

Shikshana Prasarak Mandali's
Ramnarain Ruia Autonomous College

Matunga, Mumbai 400019

Minutes of the 12th meeting of the

Academic Council

Held on 19th April 2023

The 12th meeting of the Academic Council of the Ramnarain Ruia Autonomous College was held on Wednesday, 19th April 2023, at 11.00 hours IST in an online mode on the zoom platform using the following link:

<https://us06web.zoom.us/j/88935535719?pwd=bzFVeUV5TWI2QlBOWGpoUjlHN2Nwdz09>

The status of the Council members was as follows:

Sr. No.	Name of the Person	Designation & Department	Present/Leave of absence Granted
1.	Prof. Dr. Anushree Lokur	Principal	Present
2.	Dr. Sujata Suvarnapathaki	Member Secretary	Present
3.	Prof. Vilas Gaikar	VC Nominee Professor from ICT, Mumbai	Granted leave of absence
4.	Dr. Anuradha Majumdar	VC Nominee Dean, Faculty of Science and Technology, University of Mumbai	Present
5.	Prof. Mala Lalwani	VC Nominee Professor, Dept. of Economics, University of Mumbai	Present
6.	Dr. Ashwini Deshpande	IQAC Coordinator	Present
7.	Dr. Aditi Abhyankar	Senior Teacher	Present
8.	Dr. Bhavana Nerula	Senior Teacher	Present
9.	Dr. Nana Pradhan	Senior Teacher	Present
10.	Dr. Sunil Shankhadarwar	Examination In- charge	Present

11.	Dr. Sybil Thomas	Professor, Education Department University of Mumbai	Present
12.	Dr. Rajanish Kamat	Professor, Shivaji University	Granted leave of absence
13.	Dr. Amol Dighe	Professor, Physics, TIFR	Present
14.	Dr. Uday Salunkhe	Director of the Welingkar Institute of Management Development & Research, Mumbai	Granted leave of absence
15.	Dr. Urmila Moon	Head, Dept. of Commerce	Present
16.	Ms. Varsha Malwade	Head, Dept. of Economics	Present
17.	Dr. Arjun Kharat	Head, Dept. of English	Present
18.	Ms. Pakzan Fitter	Head, Dept. of French	Present
19.	Dr. Pravinchandra Bisht	Head, Dept. of Hindi	Granted leave of absence
20.	Prof. Dr. Louiza Rodrigues	Head, Dept. of History	Present
21.	Ms. Priyanka Desai	Head, Dept. of Mass Media	Present
22.	Ms. Leena Kedare	Head, Dept. of Marathi	Present
23.	Dr. Himani Chaukar	Head, Dept. of Philosophy	Present
24.	Dr. Himani Chaukar	Head, Dept. of Psychology	Present
25.	Dr. Vaibhavi Palsule	Head, Dept. of Political Science	Present
26.	Dr. Vaishali Dabke	Head, Dept. of Sanskrit	Present
27.	Dr. Sachin Palekar	Head, Dept. of Bioanalytical Sciences	Present
28.	Mr. Prashant Masali	Head, Dept. of Biochemistry	Present
29.	Ms. Supriya Kale	Head, Dept. of Biotechnology	Present
30.	Dr. Sucheta Ketkar	Head, Dept. of Statistics	Present

31.	Prof. Dr. Jessy Pius	Head, Dept. of Botany	Present
32.	Dr. Manish Hate	Head, Dept. of Chemistry	Present
33.	Ms. Arya Tawde	Head, Dept. of Computer Science and Information Technology	Present
34.	Dr. Seema Shinde	Head, Dept. of Life Science	Present
35.	Dr. Rajeshwar Andhale	Head, Dept. of Mathematics	Present
36.	Dr. Varsha Shukla	Head, Dept. of Microbiology	Present
37.	Prof. Dr. Vijay Mayekar	Head, Dept. of Physics	Present
38.	Prof. Dr. Vaishali Phusate	Head, Dept. of Zoology	Present
39.	Ms. Reshma Tamhane	Head, Dept. of Tourism and Travel Management	Present
40.	Dr. Sasikumar Menon	Head, Dept. Of Pharma Analytical Sciences	Present
41.	Dr. Himani Chaukar	Chairperson, Foundation Course	Present

Honorable Principal, Prof. Dr. Anushree Lokur opened the 12th Academic Council meeting by warmly welcoming everyone.

The Member Secretary, Dr. Suvarnapathaki followed with the meeting proceedings post the Principal's address. Each agenda was taken up thereafter.

