

RAMNARAIN RUIA AUTONOMOUS COLLEGE, MUMBAI-19

Dept of Bioanalytical Sciences

Minutes of the meeting of the Board of Studies in Bioanalytical Sciences

Date: 22.10.2020

Time: 11:30 am to 12:30 pm

Venue: e-Meeting via Google Meet platform

Members Present:

Sr. No.	Name	Signature
1	<u>Dr.KrishnapriyaMohanraj</u>	
2	<u>Dr. Anjali Apte-Deshpande</u>	
3.	<u>Dr.Purvi Bhatt</u>	
4.	<u>Dr.AjitDatar</u>	
5.	<u>Ms. Sujata Suvarnapatki</u>	
6.	<u>Ms. Saeed Joshi</u>	
8.	<u>Ms. Nandini Girish</u>	
9.	<u>Ms. Sandhya Menon</u>	
10.	<u>Dr. Sachin Palekar</u>	
11.	<u>Dr. Madhura Dhavale</u>	
12.	<u>Ms. Sayali Kadge</u>	
13.	<u>Ms. Dhanashree Joshi</u>	
14.	<u>Ms. Gauri Risbud</u>	
15.	<u>Ms. Monali Thorat</u>	

Agenda I: To revise and approve the syllabi for FY/SY/TYBSc/MSc I & II for even semester classes, wherever applicable.

Discussed that: Following changes were proposed in the syllabi.

No change in the undergraduate syllabus for even semesters.

Regular M.Sc. Course Sem IV

Paper I

1. Title of RPSBAS401 is changed to **Pharmaceutical Biotechnology & Modern Analytical Techniques.**
2. RPSBAS401.4 UNIT clubbed with 401.2
3. Pharmaceutical manufacturing topic removed from the curriculum.
4. Addition of the topics in the paper:
 - 1) Thermal Analysis & X-ray Diffraction-X-ray Fluorescence
 - 2) Chiral Chromatography & Circular Dichroism and Optical Rotatory Dispersion

Palekar



Paper II

1. RPSBAS402.3 and 402.4 units clubbed with a new title: **Analytical & Bioanalytical Method Validation**
2. Introduction of the topic Tracer techniques in the paper.

Paper III

1. No change in the paper.

Paper IV

1. Credits increased for Research project. Existing **2 credits** equivalent to one practical paper changed to **8 credits** equivalent to one theory Paper & 2 Practical Papers.
2. Topics/Units for theory Paper IV adjusted in Paper I and II i.e. RPSBAS402,RPSBAS403
 - Thermal Analysis & X-ray Diffraction-X-ray Fluorescence, Chiral Chromatography & Circular Dichroism and Optical Rotatory Dispersion shifted to paper I(RPSBAS401)
 - Tracer techniques topic shifted to paper II (RPSBAS402)

Practicals of Sem IV: No changes in the practical.

Reg M.Sc. course Sem II

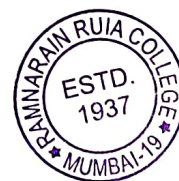
1. Paper I
No major changes
2. Paper II
No major changes
3. Paper III
No major changes
4. Paper IV
No major changes

Int M.Sc. I course Sem X

1. Paper I
No change
2. Paper II
No change
3. Paper III
No change

Int M.Sc. course Sem VIII

1. Paper I
No change
2. Paper II
No change
3. Paper III
No change
4. Paper IV



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- Title of the RPSBAS804 is changed **Recent trends in Pharmaceutical Industry and Biotechnology**
- Unit RPSBAS804.1,RPSBAS804.2,RPSBAS804.3- No change
- Unit 804.3 Biopharmaceuticals and Biosimilars unit removed from the curriculum
- Unit 804.3 Introduction of the new unit 'Advances in Bioanalysis'

Suggestions of BOS members with respect to agenda I

No specific suggestions given.

Resolved that

1. The proposed changes in syllabi are approved.
2. The exam cell will be informed about changes in paper titles.

Agenda II: Question Paper Audit

The question papers relevant to the subject expertise of the BOS Member along with the respective syllabus for the paper, mailed individually to the BOS Member for the audit and further suggestions

Resolved that

Question paper audit suggestions taken into consideration.

1. **Agenda III:** To decide on the changes in the modalities of assessment, if any, which includes the question paper pattern, for internal and external examination

Discussed that:

- 1) Looking at the current pandemic situation the question paper pattern for the upcoming examinations might change, depending upon the further situation.
- 2) Currently more focus has to be on MCQ based questions with difficulty range ranging from low to medium.
- 3) Short/Long answer questions could be included.

Agenda IV: Any other matter with the permission of the chair.

No specific matter discussed.

