of Studies and Research/Board of Studies and concerned Faculty Board of the university ;
- To act as a responsible member of the academic community within and outside the university;
- To maintain satisfactory progress of the agreed programme of research as per ordinances for Ph.D. /M.Phil. degree and Resolutions of Post Graduate Council of Studies and Research/Board of Studies and concerned Faculty Board of the university ;
- To participate in discussions for solving difficulties and resolving of issues under the guidance of the Research Supervisor(s)/Guide(s) etc. of the university;

- To identify personal development and training needs in consultation with supervisor/Guide and undertake the appropriate skills and career development training within and outside the university;
- To make appropriate use of both formal and informal teaching and learning opportunities as provided within and outside by the university;
- To collaborate with Supervisor(s)/Guide(s), assume responsibility for the direction, timetable and smooth timely conduct and progression of the research studies within and outside the university;
- To act in accordance with relevant legislation and regulations in respect of health and safety, ethics etc.
- To ensure that the Final Ph.D. Thesis/Dissertation/Project Report etc. is submitted within the stipulated time period, taking due consideration of advice and recommendations of supervisor(s).

#### **(b) Responsibilities Related to Meetings, Written Work and Records**

##### **It shall include following:**

- To offer positive, truthful and constructive reflection, and feedback on guidance provided by the Supervisor/Guide in formal and informal setting;
- To comply with the University's requirements for formal progress reviews as determined by the Supervisor/Guide and university;
- To attend/meet, discuss, participate/interact and collaborate in the one-to-one or formal meetings mutually arranged by Supervisor(s)/Guide(s) with research scholars and keep written records or soft copies of such meetings and interactions which would mainly include following;
  - Nature and Extent of Guidance/Feedback
  - Written Work/Oral Review on Research Work by Supervisor/Guide
  - Comments/Remarks/Observations of Research Work by Supervisor/Guide
  - Periodic Progress Reports on the research work
  - Communications received or sent between research scholar and supervisor /Guide as well as from other external agencies etc. as the case may be.
- To maintain clear, accurate, detailed and accessible records of all relevant research work
- To provide adequate explanation of any failure to meet commitments in carrying out research work etc.

#### **(c) Responsibilities Related to Communication of Findings and Implications of Research Studies :**

##### **It shall include following:**

- To assume ultimate responsibility for the communication of research findings to the academic, scientific and professional communities as appropriate to the area/discipline;

- To establish, in agreement with the Supervisor/Guide to devise a strategy for the communication and dissemination of research outputs in a timely and effective manner;
- To ensure that all contributions to the research work are appropriately acknowledged and recognised, paying particular attention to the issue of co-authorship where appropriate;
- To obtain appropriate consent from Supervisor/Guide and any relevant co-authors for publication of findings from work undertaken as part of the thesis
- To avoid inappropriate publication or duplication of others' work
- To ensure that intellectual property rights are respected in relation to research output from the research programme, both during the period of registration and subsequently;
- To ensure that any circumstances which might require the mode of study to be altered or the registration period to be extended, suspended or withdrawn, are brought to the attention of his/her supervisor/Guide
- To familiarize with the University Policy on Academic Integrity and Prevention of Plagiarism and adhere to it through the entire course of study.

## **B. Roles and Responsibilities Of Research Supervisors**

**Note that the terms Supervisor and Guide have been used interchangeably in this document.**

### **Prologue:**

Research supervisors have various roles to play with their in their research scholars' course of study. Each supervisor can choose the appropriate role depending on the situation and needs of the candidate. A good supervisor knows when to use which role and can move comfortably between roles. Supervisors can choose to become even better in a role which they naturally like and are good at or s/he can choose to stretch themselves and work on assuming a less developed role. It is the Supervisor's responsibility to invest in the personal and professional of the student(s) growth through feedback, training and coaching.

The Supervisor/Guide is required to enact multiple roles including that of a leader, a manager, a coach, an entrepreneur and an expert. Each of these roles are briefly described below:

### **Role of Supervisor as a Leader:**

A leadership role will help supervisors dealing with the paradoxes in supervision, by becoming more self-aware of their preferred leadership role and will provide a framework which will increase supervisors' confidence in taking up the appropriate role (Vilkinas, 2002). The model of leadership roles for PhD supervisors is based on self-awareness, flexibility, balance and is situational. The supervisor is expected to give direction and motivate the research scholar by bringing a clear, transparent and inspiring vision which would create his or her involvement resulting in the research scholar's participation and transparent communication.

### **Role of Supervisor as a Manager:**

As a Manager, the supervisor coordinates all relevant tasks so that the research scholar can achieve best result possible. The supervisor assumes a multitude of responsibilities and tasks to set priorities and coordinates the diverse tasks fine-tuned with the talent of the research scholar. The supervisor needs to provide clarity regarding objectives, expectations and procedures as well as to take up the responsibilities by focusing on autonomy, competence and connectedness.

### **Role of Supervisor as a Coach:**

As a coach, the supervisor has to guide the research scholar, provide feedback, enter into a dialogue and look for constructive, collective solutions. She/he is expected to stimulate development by creating a positive working environment and providing learning opportunities that focus on realizing the student's best potential. Supervisor need to pay attention to the research scholar's well-being which calls for their accessibility along with an empathetic and supportive approach. Supervisor is expected to support the passion, ambitions and career development of the PhD scholar within or outside academia.

### **Role of Supervisor as an Entrepreneur:**

As an entrepreneur, supervisor is expected to actively promote innovation by taking initiative and introducing creativity so as to provide opportunities that bring in added value for the University / Faculty / Department. As an entrepreneur, Supervisors must encourage their PhD candidates to search for opportunities for funding and research Collaborations.

### **Role of Supervisor as an Expert:**

As an expert, supervisors are expected to actively use their professional knowledge and stimulate knowledge sharing among their colleagues, staff and scholars. Supervisor should stimulate knowledge sharing among research scholars and help them to achieve a specific result ensuring research integrity.

## **C. Responsibilities of Research Supervisors**

### **General Responsibilities of the Research Supervisor /Guide:**

Whoever adopts teaching as a profession assumes the obligation to conduct himself / herself in accordance with the ideal of the profession. A research Supervisor/Guide is constantly under the scrutiny of his research scholar(s), the academic community and the society at large. Therefore, every research supervisor /Guide should see that there is no incompatibility between his/her precepts and practice. The national ideals of education and research which have already been set forth and which the research supervisor/Guide should seek to inculcate among research scholar(s) must be his/her own ideals. The research supervisor /Guide should be calm, patient and communicative by temperament and amiable in disposition.

Research Supervisor /Guide should:

- (i) Adhere to a responsible pattern of conduct and demeanor expected of them by the community;
- (ii) Manage their private affairs in a manner consistent with the dignity of the

- profession;
- (iii) Seek to make professional growth continuously through study and research;
  - (iv) Express free and frank opinion by participation at professional meetings, seminars, conferences etc., towards the contribution of knowledge;
  - (v) Maintain active membership of professional organizations and strive to improve education and profession through them;
  - (vi) Perform their duties apart from conduct of research in the form of teaching, tutorials, practical, seminars and research work, conscientiously and with dedication;
  - (vii) Discourage and not indulge in plagiarism and other non-ethical behaviour in teaching and research;
  - (viii) Abide by the Act, Statute and Ordinance of the University and to respect its ideals, vision, mission, cultural practices and tradition;
  - (ix) Co-operate and assist in carrying out the functions relating to the educational responsibilities of the university

**(a) Specific Responsibilities of the Research Supervisor/Guide:**

The research supervisor must ensure that the research scholar is clear about the rules and regulations of Ph.D. registration and must emphasise that the Ph.D. Thesis should be based on original research work within the supervisory framework with complete adherence to all UGC Regulations.

**The research Supervisor is expected to fulfill the following specific responsibilities:**

- To arrange Faculty Advisory Research Committee and Departmental Research Committee meetings required for submission of Ph.D. Thesis;
- To maintain and ensure availability for regular contact with the research scholar;
- To plan and provide for making sufficient time available to fulfil the needs of the research scholar;
- To review written/experimental/practical/field research work produced by the research scholar;
- To provide timely suitable and constructive criticism on the written/experimental/practical/ field research work produced by the research scholar;
- To possess and maintain knowledge of the research area to provide adequate supervision of the research study/project;
- To develop the appropriate skills to facilitate the production and submission of high-quality research work by the research scholar;
- To develop, in collaboration with the research scholar, an appropriate planning schedule for successive stages of the research studies/ project (including experimentation and writing-up) so that the Ph.D. Thesis may be completed and submitted within the acceptable time limit;
- To advise research scholar to attend Ph.D. Course Work/Extension Lectures, Training Programs/ Conferences/Seminars Etc.;
- To advise and ensure attendance and participation of the research scholar in Ph.D. Course Work/Extension Lectures, Training Programs/ Conferences/Seminars etc.;

- To coordinate and ensure maintenance of attendance register, if required, Fellowship Details, Contingency Grant Stock Register etc. of the research scholar for its production and submission for audit, verification, and approval before the university/institute authorities etc;
- To advise the research scholar to take up Language Course/Attend Soft Skill Classes/Spoken English and English Writing Skill Classes etc;
- To examine/review the draft Ph.D. Proposal prepared by the research scholar to ensure the following:
  - To ensure the in-depth conduct of ‘Review of Literature’ by the research scholar after reviewing of Relevant online databases as well as Reference Books, Research Papers/Articles etc;
  - To ensure the identification of proper research gaps supported with concise review of literature and existing body of knowledge by the research scholar;
  - To ensure identification and selection of the suitable and relevant research problem by the research scholar;
  - To support and facilitate availability Equipment/library and diverse kind of experiential facilities for smooth conduct of the research work by the research scholar;
  - To decide on appropriate title of the Ph.D. Thesis;
  - To duly report and acknowledge each of the citations used in the review of literature by the research scholar;
  - To ensure preparation of a scientific and qualitative research report by the research scholar;
- To timely monitor the progress of the research scholar with the help of formal periodic supervisory meetings;
- To ensure that the research scholar keeps a record and minutes of the formal periodic supervisory meetings;
- To be accessible and available at mutually convenient times for meetings with the research scholar;
- To emphasize upon importance of timely submission of the Ph.D. Thesis;
- To arrange for open defence and PhD viva voce examination of the research scholar;
- To give timely feedback on performance of the student in conduct of research work and progress report with timely corrective and supportive positive action for its improvement and timely submission of the PhD Thesis by the research scholar;
- To read, review and comment on the whole of the final draft of the PhD Thesis
- To ensure due compliances on word length, format, and binding etc. of the PhD Thesis to be submitted by the research scholar;
- To review and forward timely submission of six monthly and annual progress reports of the research work undertaken by the research scholar;’
- To guide research scholar regarding publication of the research work in UGC approved CARE List (or) Scopus (or) Web of Science etc. Quality Journals;
- To ensure that the research scholar gets due credit ranking and recognition in publication of the research work in Quality Journals; and

- To recommend cancellation of Ph.D. registration of research scholar, in exceptional cases if progress report of research scholar is highly undesirable and unsatisfactory.

#### **D. Research Supervisor's Code of Professional Ethics**

##### **Research Supervisor /Guide should:**

- (i) Respect the rights and dignity of the research scholar in expressing his/her opinion;
- (ii) Deal justly and impartially with research scholar regardless of his/her religion, caste, gender, political, economic, social and physical characteristics;
- (iii) Recognize the difference in aptitude and capabilities among research scholar (s) and strive to meet his/her individual needs;
- (iv) Encourage research scholar to improve his/her attainments, develop his/her personality and at the same time contribute to community welfare;
- (v) Inculcate among research scholars' a scientific temper, spirit of inquiry and ideals of democracy, patriotism, social justice, environmental protection and peace;
- (vi) Treat the research scholar(s) with dignity and not behave in a vindictive manner towards any of them for any reason;
- (vii) Focus essentially on the research scholar's assessment of merit;
- (viii) Make themselves available to the research scholar(s) even beyond their class hours and help and guide students without any remuneration or reward;
- (ix) Aid research scholar (s) to develop an understanding of our national heritage and national goals; and
- (x) Refrain from inciting research scholar against other research scholar (s), colleagues or university/college administration.

### **XIII. Academic Integrity and Prevention of Plagiarism Policy**

#### **Preamble**

Honesty, integrity, originality, and mutual trust are fundamentals of an enriching environment for teaching, research and scholarship. The Maharaja Sayajirao University of Baroda is committed to maintaining utmost standards of quality and ethics as it prepares its students and faculty members to contribute meaningfully to their fields of interest.

Today, there is a surge of information available to students and faculty members in the form of books, journals, essays and projects in libraries as well as the internet. Such easy access to information and the freedom to use it brings with it the temptations to cheat, plagiarize and use unfair means to improve performance. Poor time management, lack of sincerity, and the pressure to perform and publish are some common reasons that contribute to this temptation.