❖ Agenda item No.01: To confirm the minutes of the 11th Academic Council Meeting held on 11th April 2022.

The Minutes of the last meeting were reiterated by Dr. Sujata Suvarnapathaki and the council concluded the discussion for agenda 1.

Proposed by: Dr. Sujata Suvarnapathaki Seconded by: Dr. Anuradha Majumdar

❖ **Agenda item No.02:**

To seek approval for the changes in the number of credits to be awarded for the undergraduate programs B.A and BSc (for the students admitted to FY for the academic year 2022-23) from 132 to 120

For agenda 2, Dr. Suvarnapathaki, proposed that the students getting admitted at the first year for the academic year 2022-23 be awarded total 120 credits (instead of the earlier 132) on successful completion of their B.A/ BSc program.

The above suggestion was appreciated and passed by the council. Dr. Amol Dighe also commented that this has high chances of being in line with the pattern of distribution of credits as per NEP 2020.

Proposed by: Dr. Sujata Suvarnapathaki

Seconded by: Dr. Amol Dighe

❖ **Agenda Item No. 3: To seek approval for the changes in the syllabus for SYBA/BSC/B.VOC/BACM and TYBA/BSC/B.VOC/BACM and MA/M.Sc wherever applicable.**

Syllabus changes were proposed in the subjects of Foundation Course, Economics and Marathi under the Arts stream and in the subjects of Bioanalytical Sciences, Biochemistry and Zoology in the Science stream.

- Dr. Pradeep Waghmare proposed the following changes in the subject of Foundation Course

Subject	Semester, Paper code and Paper Title	Changes	Justification
Foundation Course	III RUFC301 Foundation Course (Career Planning and Writing Skills)	Unit I Critical thinking and Lateral thinking Unit II Career related skills Unit III Developing career required soft-skills Unit IV Formal Writing Etiquettes	Under CBCS few topics were included in FY FC Syllabus in previous year as Ability Enhancement Course and few new topics are included in SY FC sem 3 and sem 4 syllabus under Skill Enhancement Courses.
	IV RUFC401	Unit I Yoga and Stress management Unit II	Under CBCS few topics were included in FY FC Syllabus in

	Foundation Course (Modern Life Skills)	Entrepreneurship and Financial literacy Unit III Soft-skills required in the contemporary world Unit IV Developing Writing Skills and E-Content	previous year as Ability Enhancement Course and few new topics are included in SY FC sem 3 and sem 4 syllabus under Skill Enhancement Courses
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Dr. Anuradha Majumdar commented that the revisions were very relevant and nicely made. The council agreed to the above changes in Foundation Course syllabus.

- Ms. Varsha Malwade, Head, Dept. of Economics proposed the following changes:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Economics	III RUAECO302 Indian Economy: Contemporary Concerns	Unit II, III & IV from Economic Survey of India 2022-23	As per BoS decision, every year 3 Units get selected from Economic Survey of India
Economics	IVRUAECO402	Unit III & IV from World Development Report 2023	As per BoS decision, every year 2 Units get selected from World Development Report

The council agreed to the above changes in Economics syllabus.

- Ms. Leena Kedare, Head, Dept. of Marathi proposed the following changes in syllabus:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Marathi	VI RUAMAR402 मराठीच्या बोलींचा अभ्यास (मालवणी बोली)	"फाग गीते - १) माझे नमन विघ्नेश्वरा २) चौडेश्वरी देवीचा ३) रवळनाथाचा ४) टीपराचा (दिवाळे टीपराचे दिवशी) ५) देवाची पंढरी ६) इंग्रजांचा (विजयदुर्ग) हल्ला	घटक १ मध्ये मालवणी बोलीचा परिचय आणि इतिहास समाविष्ट आहे. त्यातील इतिहासाऐवजी मालवणी संस्कृतीचा अधिक परिचय व्हावा म्हणून १० फाग गीतांची निवड करित आहोत. यातून मालवणी संस्कृतीचा अधिक चांगला

		७) रामायण - कन्येचे (सीता) स्वयंवर ८) कृष्ण अवतारी : श्रीकृष्ण जन्म ९) गौळण मदनाची पुतळी १०) श्रावण बाळ"	परिचय होईल. 'शिमगा' हा कोकणातील मोठा सण - उत्सव असून त्यावेळी ही 'फाग' गीते सादर केली जातात.
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The council passed the above changes in Marathi syllabus.