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**Head.
Department of Bioanalytical Science
Ramnarain Ruia Autonomous College
Matunga, Mumbai-400 019.**



RAMNARAIN RUIA AUTONOMOUS COLLEGE, MUMBAI-19

Dept of Bioanalytical Sciences

Minutes of the meeting of the Board of Studies in Bioanalytical Sciences

Date:17.05.2021

Time: 11:00 am to 12:30 pm

Venue: e-Meeting via Google Meet platform

Members Present:

Sr. No.	Name	Signature
<u>1</u>	<u>Dr.Krishnapriya Mohanraj</u>	
<u>2</u>	<u>Dr. Ajit Datar</u>	
<u>3</u>	<u>Dr. Purvi Bhatt</u>	
<u>4</u>	<u>Dr. Varsha Shukla</u>	
<u>5</u>	<u>Dr. Sujata Suvarnapatki</u>	
<u>6</u>	<u>Ms. Saeed Joshi</u>	
<u>7</u>	<u>Ms. Sandhya Menon</u>	
<u>8</u>	<u>Dr. Sachin Palekar</u>	
<u>9</u>	<u>Ms. Nandini Girish</u>	
<u>10</u>	<u>Dr. Madhura Dhavale</u>	
<u>11</u>	<u>Ms. Anushka Joshi</u>	
<u>12</u>	<u>Ms. Sayali Kadge</u>	
<u>13</u>	<u>Ms. Dhanashree Joshi</u>	
<u>14</u>	<u>Ms. Gauri Risbud</u>	
<u>15</u>	<u>Ms. Monali Thorat</u>	

- 1. Agenda I: To revise, if needed, and approve the changes in the syllabi (odd and even semesters) for FY/SY/TY /MSc (Integrated and Regular) classes for the academic year 2021-22**

Discussed that:

Regular M.Sc. Course(2 years)

Sem I

Paper:

RPSBAS101 – No change

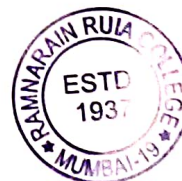
RPSBAS102- No change

RPSBAS104- No change

Practicals for Semester I- No change

RPSBAS103.3-

'Identification of Target' to be added first in the proposed unit [May include case studies(The Organic Chemistry of Drug Design and Drug Action by Richard Silverman)]



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and its hyphenated techniques RUSBAS604.3- Biochemical Methods of Analysis	RUSBAS604.2- Micro Analysis & Surface Analysis RUSBAS604.3- General Metabolism and Nutrition
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Sem V RUSBAS501(Changes awaited), 502, 505- No change

Sem VI RUSBAS601(Changes awaited), 602, 605- No change

Integrated M.Sc. I

Semester VII

Semester VII (Existing)	Semester VII (Proposed change)
RPSBAS701 Pharmaceutical Microbiology & Pharmaceutical Manufacturing	RPSBAS701 Extraction, Separation and Isolation of Analytes from biological matrices
RPSBAS702 Pharmacology & Toxicology	RPSBAS702 Pharmaceutical Microbiology & Pharmaceutical Manufacturing
RPSBAS703 Extraction, Separation and Isolation of Analytes from biological matrices	RPSBAS703 Pharmacology & Toxicology
Name of a unit has been changed in RPSBAS704:	
RPSBAS704 Different Systems of Medicine & Regulations 704.1 Disease Management as per different medicinal systems	RPSBAS704 Different Systems of Medicine & Regulations 704.1 Modern medicine and Disease Management

- **Electrophoresis unit(Shifted from RPSBAS703.4 to RPSBAS701.4)**
 - ❖ Sequence of the points in the unit is rearranged.
- Practical of RPSBAS702: Bacterial Endotoxin test practical has been added.
- **New point to be added in 703.1 Basic Pharmacology:**
Classification of drugs based on mechanism of action- CNS agents and Immunomodulators
- **RPSBAS704: New name of the unit: 704.1: Modern medicine and Disease Management-**
Reframing/Modifying existing points from the unit.
 - ❖ 704.2 New Chemical Entity (NCE) & its Evolution into a drug molecule- Rearranged and reframed the unit. Name of the unit changes to New Drug Development
 - ❖ 704.4: Standardization aspects of Ayurveda, Siddha & Unani drugs- Rearranged and reframed the unit

Integrated M.Sc. I Semester VIII

Sequence of the papers has been changed for ease of paper setting.

Integrated M.Sc. II Semester IX - No major changes

Integrated M.Sc. II Semester X- No major changes



- Verification of Beer-Lambert's law.
- To determine: a) λ_{max} b) Molar absorptivity constant

Sem III RUSBAS303,304,305,306,307- No change

SEM IV

RUSBAS401

401.2 Genetic Mutation and Repair: Added concept of transposons, and Introduction to genetic engineering to the unit. Name of the unit changed to **Genetic Mutation and Repair and Genetic Engineering**

401.3 Genetic disorders: Added Spinal Muscular Atrophy to the unit

RUSBAS402

402.2 Biochemical Methods of diagnostics: Added IRMA, Flow Cytometry to the unit. (Removed few repetitive points)

RUSBASP401 Biological Sciences Practicals

New Practicals added:

- Study of glucose uptake by Yeast cells
- Trypsinization of Liver Tissue & Cell Viability studies