During the course of their study in this university, students will be required to refer to works by prominent theorists, researchers and scholars in their chosen field. Students will engage with academic publications and will refer to sources as they think, reflect, write, build arguments and analyze them. At the same time, they will be expected to express ideas, thoughts and make inventions that are original and creative. Similarly, academicians and researchers affiliated to the university will be expected to cultivate academic integrity and ensure authenticity of their research projects and publications. Considering this, it is absolutely essential to educate the students and faculty members of the university about the rules and regulations governing academic honesty, intellectual property as well as penalties for the violation of scholarly ethics.

Maintaining academic integrity involves:

- Creating and expressing one's own ideas in course work and research work.
- Acknowledging all sources of information including authors of print or electronic sources.
- Acknowledging collaboration with faculty members, classmates, and friends.
- Accurately reporting results when conducting one's own research or with respect to laboratory work or field work.
- Assigning appropriate authorship credit to colleagues, collaborators, research scholars, and students.
- Upholding honesty during examinations.

This document presents the University's policy on preserving academic integrity and preventing plagiarism. Students and faculty members are expected to understand and adhere to these principles and regulations to uphold the highest standards of excellence for themselves and the University. The document draws from the UGC Promotion of Academic Integrity and Prevention of Plagiarism in Higher Education Institutions Regulations 2017 ([https://www.ugc.ac.in/pdfnews/8864815\\_UGC-Public-Notice-on-Draft-UGC-Regulations,-2017.pdf](https://www.ugc.ac.in/pdfnews/8864815_UGC-Public-Notice-on-Draft-UGC-Regulations,-2017.pdf)).

## Objectives

- To create academic awareness about responsible conduct of research, study, project work, assignment, thesis, dissertation, promotion of academic integrity and prevention of misconduct including plagiarism in academic writing among students, researchers, faculty and other members of academic staff as well as any employee of the University.
- To establish institutional mechanisms through education and training to facilitate responsible conduct of research, study, project work, assignment, thesis, dissertation, promotion of academic integrity and deterrence from plagiarism.
- To develop systems to detect plagiarism and to set up mechanisms to prevent plagiarism and take appropriate punitive action in the event that an act of plagiarism is committed by a student, faculty, or staff of the University.

### 1. What is Plagiarism?

Plagiarism is a practice that is deemed as breach of academic integrity. Failure to acknowledge sources is considered as plagiarism. Specifically, it refers to an intentional or non-intentional decision not to acknowledge or give credit to the work of others (intellectual property) and instead incorporate or present others' work as one's own. Plagiarism covers a wide range including words, structure, ideas, authorship, and self-plagiarism. Others' work may be published or unpublished and include materials such as written text, data, Internet sources, spoken words, ideas, opinions, graphics, images, artwork, performances, music recordings. Presenting work done in collaboration with another person as one's own individual work also falls within the purview of plagiarism.

### 2. Types of Plagiarism

#### **Intentional Plagiarism**

Refers to the deliberate intentional act of passing off others' work as one's own; cutting and pasting from different sources to create own write-up without giving credit in the form of citation; copying an essay or article from any source (print, electronic) without quoting or giving credit; borrowing words or ideas from other sources without giving credit.

#### **Unintentional Plagiarism**

This occurs because of ignorance or carelessness in know-how of rules for citation and referencing. It comprises: poor paraphrasing for example, changing a few words without changing sentence structure or changing sentence structure without changing the words; carelessness in quoting, such as missing out on quotation marks in certain places or quoting partially; and poor citation in terms of omissions or inaccuracies.

[*MLA handbook for writers of research papers*. (2009). (7<sup>th</sup> ed.). New York: The Modern Language Association of America].

#### **Self-Plagiarism or Auto-Plagiarism**

Self-plagiarism means presenting one's own previous work (partially or fully) as new scholarship, either to one's current university or any other institution in future. All of

your past work that has been published must be cited and referenced clearly. In general, the core of the new document must constitute an original contribution to knowledge.

[*Publication Manual of the American Psychological Association*. (2010). (6<sup>th</sup> ed.). Washington D.C.: APA].

### 3. Ways to Avoid Plagiarism

Creating awareness and understanding related to the meaning of plagiarism and how to avoid it is very important. The University is committed to provide all support in this direction. The University will take the following necessary steps to spread awareness regarding how to avoid plagiarism:

- Provide tips to avoid plagiarism on the library website.
- Display posters and make available leaflets in the library, student common rooms and canteens for generating awareness.
- Conduct sessions on academic integrity and prevention of plagiarism during orientation programs for students and newly appointed faculty members.
- Include specific inputs on prevention of plagiarism in research methodology courses across all departments and at all levels (undergraduate and postgraduate).
- Organize periodic talks and awareness programs for students and teachers on the matter of plagiarism.

#### Tips for Students, Research Scholars, and Faculty

- Take utmost care that your writing represents original ideas and all sources which have been referred are cited.
- Paraphrase your writing. This refers to rewriting an author's material in one's own words, and at the same time giving credit by acknowledging the author.
- Cite any and all sources that you use, and ensure that the source is included in the reference list. Sources may include but are not limited to, print materials (e.g., books, journals, articles, and reports), graphs, tables, data or diagrams, web sources, TV and radio programs, as well as information or ideas through personal communication.
- Do not make use of 'ghost writers' or professional agencies to do your writing work.

**Note.** Students and faculty members are advised and expected to refer to Style Manuals or Style Guides (e.g., APA Manual, Chicago Manual of Style, Oxford Style Manual, MLA) for detailed information on correct ways of citing sources. Students and faculty members may also refer to the references provided in Appendix C.

### 4. Curbing Plagiarism

- Every student submitting a thesis, dissertation, term papers, reports or any other such documents to the University shall submit an undertaking indicating that the document has been prepared by him or her and that the document is his/her original work and free of any plagiarism.
- The undertaking form is appended with this document. It shall include the fact that the document has been duly checked through a **plagiarism detection tool** approved by the University. (Refer Appendix A for the undertaking form).

- Every faculty, researcher and M.Phil/Ph.D student should be provided an account in the plagiarism tool for checking the content of their scripts.
- Each supervisor shall submit a certificate indicating that the work done by the researcher under him/her is plagiarism free.

### **5. Similarity Checks for Exclusion from Plagiarism**

The similarity checks for plagiarism shall exclude the following:

- i. A quoted work either falling under public domain or reproduced with all necessary permission and/or attribution.
- ii. All references, bibliography, table of content, preface and acknowledgements.
- iii. All small similarities of minor nature.
- iv. All generic terms, laws, standard symbols and standards equations.

### **6. Zero Tolerance Policy in Core Areas**

The core work carried out by the student, faculty, staff and researcher shall be based on original ideas and shall be covered by Zero Tolerance Policy on Plagiarism. In case plagiarism is established in the core work claimed, then the Plagiarism Disciplinary Authority (PDA) (refer sub-section 8.2) of the University shall impose the appropriate penalty.

The core work shall include abstract, summary, hypothesis, observations, results, conclusions, and recommendations.

Identification of an incidence of plagiarism is likely to begin with the concerned teacher or supervisor or any other member of the academic community suspecting some misconduct, and then proceeding to determine if there is prima facie evidence for an allegation of plagiarism.

If a member of the academic community suspects with appropriate proof that a case of plagiarism has happened in any document, he or she shall report it to the competent/designated authority of the university. Upon receipt of such a complaint or allegation the university authority shall refer the case to the Academic Misconduct Panel (AMP) of the University who in turn shall submit a report to the Plagiarism Discipline Authority (PDA).

The authorities of University can also take *suo moto* notice of an act of plagiarism and initiate proceedings under these regulations. Similarly, proceedings can also be initiated by the University on the basis of findings of an examiner.

### **7. Levels of Plagiarism in Non-Core Areas**

For all other (non-core) cases, plagiarism would be quantified into following levels in ascending order of severity for the purpose of its definition:

- i. Similarities upto 10% - excluded
- ii. Level 1: Similarities above 10% to 40%
- iii. Level 2: Similarities above 40% to 60%
- iv. Level 3: Similarities above 60%

## 8. Identification of Plagiarism and Guidelines for Action

The Academic Misconduct Panel (AMP) (refer sub-section 8.1) of the University will establish whether plagiarism has in fact occurred and the level of seriousness. The committee will submit its report to the Post-Graduate Council of the University for a Final Decision and further action.

### 8.1 Academic Misconduct Panel (AMP)

- i. AMP is constituted by the University to investigate about the allegation of plagiarism and submit the report to the Plagiarism Disciplinary Authority (PDA).
- ii. The AMP shall have the power to assess the level of plagiarism and thus recommend penalty (is) accordingly.
- iii. The AMP shall consist of four members who shall be senior academicians with good publication record with at least one member nominated by the Vice-Chancellor from outside the University. The Chairperson of the AMP shall be an academic functionary (Dean/Senior Academician of Professor Level) of the University. The third member shall be a reputed Academician from the Discipline in which the plagiarism is alleged. The fourth member shall be an expert well versed with anti- plagiarism tools.
- iv. The AMP shall follow the principles of natural justice while deciding about the allegation of plagiarism against the student, researcher, faculty member or any other employee of the University.
- v. The AMP shall send the report after investigation and the recommendation on penalties to be imposed to the PDA preferably within a period of 45 days from the date of complaint/initiation of the proceedings in case of *suo moto* notice.
- vi. The AMP shall provide a copy of the report to the person(s) against whom inquiry report is submitted.

### 8.2 Plagiarism Disciplinary Authority (PDA)

- i. The PDA is constituted by the University to consider the recommendations of the AMP and take appropriate decision after giving a hearing to the accused individual.
- ii. There shall be three members in the PDA chaired by the Vice-Chancellor/Registrar. The other members shall be Dean/Director (Academic/Research) and one senior academician not below the rank of Professor in the relevant discipline from outside the University.
- iii. The decision of the PDA shall be final and binding to all parties concerned.

## 9. Disciplinary Sanctions and Penalties

Once plagiarism is detected, the following disciplinary actions are to be taken depending on the severity of the misconduct:

Penalties in the cases of plagiarism shall be imposed on students pursuing studies at the level of UG, PG, Masters, M. Phil., Ph.D. and faculty and staff of the University only after academic misconduct on the part of the offender has been established without doubt, when all avenues of appeal have been exhausted and the individual in question has been provided enough opportunity to defend himself or herself in a fair or transparent manner. Since the act of plagiarism, witting or unwitting, is potentially detrimental to the academic credibility and social reputation of the individual concerned, all proceedings of investigations and imposition of penalties shall be conducted in camera so as to prevent stigma and slur upon the individual concerned

### **a) Penalties for Students**

Plagiarism Disciplinary Authority (PDA) of the University, based on recommendations of the Academic Misconduct Panel (AMP), shall impose penalty considering the severity of the Plagiarism.

- i. Level 1: Similarities above 10% to 40%: Such student shall not be given any mark and/or credit for the plagiarized script and shall be asked to submit a revised script within a stipulated time period not exceeding 6 months.
- ii. Level 2: Similarities above 40% to 69%: Such student shall not be given any mark and/or credit for the plagiarized script and shall be asked to submit a revised script after a time period of one year but not exceeding eighteen months.
- iii. Level 3: Similarities above 60%: Such student shall not be given any mark and/or credit for the plagiarized script and his/her registration for that course is to be cancelled.

Note 1: Penalty on repeated Plagiarism: Such student shall be punished for the plagiarism of one level higher than the previous level committed by him/her. In case where plagiarism of highest level is committed then the punishment for the same shall be operative.

Note 2: Penalty in case where the degree/credit has already been obtained: If plagiarism is proved on a date later than the date of award of degree or credit as the case may be then his/her degree or credit shall be put in abeyance for a period decided by the AMP or PDA.

### **b) Penalties for faculty, staff, researcher(s) of the University**

- i. Level 1: Similarities above 10% to 40%: Shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of one year.
- ii. Level 2: Similarities above 40% to 60%: Shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of two years and shall be denied a right to one annual increment and shall not be allowed to be a supervisor to any UG, PG, Master's, M.Phil., Ph.D. student/research scholar for a period of two years.
- iii. Level 3: Similarities above 60%: Shall be asked to withdraw manuscript submitted for publication and shall not be allowed to publish any work for a minimum period of three years and shall be denied a right to two successive annual increments and shall not be allowed to be a supervisor to any UG, PG, Master's, M.Phil., Ph.D. student/research scholar for a period of three years.

Note 1: Enhanced penalty on repeated plagiarism: Shall be punished for the plagiarism of one level higher than the lower level committed by him/her. In case where plagiarism of highest level is committed then the punishment for the same shall be operative. In case level 3 offence is repeated then the concerned person shall be dismissed.