- Dr. Sachin Palekar, Head, Dept. of Bioanalytical Sciences proposed the following changes in syllabus:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Bioanalytical Sciences	III RUSBAS305 Computational Sciences I	Existing paper renamed as Computational Sciences I	Based on changes in FY Syllabus existing paper renamed as Computational Sciences I
	III RUSBAS306 Ethics in Science	Topics like The role of ethics in science, Practicing Ethics in Science & Technology, Ethical in Scientific Research are introduced.	New Paper introduced as ability enhancement Course
	IV RUSBAS405 Tools and techniques in Biology	Topics of Advances in Microscopy, Electrophoresis, Principles of Clinical Biochemistry introduced.	New Paper introduced as skill component
	IV RUSBAS406 Research Methodology	Topics of Introduction to Research Methodology, The research process and conceptualizing a research design are introduced.	New Paper introduced as ability enhancement Course
	IV/ X RPSBAS403/1003 Biopharmaceuticals & Biosimilars	Following topics are introduced: Introduction to Biopharmaceuticals & Biosimilars, Biopharmaceuticals : Development and Regulations, Biosimilars: : Development and Regulations, Analysis of Biopharmaceuticals and Biosimilars	New Paper introduced as Discipline specific elective
	IV/ X RPSBAS403/1003 Xenobiotic Analysis	Following topics are introduced: Introduction to Xenobiotics, Metabolites of pharmaceuticals, Analysis of Xenobiotics in biological and environmental matrices, Mass spectrometry of Xenobiotics	New Paper introduced as Discipline specific elective

The council appreciated the proposed specializations in Bioanalytical Sciences and also suggested the addition of Bioprobes in the upcoming years.

- Dr. Prashant Masali, Head, Dept. of Biochemistry proposed the following changes in syllabus:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Biochemistry	V RUSBCHP501 Membrane Biochemistry & Cancer Biology	Internship / Workshop / Hands-on training (1 - 4 weeks)	To give a hand-on approach
	VI RUSBCHP601 Human Physiology	Certificate Courses	To promote certificate courses
	II RPSBCHP203 Instrumentation and Analytical Techniques II	Project work	To give a hand-on approach
	III RPSBCH303 Internship / Courses	Internship / Courses	To promote & inculcate research culture
	IV RPSBCH401 Human Physiology & Developmental Biology	Workshops / Hands-on training	To give a hand-on approach

The changes proposed in Biochemistry have been kept on hold until further discussion.

- Ms. Supriya Kale, Head, Dept. of Biotechnology proposed the following changes in syllabus:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Biotechnology	IV RUSBTK405 Biostatistics and Bioinformatics	Unit 1: Introduction to computers and biological database ADDITIONS:- Reactome pathway database Unit2: Blast and structural bioinformatics : Additions:- Multiple sequence alignment; MUSCLE, Clustal O , Sequence logo and phylogeny ; Mega X Structural analysis; Modelling and analysis using SWISS PROT	Unit 1 additions: Introduction to pathway databases Unit 2 additions:ntroduction to global alignment and phylogeny Introduction to Modelling and ligand analysis
	IV RUSBTK407 Entrepreneurship Development	Change in complete paper with introduction of new topics	In accordance with new entrepreneurship strategies and marketing

	V RUSBTK505 Forensic science -1	ADDITIONS;- UNIT 1: Laws to combat crime: Civil and Criminal Introduction to IPC, Structure of IPC, Indian Evidence Act	Included in syllabus of Forensic Science keeping view with Post Graduation Entrance Exams
	Msc part 2 sem IV RPSBTK402 Bioprocess technology	shifting of unit 2 food rheology in unit 1 and introduction of Vitamins in unit 2 from bioinformatics paper	Rearrangement of units in suitable paper
	Msc part 2 sem IV RPSBTK401 Bioinformatics	shifting of unit 4 vitamins to RPSBTK402 bioprocess technology paper ; Addition of new unit UNIT IV: Molecular Docking Introduction to docking , Types of docking, preparation of ligand, softwares used for molecular docking- Autodock,Swiss Dock, Online docking servers , Applications and case studies of docking	Additions of recent and frequently used one of the advanced bioinformatic studies docking as part of drug development and drug designing studies
	Msc part 2 sem IV RPSBTK401 Bioinformatics	Additions of practicals 10.Preparation of protein structure. 11. protein-ligand docking. 12. protein -ligand interaction profiling.	Practicals in alignment with added new unit molecular docking in theory

The above changes were passed by the members of the council.