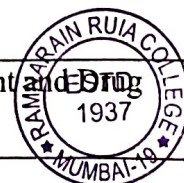
RUSBAS404

404.3 Principles of Planar chromatography: Restructured few points to make it more streamlined and relevant

Sem IV RUSBAS403,405,406,407- No change

TYBSC

SEM V	
TYBSc Chemical Sciences Existing	TYBSc Chemical Sciences Modified
RUSBAS503.1- Methods of Separations III RUSBAS503.2- Bioanalysis RUSBAS503.3- Thermodynamics	RUSBAS503.1- Atomic Spectroscopy RUSBAS503.2- Molecular Spectroscopy RUSBAS503.3- Raman and IR Spectroscopy
RUSBAS504.1 Basic Pharmaceutical Chemistry RUSBAS504.2 Micro Analysis & Surface Analysis RUSBAS504.3- General Metabolism and Nutrition	RUSBAS504.1- NMR RUSBAS504.2- Biochemical Methods of Analysis RUSBAS504.3- Bioanalysis
SEM VI	
RUSBAS603.1- Spectroscopy I RUSBAS603.2- Pericyclic Reactions RUSBAS603.3- Electro-analytical & Thermal methods	RUSBAS603.1- Liquid Chromatography RUSBAS603.2- Gas Chromatography RUSBAS603.3- Introduction to Mass Spectrometry and Hyphenated Techniques
RUSBAS604.1- Spectroscopy II RUSBAS604.2- Introduction to Mass Spectroscopy	RUSBAS604.1 Drug Development and Drug Action



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1. Immobilization of Invertase
2. Applications of enzymes in diagnostics (Determination of glucose with Glucose oxidase kit, Demonstration of Glucometer)
- 3.

Chemical Sciences I RUSBAS203

203.3- Chemical Kinetics and Chemical Thermodynamics:

Methods of determining order of reaction by Integration method, Graphical method, Equi-fraction method, Ostwald's isolation method (point to be removed)

Chemical Sciences II RUSBAS204

*Units shifted from SEM I 204.1 and 204.2- (Fundamentals of Organic Reactions and Mechanisms I and II). Added Pericyclic reactions in these units.

Sem II RUSBAS201,202,205,206,207- No change

SYBSc.

SEM III

301.2 Developmental Biology unit:

Addition of new point: Introduction to Stem cells and its applications

302.2 Virology unit:

Addition of new point: Added SARSCoV2

Biological Sciences Practicals:

Practical topics to be removed:

- Haemocytometer
- Study of growth curve of *E. coli*
- Study of microbial Biosurfactants

Practical topics to be added:

- Working in Laminar Air flow
- Handling of Micropipettes
- Preparation of antigens and vaccines

Chemical Sciences Practicals:

Practical topics to be removed:

- Investigate the Conductometric titration of Oxalic acid with Standard NaOH solution
- Determination of the mixture composition of Acetic acid and HCl by Conductometric titration
- Nitration of Salicylic acid
- Hydrolysis of Ethyl benzoate

Practical topics to be added:

Colorimetry:



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'Enzymes in Drug discovery' to be added instead 'Enzyme as Therapeutics agents'

Regular M.Sc. Course Sem II, III, IV – No major changes

FYBSc

SEM I

RUSBAS101 Biological Sciences I

Unit 101.1 Type specimens is evenly distributed in the following topics respectively

101.1: Introduction to Plant Anatomy and Physiology

101.2: Introduction to Animal Anatomy and Physiology

101.3: Introduction to Microbiology

RUSBAS102 Biological Sciences II

Rearrangement of units is done so as to justify the number of lectures and weightage allotted for each unit/topic

RUSBAS 103 Chemical Sciences I

Fundamentals of Organic Reactions and Mechanisms I and II shifted to Sem II *

RUSBAS104 Chemical Sciences II New topics Proposed for RUSBAS104:

- 1) RUSBAS104.2 Basic Laboratory Instruments and Automation
 - Water purifying/Distillation apparatus to be included in theory
- 2) RUSBAS104.3 Introduction to Good Laboratory Practices (GLP) and safety in laboratory.
 - Introduction to SOP should be taught
 - Only importance of GLP to be taught(no audit part to be included at FYBSc level)
- 3) 104.1- Removal of Repetitive points in titration, Addition of Karl-Fischer titration- PPT, and Femtomoles levels to be added in stoichiometry interconversion between different concentration units to (% to ppm, % to molar, % to mg/mL, PPM to mg/ mL, etc.)

Sem I RUSBAS103,105,106,107- No change

FYBSc

SEM II

Biological Sciences Practical

New practicals added:



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Resolved that

1. The proposed changes in syllabi are approved.
2. The exam cell will be informed about changes in paper titles.


Agenda II: To seek approval for the new certificate courses, SWAYAM, NPTEL Courses, if any.

Agenda III: To decide the changes in the modalities of assessment, if any, which includes the question paper pattern, for internal and external examination. (Theory/Practical, wherever applicable).

Resolved that:

1. **Agenda II:** No suggestions, approved as it was earlier
2. **Agenda III:** No suggestions, approved as it was earlier

Agenda IV: Any other matter with the permission of the Chair: No specific matter discussed.


Head.
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