Note 2: Penalty in case where the benefit or credit has already been obtained-If plagiarism is proved on a date later than the date of benefit or credit obtained as the case may be then his/her benefit or credit shall be put in abeyance for a period decided by the AMP and PDA on recommendation of the AMP.

Note 3: If there is any complaint of plagiarism against the Head of the Institute, a suitable action, in line with these regulations, will be taken by the Competent Authority/ Governing Council as the title may be.

## **10. Dissemination and Publication of Results**

The university encourages publication and dissemination of results of high quality research and believes that researchers must do this responsibly and with an awareness of the consequences of any such dissemination in the academic community or wider society.

Researchers should take into account the following guidelines when publishing or disseminating their research including any plans they may have to publish or disseminate research at conferences or on websites.

- Researchers should make every effort to ensure that the research is published in high quality refereed peer reviewed journals that are included in the UGC-CARE list and also indexed in Scopus, Web of Science or any such standard database that is accepted in the University.
- All funding sources must be acknowledged in any publication or publicity of the research.
- The contributions of formal collaborators and all others who directly assist or indirectly support the research should be both specified and properly acknowledged.
- Work should normally be published as a coherent entity rather than a series of small parts, unless there is a legitimate need to demonstrate first discovery by publishing preliminary data.
- Quality rather than quantity is paramount; the proliferation of multi-author papers to increase quantity should be discouraged.
- Authors must not publish the same data in different journals.
- If an error is found that degrades the worth of published findings, the principal author must take efforts to publish a correction as soon as possible.
- Where the findings are found to be in serious doubt, a retraction should be published speedily.

### **Authorship**

In general, authorship credit must be taken only for work one has performed or to which one has substantially contributed.

Any publication(s) based on the MPhil dissertation/PhD thesis should have the student as the principal first author and research guide as the second author.

- For research projects
  - The order of authorship credit should be according to the relative contribution of each individual. In general, the name of the principal contributor is stated first, and the other names will follow in the order of decreasing contribution.
  - All collaborators should decide as early as possible the tasks involved and the responsibility that each individual will take as well as the level of authorship credit (first author, second author).

## **IX. The MSU Research Grievance Committee for Students (RGCS)**

The MSU **Research Grievance Committee for Students (RGCS)**/The MSU **Students Research Grievance Committee (SRGC)** is instituted on the premise of promoting cordial and responsible student-teacher/research guide relationship, which is critical to maintain a healthy research environment in the University. The Committee provides a space for students to share any grievances related to their M/Phil or Doctoral research. The nodal officer (a Professor and PhD Research Guide) appointed by the University Vice-Chancellor will be in-charge of the research redressal Committee.

### **Objectives**

1. To develop a responsive and accountable attitude among research guides and students.
2. To introduce a reliable mechanism for redressal of any research issue faced by a student.
3. To ensure that research grievances are resolved promptly, impartially and in complete confidentiality.

### **Procedure**

- A student having any grievance related to her/his M/Phil or Doctoral research must first approach her research guide and try to discuss the matter amicably and resolve it through mutual consent.
- She/he may approach the Head of the Department/Associate Director of the Institute and share the grievance either in oral or in written form.
- In cases where the Head is the research guide, the student may approach the DRC/Dean/Director /Nodal officer to share the grievance.
- The Dean/Head may discuss the matter with the research guide and student, and make all efforts to discuss and resolve the grievance to the satisfaction of all concerned. This is to be minutised.
- If a satisfactory resolution is not reached through discussion, the student may be asked to file a written complaint on a prescribed form (to be made available on the University website).
- The Nodal officer/Dean will present and discuss the grievance in the Faculty Research Advisory Committee (FRAC) and resolve the matter. This is to be minutised.
- If the grievance is not yet resolved, the student may appeal to the Vice Chancellor through the Dean/Director within a reasonable time (two weeks). The Vice-Chancellor will discuss the matter with the Nodal Officer, concerned Dean/Director and Head/Associate Director and decide upon corrective action to resolve the matter within 15 days from the date of receipt of the student's grievance.
- The decision of this committee chaired by the Vice Chancellor shall be final and binding to all parties concerned.
- At all stages of the redressal process, the anonymity of the student and the



research guide will be strictly maintained so as to protect the reputation of all concerned.

### **The MSU Students Research Grievance Form**

All genuine complaints **pertaining only to MPhil and PhD research** will be considered. Making a complaint is serious and hence students are requested to approach this matter with utmost responsibility. Note that all complaints will be addresses in a sensitive and confidential manner.

Attempts to resolve the complaint at the Department or Faculty level have been made.

Name of Student:

Department/Faculty/Institute:

Phone Number:

Email id:

MPhil/PhD Registration Number:

Complaint (type in the box below)

[Click to Submit]

## X. MSUB Online portals for reporting of Research Activities

- The MSUB has streamlined the academic and administrative process by extensive use of Digital Technology.
- The Annual Report Management System (ARMS) has been developed indigenously by the MSUB Computer Centre for data collection and preparation of annual report of the university teachers and research scholars. The following is the weblink for the ARMS portal.

<http://ccc.msubaroda.ac.in/AnnualRep/Default.aspx>

- It is a repository of all information about the academic activities that is mandated by different Rating and Ranking Agencies.
- All teachers of the university are required to submit their academic output to the portal regularly.
- The portal accepts the submissions 24x7. Along with other details, all the teachers submit details about their research projects, consultancies, collaborations, publications in journals and edited volumes, conference presentations / proceedings, patents (filed, published, granted) etc.
- The ARMS portal accepts the data from all stakeholders at three different levels:
  - Faculty
  - Department
  - Teacher.
- Details about the academic activities at department or faculty levels are furnished by concerned head of department and dean of faculty, respectively. This includes details about departmental or central projects, grants, organization of conference, seminars, webinars, workshops, research and extension activities.
- Major part of the ARMS data comes from teachers of the university. It is a normal practice for all the teachers that as soon as they have any academic/research activity to be reported, they will submit the same to the portal.
- Various reports can be generated from the submission by teachers at any given time.
- The ARMS portal serves as a central pool of data pertaining to all academic activities across the university.
- The portal is also linked to the profiles of the teachers and the curriculum vitae of any teacher is directly generated from her/his profile using the information submitted by her/him.

## **XI. Managing Research Projects in the University**

### **1. Forwarding Research Project Proposals**

- Identify the subject of the research
- Identify the funding agency which will finance this research
- Add 15% of total cost of project as Management Charges/Overheads in the financial proposal.
- In case of online proposal
  - The undertaking of the Institution which is required to be uploaded along with the proposal will be given by the GCU Section.
  - The Undertaking format signed by Head of the Department and Dean/Principal is to be given in the GCU Section in duplicate for taking the signature of Head of the Institution.
  - Submit a copy of the proposal in the GCU Section for keeping the record.
- In case of Physical submission of proposal
  - Download the guidelines for preparing the proposal from the website of the Funding Agency (F.A.)
  - Prepare the research proposal
  - Submit the proposal with required number of copies to the GCU section through proper channel (through Head and Dean) for taking the signature of the Head of the Institution.
  - Always keep one extra original copy of the proposal for the GCU section, for keeping the record.
  - After checking the proposal for Management Charges the proposal will be forwarded by normal post to the Funding Agency with Registrar's permission/signature.
  - If the proposal is to be sent by the individual, inform the section in advance.

All the Individual Research proposals/Departmental programmes shall be signed and forwarded by Development Officer, as per powers delegated to DO vide S.R. No. 12 dated 2/9/2014 circulated vide Circular no. R/MSU/381 dated 27/9/2014.

### **2. Procedures after receiving the Project**

- Always write a covering letter to the University addressed to "Registrar (GCU).
- All the letters must be sent through proper channel i.e. through Head and Dean
- Letters from the Research Scholar must be signed by Guide/PI and sent through proper channel.
- Formats of the Funding Agency which requires Head of the Institution's (Registrar) Signature must also be signed by Head and Dean (even if it is not mentioned in the format).
- Make three copies of all the letters/formats to be sent to Funding Agency.
- Registrar will not sign on any photocopy or colour copy.

### **3. Permission for Implementation of the Project**

- After receiving the sanction letter from the Funding Agency, send a letter to the University (in GCU Section) addressed to The Registrar (GCU) through proper channel (i.e. through Head and Dean) requesting to give permission for implementing the sanctioned research project. Attach a copy of the sanction letter.
- If there is a Co-Principal Investigator appointed by the Funding Agency then his/her signature is also required on the letter to University.
- If Co-PI is not appointed by Funding Agency and you still feel that another teacher can work as Co-PI then request University to appoint him/her as Co-PI on the project along with permission for implementation of the project. His/her signature is also required on the letter to University.
- In case Person who is not the University Employees receives a project and he/she wishes to work in the University, then a permanent teacher of the University will have to take the administrative and financial responsibility of the project and a letter to the effect must be sent to the University through proper channel for accepting the project.
- As per Section 43 of Ordinance 31 as revised vide Syndicate Resolution No. 21 dated 29/7/2016 (effective from 1<sup>st</sup> August, 2016)
  - If the total cost of the project is upto Rs 50,000/, then Dean has power to approve it.
  - If the total cost of the Project/Programme is upto Rs 1 Crore, then Hon. Vice-Chancellor has powers to approve it and Syndicate is to be informed.
  - If the total cost of the project is more than Rs.1 Crore, then it is put up before the Syndicate for approval.
- After taking the due permission, a letter of implementation will be issued by the University along with a copy of the sanction letter, guidelines and circulars of the GCU Section.
- Inform Date of Implementation of the project to the University.
- If Date of Implementation of the project is not mentioned by the Funding Agency then the date of receipt of the I<sup>st</sup> installment or the date of appointment of the Project Fellow can be considered as the Date of Implementation.

### **4. Acceptance Letter to the Funding Agency**

- Send Acceptance Letter to the Funding Agency including the date of implementation of the project. Send this acceptance letter after taking Head and Dean's signature in two original copies to the University for taking signature of the Registrar. The covering letter from the P.I. requesting to do the needful must also be sent through proper channel.

## 5. Opening a Bank account

- As per the Guidelines for implementation of Research Project in the University duly approved by Syndicate vide S.R.No. 28 dated 24/10/2016 the permission to open the bank account in any branch of the Bank of Baroda is given in the Implementation letter of the GCU.
- Approach closest branch of BoB to open the account in the name of Project.
- Inform the Accounts Section and GCU about the details of account opened.

## 6. Taking Advance for implementing the Project

- After the 1st installment of the grant is received by the University, P.I./Co-ordinators can request for advance for utilizing under various budget head other than Manpower and upto 75% of the requested amount, as the case may be, shall be released by the Accounts Section.
- The request for advance is to be sent to Chief Accounts Office in the prescribed format, with detailed estimated expenditure to be incurred under various budget head from the advance requested.
- The next advance shall be given only after the entire amount of previously asked advance has been settled with the Accounts Section.

## 7. Appointing Project Staff

### All Project Staff are appointed by Vice-Chancellor

#### (a) Procedure for Appointing Project Fellow/JRF/SRF/RA etc.

- Issue notification with qualifications/remunerations as per directives of the Funding Agency including the duration of the appointment.
- Mention in the notification that this is a temporary appointment and co-terminus with the project.
- UGC guidelines is to be followed if no directive about the qualifications of the staff is given by the Funding Agency.
- If the NET qualified candidates (JRF) are not available, then the position can be filled by candidates with lesser qualifications, however, in that case the nomenclature of the post should be Project Fellow or Project Assistant depending on the remuneration. Funding Agency must be informed about this.
- Send notifications to the concerned departments, other Universities etc (if required).
- Notifications can be published in the Employment News also and expenditure can be charged against Contingency or Overhead budget head.
- Call Selection committee after one month of notification.(advisable)
- Members on the Selection Committee
  - Dean of the Faculty (Chairperson)
  - Head of the Department

- Principal Investigator
- Two experts ( to be decided by the Dean as per the guidelines of the project)
- Dean of any other Faculty (as Hon. Vice-Chancellor nominee) to be invited by the Dean of the concerned faculty.
- Prepare the summary statement of the candidates including the name, qualifications, experience and eligibility of all the candidates whose application is received. The comment of P.I. regarding eligibility of the candidate is preferred.
- Send the proceedings of the appointment of the candidate to the University for approval by the Hon. Vice-Chancellor with following documents
  - Copy of the notifications
  - List where the notification was sent (signed copy is preferred)
  - Summary statement of the candidates
  - True copy/self attested credentials of the selected candidate
  - Selection Committee's Report in original with signature of all the members
  - Names of waitlisted candidates (if any)
  - True copy/self attested credentials of the waitlisted candidate
- Waitlisted candidates can be appointed as per the priority list in case the selected candidate is unable to join due to any reason. The tenure of wait listed candidates is considered to be the duration of the project if not mentioned otherwise in the report.
- Mention following clearly in your letter to the University
  - Name of the selected candidate
  - Designation of the candidate
  - Remuneration to be given (should be as per notification)
  - Effective date of joining
  - Duration of the appointment
  - Names of waitlisted candidates (if any)
- After receiving the approval from the University, issue the letter of appointment to the candidate.
- Send joining report of the candidate along with a copy of the appointment letter to the University.
- In case of UGC, fill Annexure IX ( Encl: III) in two copies and send it to the University for onward submission to UGC.
- In case the selected candidate doesnot join due to any reason, there is a provision of appointing the waitlisted candidates as per the priority list. Take permission from University before appointing the waitlisted candidates. Send the credentials of the waitlisted candidate along with request letter.