- Prof. Dr. Vaishali Phusate, Head, Dept. of Zoology proposed the following changes in syllabus:

Subject	Semester, Paper code and Paper Title	Changes	Justification
Zoology	III RUSZ00301 Theory Unit 1 Genetics, Heredity and Nucleic Acids	Study of syndromes: Genetic basis and symptoms of Turner's (45), Klienfelter's (47), Down's (21), Cri-du chat (deficiency), Patau's , Edwards (18- trisomy) Genetic counselling- delete Human Pedigree analysis with symbol	RUSZ00301 Unit 1- to complete more than 15 lectures are required , therefore repetitive contents were deleted Delete - covered in RUSZ00P503 Delete - covered in RUSZ00503 Delete covered in same unit as Pedigree analysis
	III RUSZ00P301 Practical based on RUSZ00301	Study of Human Karyotypes and Genetic disorders (Show karyotype spread pictoral)- Delete Finger printing Lifting techniques- Delete Extraction and detection of DNA Extraction and detection of RNA	Total number of practicals are more in RUSZ00P301 Delete - covered in RUSZ00P503 Irrelevant to theory syllabus

			Reframe as Qualitative tests for DNA Reframe as Qualitative tests for RNA
III RUSZ00303 Theory Unit 1 Ethology and Economic Zoology	Allelomimetic and Maladaptive behaviour- Addition Foraging behaviour in African Ungulates- Deletion		Addition is relevant to Unit Deletion-specific behavior is irrelevant in this Unit
VI RUSZ00403 Theory Unit 2 Reproductive Biology and Pollution	ART from treatment of infertility- Deletion		repeated
V RUSZ00502 Theory Unit 2 Haematology and Immunology	Blood Bank: Collection, storage, preservation of its components- Delete Blood transfusion: Crossing matching, Transfusion of blood and bone marrow transplant.		covered in RUSZ00202 Reframe-Transfusion: blood and bone marrow transplant.
V RUSZ00504 Theory Unit 1 Endocrinology, Osteology and Embryology	Pineal gland to be added		Addition is relevant to the Unit
VI RUSZ00602 Theory Unit 2 Physiology, Histology and Pathology	Unit title - Homeostasis (Temperature and Ionic regulation)		Reframe the Unit title to Physiology
VI RUSZ00604 Theory Unit 4 Environmental Biology and Entomology	Productive insects - honey bee, silk worm, lac insect; insect products – to be reframed		Reframe as: Products obtained from Honey bee, Silk worm, lac insect.
M.Sc I Sem I RPSZOPP301 Practicals based on RPSZP301	Study of nerve cells and neurosecretory cells of cockroach (Remove): Difficulty in procuring organism Addition Cockroach/Prawn- Nervous system Study of irritability in Paramecium- Reframe as Culturing and studying the irritability in Paramecium		Addition is relevant to the Unit
M.Sc II Semester IV RPSZOP403 Theory Marine	Introduction to Bioprospecting Marine Ecosystems and its functioning Marine organisms' diversity in marine environment (Invertebrates and Vertebrates) Scope and Significance of marine organisms in		Addition

	<p>Bioprospecting</p> <p>Unit 1 Introduction and Bioprospecting from Marine microbes</p>	<p>bioprospecting</p> <p>Recent trends in marine bioprospecting</p> <p>Marine organisms: a new biomedical resource and their</p> <p>Bioactive metabolites</p> <p>Discussion and prospects for the future</p>	
	<p>M.Sc II Semester IV RPSZOP403 Theory Marine Bioprospecting</p> <p>Unit 2 Marine Drugs</p>	<p>Pharmaceutical compounds from marine flora and fauna:</p> <p>a. Marine toxins b. Marine antiviral c. Marine Biotoxins</p> <p>Approved Marine Drugs as Pharmaceuticals</p> <p>a. Ziconotide b. Eccteinascidins c. Cytarabine and Vidarabin Marine Natural Products in Advanced Clinical trials</p>	<p>Addition</p>
	<p>M.Sc II Semester IV RPSZOP403 Theory Marine Bioprospecting Unit 3 Marine Nutraceuticals and Cosmeceuticals</p>	<p>Introduction to Marine sources as healthy foods</p> <p>a. Seaweeds b. Microalgae c. Fish and Fish by-products d. Crustaceans e. Marine fungi and bacteria</p> <p>Brief introduction of Marine derived ingredients with biological properties: Polysaccharides, Proteins, Peptides and amino acids, Fatty acids, Pigments, Phenolic compounds</p> <p>Marine Cosmeceuticals Definition</p> <p>b. Components of cosmetics c. Target organ and cosmetic delivery system d. Biological activities of cosmeceuticals: Photoprotective and anti-photoaging, Anti-wrinkling and skin regeneration, Depigmenting or whitening, antimicrobial activity.</p> <p>Ethical aspects of utilizing marine flora and fauna for bioprospecting.</p>	<p>Addition</p>
	<p>M.Sc II Semester IV RPSZOP403 Theory Marine Bioprospecting Unit 4 Isolation and</p>	<p>Introduction</p> <p>Separation Techniques</p> <p>a. Water soluble constituents b. Electrophoresis- Protein/Nucleic acid c. Reverse-phase (RP) columns d. High/medium pressure chromatography e. Combination of ion-exchange and size-exclusion chromatography</p> <p>Bioassay Directed Fractionation</p>	<p>Addition</p>