**(b) Procedure for Appointing Part Time Accountant/Secretarial Assistant/ Peon etc.**

PI/Co-ordinators can hire the secretarial assistance required for administrative and accounts work of the project through selection committee or hire the University appointed (permanent or temporary) staff.

In case of appointment through the Selection Committee,

- follow the same procedure as for the appointment of JRF/SRF.
- Ask for VC's nominee on the Selection Committee from the GCU Section.
- After receiving the approval, issue the letter of appointment to the candidate.

- Send the joining report.

In case of hiring the University appointed (permanent or temporary) staff.

- Send a letter through proper channel to the GCU stating the name of the employee and proposed remuneration.
- Attach the undertaking format (Encl.IV)
- Such appointed staff can draw total 40% of his /her basic salary or fixed salary, from all the projects he/she is working on with maximum of Rs 1500/- per month per project.
- He/she will have to work on the project before or after office hours.
- The parent organization shall be responsible to maintain that the regular office work does not suffer.
- After receiving the approval from the University, send the joining report.

Part Time Accountant/ Secretarial Assistant/Peons can also be appointed on daily wages. U/S 42 of O.31 Dean has power to make such appointments and to make payments as per minimum Wages Act. Inform University about such appointments.

The expenditure for these appointments can be charged under the 'Overhead' Budget Head OR under 'Contingency' if Overheads are not given, after taking due approval of the University.

### **(c) Procedure for Appointing Technical Staff**

As per UGC guidelines

Technical staff required for the implementation of the project may be hired on a fixed amount for a fixed period on contract basis. The modalities for the utilization of research funds under the head of 'hiring services' are as under:-

- This is meant for having institutional services for specialized technical work, such as sample analysis, for which the University/Institution either has no infrastructure or such services are available on payment basis.
- Stenographic services may be hired for the purpose of preparation of questionnaire/schedule or report writing and not for routine correspondence.
- Skilled/unskilled workers may be engaged on daily wages for expedition, field work only and not as a peon, attendant, lab attendant, clerk, accountant etc.
- Such of the Principal Investigators who have not been given any research personnel on a regular basis, may hire a person for technical assistance and the person so engaged must fulfill the qualifications prescribed for Project Fellow. He/she may be paid remuneration at par with the Project Fellow, limited to a maximum of 6 months in the total tenure of the project.
- Expenditure on payment of consultancy fees etc. shall be admissible under this head, if the payment is made to a person outside the Institution of the Principal Investigator and Co – Investigator(s). As far as possible, consultancy fee should be paid to some organized agencies only.

Appointment of technical staff / Consultancy fees on contractual basis can done after taking approval of the University after following procedure of appointing through Selection Committee 4(a).

Send the request letter

- Indicating the specialized requirement of the project
- Details of the person/agency etc to be appointed
- Duration of appointment
- Remuneration to be given
- Budget head

#### **8. Purchase Procedures (basic information)**

- Please consult the Audit Section before processing the major purchases in order to avoid unnecessary delays and wrong procedures.
- The equipments and Books & Journals should be procured as soon as possible for the smooth implementation of the projects.
- Only approved equipments should be procured. In case any changes are required in the list of approved equipment, take permission from the Funding Agency.
- The escalations in the cost of equipments can be met by re-appropriating from the savings of the other head after taking due permissions from the University. Funding Agency must be informed about it.
- The equipments purchased under the projects are the property of the Department which should be kept in the laboratory or deposited in the department.
- The books and Journals purchased under the project must be deposited in the Departmental library or Central Library after completion of the project.
- No dead stock items can be purchased under contingency / consumable heads.

Principal Investigator has powers of purchase at par with the Dean.

As per O.31 as revised vide Syndicate Resolution No. 21 dated 29/7/2016 (effective from 1<sup>st</sup> August, 2016)

- **Dean has power to purchase any item upto Rs. 20,000/- without inviting any quotations**

No permission from any authority is required for such purchase.

Prepare the bill in the G-Form and send it to the University along with the invoice, with two copies of the GCU- Sur Bill with signature of PI.

- **Dean has power to purchase items from Rs.20,001/-upto Rs. 50,000/- by inviting quotations.**

In such cases send inquiry to at least 6 vendors along with required specifications of the item asking them to send the quotations by a certain date and time in sealed envelopes through courier. Open the received quotations in the presence to Head and two other members of the Department (Departmental Committee). Take signature with dates of these members on the envelop and the quotations. Prepare a comparative statement. Place the order to the lowest vendor. Prepare the bill in the G-Form, attach the procedure, fill two copies of the GCU Sur Bill with details duly signed by PI. Send to the University.

- **Vice-Chancellor has powers to purchase from Rs 50,001/- to Rs. 2,00,000/- after the procedures.**  
Follow the same procedure of floating the inquiry and opening the quotations. Instead of placing the order directly, send all the documents to the Audit section for taking the approval of competent authority. Place the order after receiving the permission letter from the Audit section. Process the bills along with the University letter and all the required documents.
- **From Rs. 2,00,000/ onwards the item goes to the Purchase Committee.**  
Float the inquiry and ask for quotations in two bid system (Technical and Commercial) for items above Rs 2,00,000/. Constitue a Technical committee for opening the Technical bid. Only those commercial quotations to be opened who qualify in the Technical bid. Send all the documents to the Audit Section for placing in the Purchase Committee. After receiving approval from the University, place the order and process the bills.
- **Above Rs. 9, 50,000/- , tenders are to be published in the newspapers.** Same procedure as for purchase Committee.

**NOTE: The items whose specifications are issued by the University must be invited in two bid system irrespective of the price.**

## 9. Travel

Travel under the Research Projects is allowed for the following

- For data collection related to projects
- For visiting Libraries, institutes within the country to collect information
- For attending Conference/ Seminars/Workshops/Training Programme etc
- For inviting subject experts for the selection committee
- For inviting other experts to discuss the project work
- For attending mid-term reviews of the projects

No International Travel is allowed unless specified by the Funding Agency.

The procedure for taking permissions for undertaking travel

- Travelling by Bus/Taxi/ own Car – Dean’s permission is required
- Travelling by Train (within and outside Gujarat) - Dean’s permission is required
- Travelling by Air - Vice-Chancellor’s permission is required
- Write a letter to Dean informing about the travel. Dean may permit on the same letter. This permission must be attached at the time of producing the bills.
- Apply to the University in case of travel by Air.
- University permission letter must be attached along with the bill.

Registration fees for attending the Seminar/Conferences etc

- upto of Rs 10,000/- Dean's permission is required
  - Above Rs 10,000 Vice-Chancellor's permission is required.
- University does the Annual Rate Contract for hiring vehicles. Hiring of vehicles has to be done from the designated travel agencies only. In case the designated travel agency is unable to provide the vehicle due to any reasons, PI/Co-ordinators can travel by own car or hire a taxi/vehicle from any of the other agency after following due procedures.
  - Travelling Allowance as per entitlement, Dearness allowance, Registration fees of the conference /seminars etc and other misc expenditure can be charged under the 'Travel' Head for PI and Project Staff.
  - TA/ DA and Registration fees can be claimed under 'Contingency' head also with proper justification.
  - **DA** to the permanent employees of the University working on a project be given as per Government of Gujarat rules.
  - PI/Co-PI/Co-ordinators/ JRF/SRF/RA/PDF and other project staff can avail the lodging and boarding charges (on providing the actual receipt) as per the details given below. **In this case DA cannot be claimed.**

Sr. No.	Grade pay	Hotel accommodation per day (lodging)	Food bill per day not exceeding (boarding)
1	Rs 9,000 and above	4000	1000
2	7,000 to 8,999	3000	1000
3	5,000 to 6,999	2000	1000
4	4,400 to 4,999	2000	1000
5	JRF/SRF/RA/PDF	2000	1000

- For travel within the city of visit, the reimbursement be done on the basis of actual receipt.
- RA/PDF/JRF/SRF/PF etc working on a project/programme/getting fixed fellowship are entitled to receive Daily Allowance maximum up to Rs 500/- per day for going out station for field work/project related work/attending Seminar or training programme etc.

**Note:**

- UGC does not allow to charge expenditure for attending Conference /Seminars etc under the travel head of the project. There is a separate provision under merged schemes for university teachers.
- It is preferred that the travel is well planned and prior permissions are taken from the competent authorities.
- Post facto permission can also be sought with proper justifications.

## 10. University Management Charges

- University Management Charges (8% of the total sanctioned grant) is charged under Overhead budget head and is required to be deposited in the University Accounts.
- 3% of the Management charges so collected can be distributed to the concerned faculties for infrastructure improvement and development of the faculty.

The balance Overhead grant can be used for (Encl: VIII)

- Part Time appointment of Administrative/Financial/Store Personnel after following University procedures
- Payment of outside Audit Services
- Advertising for various posts in the project like JRF, Project Fellows etc.
- Maintenance of equipments
- Purchase of spare parts/peripherals of the equipments
- Under infrastructural facilities PI may be allowed to do interiors of the lab/room, purchase lab/room furniture.

## 11. Re-appropriation of the funds

- Re - appropriations from the Non-recurring to Recurring is not permissible.
- In case of UGC MRP, 20% of the grant allocated under each head of Recurring component can be re-appropriated after taking permission of the Hon. Vice-Chancellor and UGC is to be reported with proper justification for doing so.
- Fellowship grant cannot be re-appropriated.

## XII. Research and Consultancy Cell – Consultancy Policy

**Ref: S.R. No. 22, dated 31-8-2012, Ordinance - 296**

### **Norms, Scope of Functions and Financial Modalities of the Research and Consultancy Cell**

#### **1. Introduction**

In order to enhance the level of intellectual productivity and efficacy, the Office of Research & consultancy Cell (ORCC) is set up to provide specialized administrative and managerial support for the operation of in-house & sponsored research, consultancy and other R&D related activities of the M. S. University of Baroda. The scope and scale of research has substantially evolved from the era of student's in-house theses to funded projects and interdisciplinary research programs at national and international levels. The principal objective of creating such Cell is to facilitate - on behalf of the university, coordination in administration, managerial, liaison, monitoring etc. of in-house & sponsored research and consultancy work within the ambit of the administrative framework of the M.S. University. The Office of Research and Consultancy Cell (RCC) will facilitate interaction with external agencies, both national and international. It will also promote and manage University-Industry interactions and all externally funded research and development projects (except Government agencies) as well as patents. The Office shall act as a liaison between the University and Private/Industrial funding agency to undertake sponsored projects.

#### **2. The Research and Consultancy Cell (RCC)**

##### **(a) Objective:**

The M. S. University of Baroda, Vadodara has always emphasized on the cultivation of strong links with industry and promotion of research work and various industrial activities by the faculty members and students. In order to keep up with the growing volume of industrial liaison activities, and even more importantly, to catalyse the further growth and development of interaction between the University and Industry, a separate *Office of the Research and Consultancy Cell* (ORCC) is established and headed by the *Director, Research and Consultancy Cell*.

##### **(b) Domain of the Research and Consultancy Cell:**

The Research and Consultancy Cell will be responsible for the management of the following activities:

- University Supported Projects
- Sponsored Industrial Research Projects
- Industrial Consultancy Projects
- Intellectual Property (Patents, copyrights etc.) arising out of the above activities

**(c) Organizational Structure of the Office of Research and Consultancy Cell (ORCC):**

**(i) The Director:**

*Director* of the Office of the *Research and Consultancy Cell*, who shall be a Professor of the University with high research acclaim and with professional research approach, shall be recommended by the Standing Committee comprising of Vice-Chancellor, Pro-Vice-Chancellor and one Dean nominated by Vice-Chancellor and approved by the Syndicate for a term of three years or till his /her superannuation, whichever is earlier and shall be the main executive officer of the Research and Consultancy Cell. The term of the Director may be extended for another three years. The Director will report to the Vice-Chancellor in his/her functioning. The Director of the Cell is delegated powers equivalent to other officers such as Dean, Chief Warden; Director Students Welfare, Proctor etc. as specified in Ordinance 31.

The Vice-Chancellor shall fix, from time to time, the honorarium to be paid to *Director* and decide about the readjustment of their teaching workload in order to enable him/her to attend to his/her responsibilities in the Cell effectively.

**(ii) Advisory Committee for Research and Consultancy Cell (RCC)**

An Advisory Committee of the Research and Consultancy Cell shall be comprising of one or two Deans, Senior Professors, Senior Teachers, Development Officer and Director of the Cell, shall be constituted with the responsibilities of providing impetus to the University research and consultancy activities and to provide support, advice and assist the teachers. The Members will be senior teachers with research and consultancy experience and of high repute in their research area from different departments and inter-disciplinary programs. The Advisory Committee shall be a vibrant entity to discuss policy issues and the ways to promote research and consultancy and encourage the research activities in the University. RCC members will help in highlighting the shortcomings, if any, in procedural matters and thus sharpen the performance of the Office.

**3. Preamble**

The Director of the research and Consultancy Cell shall coordinate with all the Faculties of the University, Industries, NGO's and reputed Institutes;

- To have a closer linkage and promote research suited to industry needs, and consultancy,
- To encourage faculty members in the University to submit research projects and to bring about MOUs and Agreements with various industrial and research organizations in different fields and sectors to promote various forms of interactions such as;

**(a) Industrial Research & Consultancy**

- i. Sponsored industrial research
- ii. Joint industrial projects for faculty
- iii. Use of industrial labs by University
- iv. Use of specialized database / lab equipment of University
- v. Solutions for Field Problems
- vi. Creation of collaborative labs / testing centre at University
- vii. Research fellowship support, and manage the

**(b) Intellectual Property (Patents, Copyrights etc.)**

To encourage, safeguard and manage Intellectual property according to Intellectual Property policy (IP Policy) of the University relating to Inventions (Patents, design, trademark, Layout diversity etc.) and Expressions (Copyright, various forms of expressions and related rights).

**4. University Supported Projects**

- It is anticipated that sustained long-term support to research will deliver immense overall advantage in the research in the University.
- The M.S. University of Baroda has proposed for creation of a budget for research proposals.
- Initially, seed money of 25 lakhs shall be made available from University share of testing and consultancy income. Subsequently, the adequate funding shall be provided yearly basis from the following funds:
  - i. 5% of the “*examination fee*” and
  - ii. 5% of the “*University share of testing income*”.
  - iii. 5% of the “*University share of consultancy income*”.
  - iv. 5% of the “*University Development & Maintenance Funds income*”.
- An adequate number of projects will be approved every year; each project being proposed for a period of two to three years. This financial support from within the University will enable the teachers to forge new directions, and make a positive impact in the University’s research domain. In view of the University decision to financially support research for teachers using internal resources, the following strategy for selection and monitoring of projects, including implementation details and deadlines will be adopted:

**4.1 Research Mobilization**

The research projects shall be identified as major or minor depending upon the proposal submitted. A minor project up to 2 Lakhs and a major one of 4 Lakhs may be sanctioned.

**Guiding Notes:**

- i. Projects would be selected from detailed proposals submitted to the Office of Research and Consultancy Cell (RCC). The proposals would necessarily be in extremely important and attractive areas. They would be reviewed by a panel of experts, including some from outside the University, if necessary. The

quality of the proposal would be the primary factor guiding its selection for financial support.

- ii. Projects funded by the University would be carefully monitored. Publications, Ph. D. students and Patents would be used as indicators of success.

#### 4.2 Call for Research Proposals

- i. Office of Research and Consultancy Cell will announce the call for proposals from the teachers of the University. The call will include the thrust areas, though proposals would be welcome from all those who are fresh appointees and do not already possess any research projects earlier particularly proposals from Social Sciences, Commerce, Fine Arts, Performing Arts etc., where the fund rendering agencies are not many. Innovative but feasible proposals from the newly appointed Assistant Professors from Science and Technology may also be considered.
- ii. Proposals will be reviewed by a body-constituted by the Office of the Research and Consultancy Cell and approved by the Vice-Chancellor. The body may seek the opinion of external experts to evaluate the proposal. Such experts may be suggested by the investigator in the proposal itself.
- iii. The committee will make decisions with respect to the suitability of the proposal for financial support as well as other aspects such as time-frame requested; cost of consumables, expenses towards travel for data collection, and any other relevant item, the investigator may wish to put in the proposal. The recommendation of the experts, forwarded by Director Research and Consultancy Cell will be submitted to Vice-Chancellor for final approval.

#### 4.3 Process of Approval

Each proposal will be independently reviewed by 1-2 subject experts.

- i. **Timeline:** Call for proposals would be launched in early January every year. Proposals will be due on 15<sup>th</sup> January.
- ii. **Review** (internal and external) is expected to be complete by mid February. Presentations would be held in February-March and all decisions would be announced by the last week of March. Reviews of ongoing projects would be arranged in October each year.
- iii. **Identifying areas of research:** This step is understandably the most important. Research directions could be driven by pure excitement and curiosity. The emphasis will vary from one year to the next and will require continuous discussion.
- iv. **Evaluation:** Progress would be closely monitored, using external experts, if necessary. High impact/good publications would be the first step in this evaluation. University support will also be viewed as an investment for bringing in major projects and awards.
- v. Modalities of Audit and Utilization of the funds be followed.

## 5. Sponsored Industrial Projects

For a project sponsored by industries /corporate sectors /Trust/NGO's or University (MSU), honorarium can be claimed. The amount is to be used by the PIs as approved in the respective budget head by the funding agency.

- i. **Individual projects:** The M.S. University encourages investigation of basic and applied areas of Social Sciences, Fine Arts, Performing Arts, Science and Technology, Commerce, Management Studies etc., in the form of sponsored projects. Research grants for such projects are given by industries, private business houses, corporate sectors or any NGO's. These projects are usually of 2-5 years duration with periodic appraisals.
- ii. **Collaborative projects:** Faculty may also participate in collaborative projects with other domestic or industrial partners. In such projects, there must be a separate budget and scope of work clearly stated for the faculty & staff of the University and the collaborator.

### 5.1 Rules

- i. The office of the Research and Consultancy Cell shall be the nodal office for all the research projects sponsored by private sectors /corporate sectors /trust / NGO's or by the University (MSU).
- ii. The teachers of the M. S. University shall submit the project proposal, containing the Financial and Technical details of the project proposal, to the Director of Research and Consultancy Cell through HOD and the Dean of the Faculty. The Project proposal should be as per the format of funding agency. The Director Research and consultancy Cell shall forward the proposal to the said funding agency after proper scrutinizing and completing in all sense to avoid any delay.
- iii. A statement on terms and conditions of the project including the right of patents and royalties must be spelt out clearly.
- iv. If any Memorandum of Understanding, vis-a-vis, terms and conditions and deliverables has to be signed between the University and the funding agency, the Director, Research and Consultancy Cell will be the signatory on behalf of the University along with the Principal Investigator and Co-PI (If any).
- v. The letter of sanction and details of the amount sanctioned under different budget heads, duration of the project and other terms and conditions should be communicated to the Director, Research and Consultancy Cell with a copy of the Project, if sanctioned, after revision or changes by the funding agency.
- vi. The project will be started after the receipt of first instalment of the grant sanctioned or as specified by the funding agency, and approved by the syndicate as per Ordinance 31.

### 5.2 Financial Guidelines

University rules of expenditure that includes procurement, travel, remuneration etc., shall be applicable as for the projects funded by UGC/DST/ ICSSR/ BRNS/CSIR/ GUJCOST/ AICTE / DBT/ICMR/ICAR/GSP etc., unless an 'exception' has been made out by the funding agency.

### 5.3 Review and Closure

- i. The PI should prepare the Annual Progress Report along with the settlement of accounts which should be submitted to the Office of the Research and Consultancy Cell. After verification of the accounts by the Chief Accounts Officer, the reports and accounts with Utilization Certificate with a forwarding letter should be sent to the funding agency.
- ii. Closure of the project should be done within six months of the completion of the project. The final technical and fiscal report along with Utilization Certificate audited by the University approved Chartered Accountant, should be prepared by the PI in accordance with the requirements of the funding agency, and the same shall be submitted to the Office of the Research and Consultancy Cell for verification.
- iii. Statement of final accounts showing the year-wise receipts and expenditure and a list of articles (consumables and non-consumables) left over at the time of termination of the project and purchased out of the project funds should be sent to Office of the Research and Consultancy Cell. These articles may be transferred to the Department stock register except where the sponsoring bodies do not allow the Department to retain the articles without paying them the book value of the articles.
- iv. A teacher shall be considered for new projects proposals only up to two years before Superannuation.
- v. Teachers of the University shall be allowed to work as PI till the University Rules allows him/her to continue or up to the age of Superannuation as per the guidelines of Gujarat Government from time to time

## 6. Research Fellowships

The office of the Research and Consultancy Cell shall be responsible for disbursement / sanction of the various research fellowships/scholarships/Research Associate (RA) sanctioned by UGC, University or any other government or non-government agencies except those, which are sanctioned or allocated in the research proposals awarded to the *individual teachers* funded by the agencies such as UGC / DST / ICSSR / BRNS / CSIR / GUJCOST / AICTE/ DBT / ICMR/ICAR/GSP etc. through a committee constituted by the Vice-Chancellor. The office will also monitor the proper and timely disbursement of the fellowships as well as their research progress of such scholars from time to time.

## 7. Industrial Consultancy Projects

### 7.1 Introduction

The Maharaja Sayajirao University of Baroda is situated in industrial, scientific and economic hub of the State of Gujarat. University has a large number of faculties wherein there is a vast expertise in various fields. This expertise is at present interacting with other organizations at the individual level. Such interaction gives only limited results and maximum benefit do not accrue. Instead of this if an institution interaction is initiated between M. S. University and any interested party it will produce better and visible results. The wealth of expertise could be utilized for the welfare of society. This

will bring the university and society closer and the academic community will contribute to the growth and development of the society at large.

## 7.2 Benefits from Consultancy Activities

The Research and Consultancy Cell of The M. S. University of Baroda wishes to encourage Academic Staff to undertake consultancy assignment in the areas of their Academic and Research pursuit realizing that the benefits accrued are four-fold.

- The expertise and facilities of the university are utilized for scientific technological, commercial and social development, benefiting society as a whole.
  - A unique opportunity is provided to the faculty members to enrich their knowledge and experience in solving the problems of the real world.
  - The additional knowledge and experience thus gained are imparted to the students and
  - A fairly significant income will accrue to the university to supplement other revenues and grants.
- a) Consultancy Services may be offered to Industries, Service Sector, Government Department and other National and International agencies in niche areas of expertise available in the University.
  - b) The service offered shall be along the lines of 'Professional Services' and will hence carry with them obligations and ethical requirements associated with such services.
  - c) Consultancy services offered may cover a variety of activities such as Feasibility Studies, Technology Assessments, Assessment of Designs and/ or Current Manufacturing Process; Material, Energy, Environmental and Manpower Audits.  
**Product Design:** Job Wok Development of Process, Preparation of Chemicals/ Pharmaceutical Formulations, Product Development, Software Development General Troubleshooting, Condition Assessment & Retrofitting Exercises, Intensive efforts for transfer of highly focused skills and expertise to select groups in specific organizations, vision and strategy statement and so on.
  - d) Standardization and Calibration services may be offered in areas in which facilities are available or can be augmented. Such services should normally be backed by periodic Calibration / Standardization of laboratory equipment used for such purposes.
  - e) All Consultancy and related Jobs need to be structured and executed in the spirit of promoting University-Industry Interactions, as a vehicle for augmenting (current) levels of excellence in teaching and research.
  - f) RCC shall discuss with Industry and other such groups to identify the thrust areas of research and consultancy in their fields.

## 7.3 Eligibility for Consultancy Work

Only permanent academic faculty members of the University of the Level of Assistant Professor / Lecturer (In case of Polytechnic) / Chartered Accountants and Business Management (MBA) and above can act as consultants. Consultants are specifically identified for an individual project before it is taken up by the University. Individual faculty members will not solicit consulting work. Individual consulting will

cover only cases of paid participation in teaching or lecture programmes. Membership of Board/Committees and remunerated publication or any other activity in whatever form or method will come within the purview of consulting for the purpose of these rules.

*“The faculty member’s primary obligation is to the University and it is expected that he/she will not, in any way, financially or otherwise, transgress the spirit on which the consulting privilege rests”.*

The rules in individual consulting will be as specified in Rule 11 or 12 of the Rules regarding Discipline and Conduct of University employees.

#### 7.4 Terminology

Consultancy work is the professional services rendered by the university to a client on a fee basis. The form in which this service is rendered may be classified as follows, subject to the condition that in case of dispute or doubt in any Clause, the Vice-Chancellor’s decision shall be final.