	Separation Techniques - Marine Extract	General Fractionation Isolation Procedures a. Amino acids and simple peptides b. Peptides c. Nucleosides d. Cytokinins e. Alkaloids	
	M.Sc II Semester IV RPSZOPP4 03Practical Based on Marine Bioprospecting	1.Action of Chitosan and Chitin from Crustacean shell waste. 2. Extraction of Gelatin. 3. Preparation of any one marine extract using a marine invertebrate. (Natica / Nerita) 4. Comparative evaluation and extraction of fish oil using dry and wet mackerel samples using Soxhlet method. 5. Comparative evaluation and extraction of fish oils using any two fish samples available on Mumbai coast. (Oil sardine / Shark liver) 6. Qualitative estimation of secondary metabolites (Alkaloids, Flavonoids, Tannins, Saponins) from a marine organism extract. 7. Gas Chromatography Mass Spectroscopy (GCMS) working, analysis and interpretation of data. (Demonstration practical) 8. HPLC working, analysis and interpretation of data. (Demonstration practical) 9. Culturing of algae 10. Visit to one research institute (related to practical) 11. Visit to shore or intertidal areas. 12. Project based activity: Evaluation of nutritive value of any fish.	Addition is relevant to the Unit

The above changes were appreciated and passed by the members of the council.

Proposed by: Dr. Sachin Palekar

Seconded by: Dr. Anuradha Majumdar

❖ **Agenda Item No. 4: To seek approval for the Swayam courses identified by the departments of Science and Arts faculty.**

The following courses were proposed by the heads of the department of physics and zoology respectively

Department	Title of Course
Physics	Introduction to Atmospheric Space Sciences, Experimental Physics – I,II,III, Physics of Biological Systems , Optical Sensors , Quantum Mechanics
Zoology	Cancer Fundamental (syllabus based topics for internal assignment)

The council passed the courses proposed by the department of physics with suggestions by Dr. Amol Dighe to lay special emphasis on practical based (experimental) approach in the topics of Experimental physics.

The courses proposed by Zoology have been kept on hold until a firm assessment pattern is devised for the same.

Proposed by: Prof. Dr. Vijay Mayekar

Seconded by: Dr. Amol Dighe

❖ **Agenda Item No. 5: To discuss the proposed Credit structure for Four Year Undergraduate Degree Program (Arts/Science).**

Principal, Prof. Dr. Anushree Lokur proposed the following credit structure for the Four year Undergraduate program.

Semester	Faculty			Any Faculty			Field projects/Internship/Apprenticeship/ Community Engagement and Services	Credits
	Subject 1	Subject 2		Subject 3 GE course (From a basket of Electives (Across disciplines)	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course/ EVLSc		Inter-Intra Faculty
	Major		Minor					
	Dept. Specific Core (DSC)	DSE (From a basket in a cluster)						
1	6		6	3	3	4		22
2	6		6	3	3	4		22
Exit option: 4 credit course by Sector skill council/basket offered by college								
3	6		6	3	3	4		22
4	6		6	3	3	2	2	22
Exit option: 4 credit course by Sector skill council/basket offered by college								
5	8	8			4		2	22
6	8	8			4		2	22
7	8	8					6	22
8	8	4					10	22
Total Credits (Four Year UG)	56	28	24	12	20	14	22	176
Percentage	32	16	14	7	11	8	13	100

The above patterns were also explained with suitable examples for Arts and Science faculty by Vice principals Dr. Vaibhavi Palsule and Dr. Varsha Shukla respectively.

The proposed structure was well received and highly appreciated by all the external members of the council.

Proposed by: Dr. Varsha Shukla

Seconded by: Dr. Amol Dighe

Agenda Item No. 6: Any other matter with the permission of the chair.

None

Dr. Sujata Suvarnapathaki

Dean, Academic Affairs and Member Secretary, Academic Council

Minutes Approved by

Prof. Dr. Anushree Lokur

Principal, Chairperson, Academic Council