- (a) **Consultancy Project:** - In this category of work, activities such as design/analysis, software development, product design /development, process design/development. Model investigation, advice on R & D., transfer of technology, evaluation/review and diagnostics may be undertaken wherein considerable intellectual input and /or originality is involved. It covers Exhibition of Art work/sponsored Performances for the Faculty of Fine Arts and Faculty of Performing Arts respectively and Chartered Accountant / MBA’s.
- (b) **Test project:** - This category of consultancy work involves developing, testing, typically implying innovations or innovative use of experimental facilities and considerable interpretation of results often leading to opinions and recommendations.
- (c) **Consultant:** - A consultant is an academic faculty member of the university as defined in Clause (3) who on behalf of the university renders specified professional services to client, normally on the basis of personal compensation for such services.
- (d) **Investigator:** - An investigator is an academic faculty members of the university specified under clause (3), who on behalf of the university undertakes development testing and offers his expertise in the interpretation of results of the test project, as well as opinions and recommendations wherever necessary, normally on the basis of personal compensation for such services.
- (e) **Client:** - A client is an individual or organization requesting and contracting for professional services from the university. The type of organization may include Government (Centre/State). Public/Private/Joint sector units. Consulting agencies. R & D Laboratories, Educational Institutions and in fact any bonafide legally established organization with freedom to carry out business with the University.
- (f) **Total Project Cost:-** This is the sum of money in exchange of which the University undertakes to fulfil the items of work defined under the scope of the consulting work. The entire project cost is normally required to be paid in advance or at least

partly before the commencement of the consultancy work and thereafter in parts/phases by the client to the university (*as given in 7.11 Financial Guidelines*). However in genuine case, the Director, Research and Consultancy Cell shall have power to make amendments in this clause.

- (g) **Terms and Conditions:** - The terms and conditions governing the undertaking of the consultancy work by the University would normally specify clause of contractual obligations such as the scope of work, time limits, provision of data by the client limitations in terms extent of involvement of the university or the consultants for visits, technical advice and training, intellectual and material property rights and other relevant aspects.

### 7.5 Approaching for Consultancy

The client can either approach any academic staff or Head / Dean of Faculty or Director, Research and Consultancy Cell of the University for the Consultancy Job. In case the office of the Research and Consultancy Cell is approached by some outside agency for a possible consultancy job, such requests shall be referred to the concerned Head of the Department for his/her advice. In case the client gives specific references of any faculty member, it shall be referred to the concerned faculty member. The Director, Research and Consultancy Cell, in turn, will assign the job to the individual or group of individuals in the Department after ascertaining their competence. The concerned staff member(s) will prepare the proposal according to a prescribed format adhering to the standard terms and conditions and send it to the Director Research and Consultancy Cell for obtaining, through the Head of Department, approval of the competent authority.

All proposals for a consultancy job are to be submitted on **prescribed form** keeping in view the standard terms and conditions. The form should be filled up in all respect and must be signed by the consultant(s) and the client organization. Special care should be exercised for adhering to the time schedule. The following norms should be followed for monitoring consultancies undertaken by the faculty.

- (a) The consultancy work should not interfere with the normal teaching / research work of the Department and other duties of the staff member(s) concerned.
- (b) The total time to be spent by the consultant(s) in all consultancy jobs in hand at any given time should not exceed one working day per week/per person.
- (c) The total earning from consultancy should not exceed 150% of the gross yearly salary in a particular financial year.

All proposals for a consultancy job are to be submitted on prescribed form. The form should be filled up in all respect and must be signed by the consultant(s) and the client organization. Special care should be exercised for adhering to the time schedule. The following norms should be followed for monitoring consultancies undertaken by the faculty:

- (a) Consultancy jobs exceeding One lakh and to be completed in more than one year be reviewed every six months. If the job is progressing well the consultant should certify its progress in writing. In case there are serious problems either from the client or consultant the issue should be brought to the Director, Research and Consultancy Cell or the Vice-Chancellor, for his decision.
- (b) If the client and the consultant agree to a revised time schedule, written consent of the client should be obtained.
- (c) Where the consultancy is not getting completed in the agreed schedule/revised time schedule the Director, Research and Consultancy Cell shall hold a meeting of the client and consultant for resolving the issue. In case this does not happen, the Vice-Chancellor shall be referred to for a final decision in the matter.
- (d) In case of any dispute arises in relation to the matter, the same shall be referred to an arbitrator appointed with mutual consent of both the parties and the Baroda Court shall have the jurisdiction over such matter.

### 7.6 Institute Charges

The Institute charges for the purpose of costing are divided into two portions, viz.

- (a) **Operational Expenses:** to be incurred for the operation of the job, under different heads No amount from this will be paid to the consultants.
- (b) **Fee for Scientific and technical advice:** to be apportioned between the University and the consultant and other academic staff.

The different budget heads under “**Operational Expenses**” which should be planned are:

- (i) **Cost of Labour:** Honorarium to non-academic (technical/administerial staff) and hourly rate to person specifically hired for the particular work.
- (ii) **Cost of Materials:** Amount needed for the purchases of material required for the job.
- (iii) **Instrumental/Computer Charges:** Charges for the use of computer/ Instrument of the institute or from outside.
- (iv) **TA/DA:** For local visits and also for travel within /outside the country if specifically provided for the proposal.
- (v) **Contingencies:** Catering to contingent expenses.
- (vi) **Administrative Overhead Charges:** These are charged at the rate of 10% of the total consultancy charges to be paid to the University (i.e. expenses plus fee for scientific and technical advice)
- (vii) The cost of infrastructure of the University including wear and tear, depreciation of building etc. at the rate 5% of total consultancy charges.

### 7.7 Consultancy Project Type

- i. **Type-I:** Addressed to any University functionary that is HOD, Dean or Director Research and Consultancy, and has Laboratory component.

- ii. **Type-II:** Addressed to any University functionary, that is, HOD, Dean or Director Research and Consultancy, and does not have Laboratory component.
- iii. **Type-III:** Addressed to any specific faculty expert and has Laboratory component.
- iv. **Type-IV:** Addressed to any specific faculty expert and does not have a Laboratory component.
- v. **Type-V:** The Chartered Accountants, who wish to apply for permission to do private practice, are asked to pay fixed amount of ` 5,000/- p.a. for those who are practising for less than 10 years and ` 10,000/- p.a. for those who are practising for more than 10 years from the date of their applications. Permission once given will remain valid as long as the fees are paid regularly. If, in any year, the fees are not paid, the permission will automatically get cancelled and a fresh application will have to be made for renewal of the permission. (**Refer- S.R. 3(2) dated 20-7-2001**)

## 7.8 General Guidelines

- i. Each consultancy project shall have a Principal investigator and other Co-PIs as chosen by the PI as per their area of specialization. Principal Investigator must be a regular teacher of the University however temporary Assistant Professor / Temporary Lecturers (in case of Polytechnic) may be considered for Co-PI.
- ii. The PI shall be appointed by the Director, Research and Consultancy Cell on the recommendation of Head of the Department and Dean of Faculty as per the area of specialization, willingness and availability of the member for the projects of Type I and Type II.
- iii. For the consultancy projects Type-III & Type IV, the PI shall normally be the concerned Academic Staff member, subject to the condition that the work falls within his area of academic/research pursuit.
- iv. For the type-III, IV and V, the teacher is permitted to do outside the work subject to the conditions governing under rule-12 or Rules regarding the discipline and conduct of the University Employees passed by the Syndicate and;
  - a) He/she will devote 40 hours per week for the work assigned in the Faculty,
  - b) Clients should not be called in the Faculty during teaching hours,
  - c) University quarters if occupied, must not be used for running the Office.
  - d) Permission to undertake consultancy should be renewed every year.
  - e) He/she shall have to intimate about the exact amount received by him latest by the second week of March or 31<sup>st</sup> March of the Year.
  - f) The amount ` 3000/- or 30% of the total income, whichever is higher shall be paid by him at the end of financial year irrespective of the fact whether he/she makes profit out of the consultancy or not **as per S.R. 34 dated 27-9-1991 under the intimation of the University.**
- v. Each consultancy project may have a team of Academic Staff members to be chosen up by the Principal investigator as per the area of specialization.

- vi. The Office of the Director, Research and Consultancy Cell (RCC) shall be the nodal Office for all the consultancy projects in the M.S. University of Baroda. The Office of the Research and Consultancy Cell (RCC) shall maintain all the financial records pertaining to the projects.
- vii. The members of the Academic Staff shall submit the proposal for any consultancy project to the Director Research and Consultancy Cell through HOD and Dean of the Faculty, and the same shall contain the following, (a) Name of other members in the project (b) Scope of the work (c) Financial details (d) copy of the letter from the Client.
- viii. Consultancy project proposals (prepared in response to a client's request) are to be approved by the Director Research and Consultancy Cell who may examine the scope of the work and cost estimates. It is essential to discuss proposed work plans with a client vis-a-vis the scope, in order to obtain clarity before the consultant prepares the cost estimates
- ix. Consultant should be aware of the potential for the generation of Intellectual Property during the execution of projects. The **Intellectual Property** (IP) Policy of the University will govern all decision and actions concerning the generation handling protection and commercialization of the Intellectual Property.
- x. The services of external consultant that include experts from other Universities/ Institutions, retired Faculty/research scientists, may be utilized to a limited extent in order to provide comprehensive services to clients. Such external consultants will be entitled to a lump sum consultant fees which may be fixed after taking into account essential expenditure directly related to the assignment.
- xi. Students who are willing to work on consultancy projects may be permitted as per University norms to do so provided it does not affect their academic commitments and performance. Such work by students may be compensated by suitable honoraria.
- xii. The persons involved in the bio-medical/bio-technology or microbiological research/ testing shall be observing the following guidelines of the committees according to Govt. of India viz.,
  - 1) Ethical Guidelines for Biomedical Research on Human Participants
  - 2) Institutional Bio-safety Committee (IBSC)
  - 3) CPCSEA Guidelines for Laboratory Animal Facility
  - 4) Ethical Guidelines for Psychological ResearchSuch committees should be made as per ICMR/DBT/CPCSEA guidelines in the University before undertaking research or consultancy work. Office of the Research and Consultancy Cell will be the nodal office to constitute the committees and monitor their functioning as per guidelines given by the authorized agencies of the Govt. of India.

### 7.9 Limitations

- i. The time spent on consultancy should be managed in such a way that it should not affect the teaching and other assignments of the University.
- ii. The total remuneration received by any Teacher through consultancy related payment shall be limited to 150% of his gross salary in financial year to be seen on accrual basis; similarly the limit for Technical / Other Staff shall be fifty percent.
- iii. Consultancy assignments may be taken up and implemented, within the constraints indicated above, provided they do not have any adverse impact on the ongoing academic, research and related activities. Further, such assignments need to be carefully scheduled in the light of ongoing commitments. If required, a clear indication of the earliest date on which the assignment can commence may be clearly spelt out in the proposal form.
- iv. The services of permanent employees of the University may be utilized for the execution of the consultancy projects provided it does not affect their primary functions and responsibilities to the University.

### 7.10 Conflict of Interest

Consultants shall disclose to the Director Research and Consultancy Cell, in writing, the existence of:

- i. any relationship between him / her and the client funding the consultancy project or any vendor to whom payments are made from the project funds, in the form of involvement of any immediate relatives or
- ii. any scope for potential disproportionate self-gain, Director Research and Consultancy Cell will review such cases and decide appropriately, with the advice of its advisory committee, to ensure that no actual conflict of interest exists and that such an involvement by the consultant does not adversely affect the consultant's objectivity integrity, or commitment to the University and to the profession.

### 7.11 Financial Guidelines

- a) All the payments for consultancy projects shall be in the name of the Registrar, The M.S. University of Baroda through DD or electronic transfer.
- b) The charges for any assignment are normally payable in advance. However, exceptions may be made in respect of assignments involving charges exceeding ` 200,000/- and with implementation periods exceeding 3 months.
- c) In the case of large assignments, a payment schedule linked to milestones can be worked out. Such a payment schedule should ensure that:
  - i. advance payment is received for every segment of work, and
  - ii. the number of instalments are reasonable and consistent with ease of implementation. The number of instalments may not exceed four for a project implemented over a one-year period, and, this number needs to be scaled down accordingly for shorter duration projects.

The **Total Agreed Charges** (TC) of a project shall have the following Budget

Heads:

- i. Technical Advice Fee (**A**)
- ii. Total Expenses (**E**), that includes- Contingency expenses: Travel expenses;
- iii. Visit Fee: Outside consultant charges and other recurring and nonrecurring expenses
- iv. Total taxes or other Levies as per prevailing rules (**T**)
- v. The minimum Technical Advice Fee (**A**) applicable for consultancy project shall be 20,000/- or more as decided by the consultant and the client excluding of any applicable tax,
- vi. Variations up to 20% in the '**Expenses Head**' can be made subject to availability of funds, and unspent balance under this head can be transferred to the "**Technical Advice Fee**".
- vii. The PI, while seeking approval of expenditure from Project funds, should specifically mention the project '**Budget Head**' to which that expenditure will be debited
- viii. Project specific services of the Consultants from outside the University may be sought, subject to the certification by the PI stating that the expertise of the kind is not available in-house and prior approval of the Director Research and Consultancy Cell is to be obtained. The payment to such Consultant shall be limited to 20% of the fee charged under Technical Advice fee or ` 100,000/- whichever is less.
- ix. Estimates under Total Expenses (**E**) should be carefully prepared by the Principal Investigator keeping in mind the market rates for equipment, material and services to be procured from market and the time required for the project.
- x. Contingency expenses may cover- cost of supplies, preparation of report, typing, word processing, drawing, drafting, stationery, reproduction literature (books, journals), postage, courier, FAX and telephone (including rental and STD/ ISD call bills of telephone at residence or mobile phones), analytical testing charges and computational charges etc.
- xi. Expenses incurred on reasonable hospitality in connection with the consultation work can also be charged as expenses on actual basis on production of receipt as per University rules.
- xii. Dearness Allowance (**DA**) for teacher and Technical Staff will be admissible for the "field work" which will comprise collection of field data from natural environment, mapping of an area, installation and maintenance of instruments in the field, performance of test in the field, etc. as per University rules.
  - a. Preliminary Diagnostic Discussions / Site Visits may be charged at a minimum rate of ` 5,000/- per day per expert. As an industry friendly

- move, the consultant may decide to absorb such charges into the final project cost.
- b. For travel outside the University, the most expeditious and convenient mode of travel should be used to minimize period of absence from the University. There will be no restriction placed by the University on the mode of travel. Actual boarding & lodging expenses will be paid on production of receipt.
- xiii. The permission to leave the Head quarter shall be as per the University rule, besides regular University leaves no additional leaves shall be maintainable for taking up the consultancy assignments.
- xiv. Principal Investigator may get specific job work done on payment from outside, such payment may not exceed 5% of the TC for the project, and for higher amount specific permission may be sought from Director, Research and Consultancy Cell, subject to the ceiling of 10 % of TC.
- xv. Principal Investigator may engage University Students (who may or may not be getting fellowship) as Student Assistants with the approval of Director, Research and Consultancy for consultancy and testing work on payment of ` 150/- per hour subject to a maximum of 50 hours per month. The expenditure on this account can be booked under manpower charges/ contingency.
- xvi. Distribution of Consultancy amount for Type-I and III projects (i.e., having laboratory component)
- a. Total Contracted Amount (C), that is. Total Agreed Charges (TC) less Taxes (T)
- b. Total Expenditure on the project (E)
- c. University share (I) = 0.50(C-E)
- d. Staff Share (S) = 0.50 (C-E)
- xvii. Distribution of Consultancy amount for Type II and IV projects
- a. Total Contracted Amount (C): that is. Total Agreed Charges (TC) less Taxes (T)
- b. Total Expenditure on the project (E)
- c. University share (I) = 0.35 (C-E)
- d. Staff Share(S) = 0.65 (C-E)
- e. The Staff Share 'S' shall be distributed to Academic, Technical and Other staff of the University involved in an assignment based on the recommendation of the PI. The distribution of University Share (I) shall be utilised by the Research and Consultancy Cell for its general activities and as a fund for research related activities.

## 8. Conditions for Projects and Consultancy

- i. **DECLARATION:** All work undertaken by the University as part of the project will be in good faith and based on material / data / other relevant information given by the Client requesting for the work,

- ii. **CONFIDENTIALITY:** Due care will be taken by the University to maintain confidentiality and discretion regarding confidential information received from the Client, including but not limited to results, reports and identity of the client.
- iii. **REPORTS:** Any test or other consultancy report given by the University will be based on work performed according to available standards and /or open domain literature in any event; this report may not be construed as a legal document, certificate or endorsement and may not be used for marketing of the products or processes, without prior consent from the University. The University reserves the right to retain one copy of the report and use the results of the project for its internal teaching and research purposes.
- iv. **WORK PERFORMANCE:** Every effort will be made to complete the specified work according to the planned time schedule. However, the University will not be held responsible for delays caused beyond its reasonable control.
- v. **LIABILITY:** The University shall not be held liable for any loss, damage, delay or failure of performance, resulting directly or indirectly from any cause which is beyond its reasonable control. The liability of the University shall be limited to the funds received for the project.
- vi. **INTELLECTUAL PROPERTY RIGHTS:** All rights pertaining to any intellectual property generated / created /invented in the due course of the project, will be governed by the IP Policy of the University.
- vii. **CONFLICT OF INTEREST:** The University may take up work for other clients also in the same area, provided, to the best of the University's knowledge, there is no conflict of interest in undertaking such projects.
- viii. **BREACH OF CONDUCT:** To examine/investigate any complaint/information of breach of professional misconduct the Vice-Chancellor may constitute a committee comprising, Director, Research and Consultancy as convener, and two external members. The Committee may recommend restraining the PI/Co-PI from undertaking industrial Consultancy assignment for a specified period.
- ix. **AUDIT:** The account of the 'Industrial Consultancy Fund' shall be annually audited through professional chartered accountant and the report thereof shall be submitted to the Director, Research and Consultancy.
- x. **TERMINATION:** The project work may be terminated by either party. However, both parties will meet any residual obligations in connection with the project
- xi. **RESOLUTION OF DISPUTES:** Any disputes arising out of the project shall be amicably settled by both the Project Team and Client. For unresolved dispute the Vice-Chancellor may constitute a committee comprising- Director, Research and Consultancy Cell as convener, and two external members, for reconciliation and recommendation. Any unsettled disputes may be subject to resolution as per the Indian Arbitration and Generation Act 1996. The terms and conditions will apply to all projects taken up by the University, unless otherwise mutually agreed to in a separate document.
- xii. **OVERRIDING POWER:** The Vice-Chancellor, on the recommendation of Director, Research and Consultancy Cell, shall have the authority to overrule any of these rules in the overall interest of the University, and the reasons for the same shall be recorded.

- xiii. **JURISDICTION:** All agreement signed on behalf of The M. S. University of Baroda will have the Jurisdiction of the courts in Vadodara (Gujarat State)

## 9. Intellectual Property Policy (IP Policy) of the MSUB

The policy is applicable to the intellectual property (IP) like patents, copyrights, trademarks, industrial designs, layout designs of integrated circuits, trade secrets, geographical indications etc created in the university or outside the university by the persons on the rolls of the university. The policy may be modified from time to time to meet the emergent needs or on case to case basis. Any intellectual property generated out of the creative efforts of the employee (temporary or permanent) or student/research scholar will be the property of the university and will be governed by the rules and regulations published by the university from time to time from the office of Research and Consultancy Cell (RCC). Following are the salient features of the policy:

- i. The faculty is advised to go for patenting (at least with provisional specifications) before sending the research work for publications, if the research work points towards an invention of commercial/strategic importance.
- ii. The patent application may first be filed in India. Cases of high commercial/strategic potential can be considered for PCT filing on the recommendation of a committee constituted by a competent authority.
- iii. The RCC may consider financing the filing of such applications which have high commercial value as advised by an expert committee constituted by the Director, Research and Consultancy Cell. Such cases will be evaluated by the committee for potential commercial value of the invention.
- iv. RCC may also consider for renewal of the patent or any other form of the IP if the patent/copyright is already granted to the creator of the invention on case to case basis on the recommendation of an expert committee constituted by the competent authority.
- v. Ownership of the intellectual property created as cited above will be as follows;
  - a) The M. S. University of Baroda (MSU) will hold the sole ownership in those cases where the IP is created by its (ex)staff / (ex)students in/out of the university using the funds of the university.
  - b) In case of projects/schemes funded by external Government funding agencies like UGC/CSIR/DST/DBT etc, the terms and conditions as defined by the funding agencies will be applicable.
  - c) In cases of collaborative projects sponsored by industries/corporate sector/trusts/NGOs/private individuals, there will be joint ownership of the created intellectual property. IP agreements need to be signed in such cases. In case of commercialization of the IP, MSU can assign its share of ownership-rights to the collaborator (funding agency) if it (MSU) wishes so on case to case basis. The collaborator will have the first right of refusal towards commercialization following which the university will be free to license the IP to a third party. In case the generated IP having academic and research value, MSU reserves the right to use the IP for its own in-house R & D/teaching fulfilment.

- d) The collaborator will not have the right to use the name or logo of MSU for any purpose for the created IP unless permitted by the MSU.
- vi. In case of commercialization/licensing of an IP, revenue sharing will be in the ratio of 60:40 between the inventors/creators and the university.
- vii. Licensing will be of 'Non-exclusive' nature unless and otherwise stated. License fee will be decided on case to case basis.
- viii. In case of 'Exclusive' licensing of an IP, there will be a periodic review which will be defined clearly in the terms and conditions of the licensing.
- ix. MSU retains the rights to initiate legal proceedings against infringement of its IP or flouting of terms and conditions by the collaborators.
- x. MSU will obtain indemnity from legal proceedings against a person or organization for its IP due to malfunctioning, manufacturing defect, production problems, design guarantee etc or against any direct or third party legal liability arising out of commercial exploitation of IP.
- xi. In case of any conflict/dispute the Vice-chancellor will have the veto power and his decision will be deemed final.
- xii. All agreements signed by RCC on behalf of MSU will have the jurisdiction of the courts in Vadodara and shall be governed by appropriate laws of the Union of India.

### XIII. Incentivization of Research at MSUB

- One of the most important criteria in ranking (NIRF, SIRF, THE, QS etc) and accreditation (NAAC) process is the research output of the Faculty members of the University.
  - Research output includes publications, research project and patents. The publication by the faculty members should be in Journals indexed in Scopus or web-of-science (clarivate) or in CARE list of Journals.
  - Impact factor of the publications is also an important factor. The more the publications per faculty member better is the score in ranking/rating research criteria.
  - Another important criteria is the funding generated through sponsored research projects and the number of sponsored research projects.
  - Patents also plays an important role in improving the ranking of the University.
- Faculty members from MSU on an average publishes 950 articles (in three years) in journal indexed in Scopus and web-of-science. About 200 Faculty members from the university contributes towards this 950 publications. Number of these papers are in low impact factor journals, which drastically bring down the overall marking in various ranking agencies.
- Keeping this in mind, to improve the research profile of the university and encourage quality research from the university, incentivization of research is necessary.
- This will also encourage faculty members to publish in quality journals with high impact factor and bring in more research projects.

The following incentives are provided to the faculty members who are engaged in active research. This will also encourage more staff members to take up meaning full and significant research.

#### Category-1: Incentivizing research publications

##### Monetary Incentives for research publications (Science and Technology)

Sr. No.	Criteria	Incentive
1	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 10	Rs. 10000 per paper
2	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 5 but less than 10	Rs. 5000 per paper
3	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 3 but less than 5	Rs. 3000 per paper
4	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 1 but less than 3	Rs. 2000 per paper
5	Papers published in Scopus/web-of-science indexed journals with impact factor up to 1	Rs. 1500 per paper
6	Full conference proceedings indexed in Scopus, web-of-science	Rs. 500 per proceedings paper
7	Edited book chapters indexed in Scopus	Rs. 2000 per chapter (only one per book)
8	Edited books indexed in Scopus	Rs. 3000 per book

### Monetary Incentives for research publications (Arts and Humanities)

Sr. No.	Criteria	Incentive
1	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 5	Rs. 10000 per paper
2	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 3 but less than 5	Rs. 5000 per paper
3	Papers published in Scopus/web-of-science indexed journals with impact factor of or above 1 but less than 3	Rs. 3000 per paper
4	Papers published in Scopus/web-of-science indexed journals with impact factor up to 1	Rs. 2000 per paper
5	Full conference proceedings indexed in Scopus, web-of-science	Rs. 1000 per proceedings paper
6	Edited book chapters indexed in Scopus	Rs. 2000 per chapter (only one per book)
7	Edited books indexed in Scopus	Rs. 3000 per book

### Incentivizing research projects

- 1) 50% of the overhead charges of research projects to be given to PI. The PI (or group members) can use it for travel (international and domestic) for exchange visits or attending conferences, to pay conference registration fee, per-diem while on travel as well as for publication charges. It may also be used (towards boarding, lodging and travel expenses) for inviting collaborators and subject experts.
- 2) Leaves for exchange visits as well as for visiting collaborator's institution/laboratory.

### Category-2: Monetary incentives for patents/copyrights

#### IPR (Patents, Copyrights etc)

- 1) Encouraging the faculty members in filing patents with the Maharaja Sayajirao University of Baroda as one of the applicant/co-applicant, with the faculty member as the applicant/co-applicant/inventor. University will provide financial and legal aid for filing of patents, copyrights etc.
- 2) University to waive off its share of royalty.
- 3) Each published patent to be rewarded with Rs. 5000 and each granted patent with Rs. 10000.

### Monetary Incentives for Patent and Copyrights

Average number of patents published per year by MSUB researchers is about 10, the number of patents granted is about 5, number of copyrights around 10.

Sr. No.	Criteria	Incentive
1	Published patent	Rs. 5000 per published patent
2	Granted patent	Rs. 10000 per granted patent
3	Granted copyrights	Rs. 3000 per granted copyright

Only those patents filed in the name of MSUB will be rewarded. The inventor of such patents/copyrights will be rewarded.

### Category-3: Filing of patents/copyrights

As MSUB do not fall under the category of small entity of start-up, the following fee structure is applicable to the University.

Sr. No.	Description	Fees (Rs)
1	Initial fee for Application of patent	8000
2	Early publication Fee	12500
3	Request for examination of patent application	20000
4	Professional fee (for patent search, drawing of patent application etc)	40000
Total		Rs. 80500 per application

Also additionally university has to pay Rs. 4000 per year for renewal. Patents will be filed in the name of MSUB with the researcher as the inventor. MSUB will support at least 10 patent applications/copyrights per year from the university.

### Category-4: Budget requirement for supporting outside analysis for MSU Faculty members:

Good quality research often needs a great of proper analysis. Many times MSUB researchers face the problem of non-availability of sophisticated instrument facilities in respective Faculties/Departments and need to depend on analysis from outside agencies. The analysis of materials and samples prepared by MSUB staff members, PhD students or other researchers is essential to improve the quality of results and hence publications. MSUB has instituted a separate grant through the office of RCC for such essential analysis for MSUB researchers.

The proposal for analysis should be made to RCC and permission should be sought from before actual analysis is done. Once the permission is granted from RCC, the staff member may submit

the samples to outside agencies for analysis, and bill/receipt/invoice may be made in the name of Director, Research and Consultancy Cell. The amount can then be reimbursed to the faculty member and not to the outside agency. It is recommended that analysis should be done from government approved or supported institutions such as Sophisticated Instrumentation Centres of IITs or CSIR laboratories or SICART, VV Nagar or National/Central/State run universities/institutes (as example). Any staff member should not exceed limit of Rs. 5,000.00 per year for such analysis, so that more staff members can avail this benefit. Paid analysis done within the university is not be supported under this scheme.

## XIV. Libraries in MSUB

The MSUB library network consists of one Central Library, Smt. Hansa Mehta Library, situated in the main campus and 13 constituent libraries situated in various Faculties/Constituent Colleges.

- Shrimati Hansa Mehta Library, the University Library of M S University of Baroda was established on May 1, 1950. At the time of establishment of the M. S. University of Baroda, a collection of 25,000 books belonging to the two State Libraries (Huzur Political Office and Secretariat Library) was handed over to the University Library.
- Dr. Rajendra Prasad, then the President of India laid down the Foundation stone of Smt. Hansa Mehta Library of The Maharaja Sayajirao University of Baroda on 16th November 1954.
- Smt. Hansa Mehta Library- Knowledge Resource Centre is the Central Library governing the entire University Library System. It is the first Wi-Fi compatible Library in the State, catering to the educational/information needs of academic fraternity of The Maharaja Sayajirao University of Baroda, Universities and Institutes of Higher Learning in and around Baroda.
- MSUB University Library being identified as a Document Delivery Centre with 22 Universities from among 700+ Universities in the country to provide Inter Library Loan service (ILL)
- MUSB has signed MOU with INFLIBNET for the “Shodhganga” project on 22nd August 2012. Till date we have uploaded all 3715 theses on Shodhganga and is on 15th rank (2018) among contributing Universities in the country and have access to 1,15,000+ E Theses of contributing Indian Universities.
- Library is known for its collection, well enriched with print and electronic resources. Library is having 1,00,000+ users (virtual and physical) per month. Library has played a significant role in enhancing research output of University having h-index of 90.
- Smt. Hansa Mehta Library designated as an active content partner in Western India by National Digital Library of India, an initiative by MHRD-NMEICT, Government of India.
- Library conducts regular User Awareness Programmes for researchers, faculty members, PhD Aspirants and PG Students
- Library also organizes user awareness programmes by leading publishing houses.

Table 12: Library resources at MSUB

Sr. No.	Particular	Number
1	Text Books	779128
2	Reference Books	92795
3	e-Books	345
4	Journals	291
5	e-Journals	24000
6	Digital Database	21
7	CD & Video	1637

Table 13: Significant E-resources including Full Text Journals subscribed  
(Accessible across the campus)

Sr. No.	Electronic Databases
1	Academic Search Premier
2	ASCE e-Journals Library (Civil Engineering Journals)
3	ASTM Digital Library (FT & E )
4	Business Source Premier
5	Capitaline Plus Website
6	Economic Outlook
7	Gale Cengage Learning - Architecture + Environmental Engg
8	India Raj and Empire
9	Indian Citation Index (ICI)
10	IndiaStat.com Online Database
11	Industry Outlook
12	Internationaltaxation.com
13	Manupatra (Faculty of Law - BSLS Grant)
14	McGraw Hill - General Engineering Reference (FT & E)
15	N-List Annual Membership
16	ProQuest - Management
17	ProQuest Dissertation & Theses (Full Text)
18	Prowess Application for Credit Evaluation (PACE)
19	PROWESS IQ Database
20	SRMO (Sage Research Method Online)
21	Taxmann's Tax & Corporate Website - Full module <ul style="list-style-type: none"> <li>• INDCAT</li> <li>• DELNET</li> <li>• NUCSSI</li> </ul>

Table 14: Electronic Resources available across the Campus

Sr. No.	Electronic databases	Number
1	E-Resources (under E Shodhsindhu)	23000+
2	E-Books (Subscribed)	345+
3	Encyclopedia (Subscribed)	100+
4	Shodhganga (Indian Uni. Thesis)	200000+
5	Free Journals (Open Access Journals)	6000+
6	Free online Journals against print subscription (FOAP)	100+
7	Free E-Books	1000+
8	PROQUEST Dissertation & Thesis (Over 1 million)	2000000+
9	Institutional Repository	300+
10	Open Knowledge Gateway (Open Sources) Through NDL	1000700+
11	World E-book Library	3000000+

Table 15: Resources available under N LIST

(a) E-Journals

Sr. No.	Publisher	Number of Titles
1	American Institute of Physics	18
2	Annual Reviews	33
3	Cambridge University Press	224
4	Economic & Political Weekly	1
5	Indian Journals	180+
6	Institute of Physics	46
7	JSTOR	2500+
8	Oxford University Press	206
9	Royal Society of Chemistry	29
10	H. W. Wilson	3000+

(b) E-Books

Sr. No.	Publisher	Number of Titles
1	Cambridge Book Online	1800
2	E-brary	125000
3	EBSCoHost-Net Library	936
4	Hindustan Book Agency	65
5	Institute of South East Asian Studies(ISEAS)	382
6	Oxford Scholarship	1402
7	Springer eBooks	2300
8	Sage Publication eBooks	1000
9	Taylor Francis eBooks	1800
10	Myilibrary-McGraw Hill	1124

## Appendices

### Appendix A. Student Compliance Form

I certify that

1. I have read and understood the Academic Integrity Policy of the Maharaja Sayajirao University of Baroda.
2. I certify that this work is substantially my original work and the parts that are not my own have been acknowledged with appropriate citations and references.
3. I certify that this work is not copied from my own previous work submitted to this University or any other institute.
4. I understand that failure to comply with the Academic Integrity Policy and Procedures can lead the University to impose one or more of the specified penalties.
5. The document has been duly checked through the plagiarism detection tool approved by the University.

**Name(s):**

**Signature(s):**

**Date:**

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### Appendix B. Glossary of Terms

#### **Intentional Plagiarism**

Refers to the deliberate intentional act of passing off others' work as one's own; cutting and pasting from different sources to create own write-up without giving credit in the form of citation; copying an essay or article from any source (print, electronic) without quoting or giving credit; borrowing words or ideas from other sources without giving credit.

#### **Fabrication**

It is an intentional act of making up data or results and recording or reporting them.

#### **Falsification**

It refers to manipulation of research materials, equipment, or processes, or changing or omitting/suppressing data or results without scientific or statistical justification, such that the research is not accurately represented in the research record. This would include the "misrepresentation of uncertainty" during statistical analysis of the data.

[*US Department of Health and Human Services*. Retrieved July 20, 2020 from <https://ori.hhs.gov/definition-research-misconduct>]

### **Unintentional Plagiarism**

This occurs because of ignorance or carelessness in know-how of rules for citation and referencing. It comprises: poor paraphrasing for example, changing a few words without changing sentence structure or changing sentence structure without changing the words; carelessness in quoting, such as missing out on quotation marks in certain places or quoting partially; and poor citation in terms of omissions or inaccuracies.

[*MLA handbook for writers of research papers*. (2016). (8<sup>th</sup> ed.). New York: The Modern Language Association of America].

### **Whole-paper plagiarism**

This type of plagiarism is when one lifts all or most material from another published or unpublished source.

### **Cut-and-paste plagiarism**

In cut and paste plagiarism, parts of a paper (select sentences or entire paragraphs) are copied from a published or unpublished source and included in one's own paper, ignoring any reference to the original source.

### **Cut and paste plagiarism with references**

In this type of plagiarism, words or ideas from another source are taken, and the reference is included, without any indication that the material is a direct quote. Direct quotes must be marked by quotation marks.

[[Nine things you should already know about plagiarism](http://integrity.ou.edu/files/nine_things_you_should_know.pdf). (n.d.). Retrieved July 20, 2020 from [http://integrity.ou.edu/files/nine\\_things\\_you\\_should\\_know.pdf](http://integrity.ou.edu/files/nine_things_you_should_know.pdf).]

### **Self-Plagiarism or Auto-Plagiarism**

This type of plagiarism refers to presentation of one's own previous published work (partially or fully) as original. All of your past work that has been published must be cited and referenced clearly. In general, the core of the new document must constitute an original contribution to knowledge.

[*Publication Manual of the American Psychological Association*. (2020). (7<sup>th</sup> ed.). Washington D.C.: APA].

### **Paraphrasing**

Paraphrasing means restating ideas from a published (or unpublished) source in your own words without changing the original meaning. Only changing a few words here and there is not paraphrasing. The vocabulary and sentence structure should be changed such that these are not very similar to the original. Citation and referencing are a must in paraphrasing.

[*Publication Manual of the American Psychological Association*. (2020). (7<sup>th</sup>ed.). Washington D.C.: APA].

## Style Guide or Style Manual

A style manual contains different components of scientific writing so as to enhance reading comprehension in respective fields. Style manuals codify rules for clear communication. The rules include elements such as formats for in-text citation, referencing, quantitative data presentation in tabular forms, graphics, as well as mechanical elements such as, punctuation, spelling, abbreviations etc.

[*Publication Manual of the American Psychological Association*. (2010). (6<sup>th</sup>ed.). Washington D.C.: APA].

## Citation

A citation indicates that certain parts of one's written work have been taken from other sources. It also helps the reader to locate the source if need be. Different style manuals have specific rules for in-text citation as well as reference list. For web references it is necessary to specify not only the web address but also the date on which the material is accessed and retrieved. The date is important because web content is likely to change.

[Chicago Manual Citation Style Example of a Web Reference: Google. "Google Privacy Policy." Accessed July 19, 2010. <http://www.google.com/intl/en/privacypolicy.html>].

## Appendix C. Useful References

1. Nine things you should already know about plagiarism. (n.d.). Retrieved July 20, 2020 from [http://integrity.ou.edu/files/nine\\_things\\_you\\_should\\_know.pdf](http://integrity.ou.edu/files/nine_things_you_should_know.pdf).
2. White paper: The plagiarism spectrum. Instructor Insights into the 10 Types of Plagiarism(n.d.). In Turnitin. Retrieved July 20, 2020 from <https://www.ed.ac.uk/files/atoms/files/10-types-of-plagiarism.pdf>
3. The little book of plagiarism: What is it and how to avoid it (2017, September). (6<sup>th</sup> ed.). Retrieved July 20, 2020 from <https://www.stir.ac.uk/media/stirling/services/academic-registry/documents/book-of-plagiarism.pdf>

## Appendix D. Select List of Style Manuals

- *The Chicago Manual of Style* (2017). (17<sup>th</sup> ed.). Chicago: University of Chicago Press.
- *MLA handbook for writers of research papers*. (2016). (8<sup>th</sup> ed.). New York: The Modern Language Association of America.
- *Publication Manual of the American Psychological Association*. (2020). (7<sup>th</sup> ed.). Washington D.C.: American Psychological Association.

Note: The above list is illustrative. Teachers and students may follow any style manual that is acceptable in their discipline/field of study.



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