Detailed Course Scheme

Bachelor of Science (Hons.)

Agriculture

Semester- V

(2022- 26)

DOC202208220008

RNB GLOBAL UNIVERSITY
Educating stars for tomorrow

RNB GLOBAL UNIVERSITY
RNB Global City, Ganganagar Road,
Bikaner, Rajasthan 334601

OVERVIEW

RNB Global University follows Semester System along with Choice Based Credit System as per latest guidelines of University Grants Commission (UGC). Accordingly, each academic year is divided into two semesters, **Odd (July-December) and Even (January-June).**Also, the university follows a system of continuous evaluation along with regular updating in course curricula and teaching pedagogy.

The Curriculum for B. Sc Agriculture program for (July-December) Odd Semester 2022 along with examination pattern is as follows:

Course Scheme

Semester –V

S. No.	Course Code	Course Name	L	T	P	Credits
1.	20016800	Principles of Integrated Pest and Disease Management	2	0	0	2
2.	20016900	Principles of Integrated Pest and Disease Management Lab	0	0	2	1
3.	20017000	Manures, Fertilizers and Soil Fertility Management	2	0	0	2
4.	20017100	Manures, Fertilizers and Soil Fertility Management lab	0	0	2	1
5.	20017200	Pests of Crops and Stored Grain and their Management	2	0	0	2
6.	20017300	Pests of Crops and Stored Grain and their Management Lab	0	0	2	1
7.	20017400	Diseases of Field and Horticultural Crops and their Management -I	2	0	0	2
8.	20017500	Diseases of Field and Horticultural Crops and their Management -I Lab	0	0	2	1
9.	20017600	Crop Improvement-I *(Kharif Crops)*	1	0	0	1
10.	20017700	Crop Improvement-I Lab *(Kharif Crops)*	0	0	2	1
11.	20017800	Food Safety & Standards	2	0	0	2
12.	20017900	Food Safety & Standards Lab	0	0	2	1
13.	20018200	Practical Crop Production – I (*Kharif* crops)	0	0	4	2
14.	20018300	Intellectual Property Rights	1	0	0	1
15.	-	Elective –II	2	0	0	2
16.	-	Elective - II Lab	0	0	2	1
17.	20018400	Ability and Skill Enhancement -V	2	0	0	2
18.	20018500	Summer Internship and Report	0	0	8	4
19.	99002800	Workshops & Seminars	-	-	-	1
20.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
	Total		**16**	**0**	**26**	**31**

Elective	Course Code	Course Name
Elective II	20018600	Geoinformatics and Nano-technologyand Precision Farming
	20018700	Geoinformatics and Nano-technologyand Precision Farming Lab
	20018900	**Weed Management**
	20019000	**Weed Management Lab**
	20019100	Micro propagation Technologies
	20019200	Micro propagation Technologies Lab
	20018000	Bio pesticides & Bio fertilizers
	20018100	Bio pesticides & Bio fertilizers Lab

EVALUATION SCHEME - THEORY

The evaluation of the theory paper of B.Sc. Agriculture program would be based on Internal and External Assessments. Internal Assessment would consist of 50% of the marks (50 marks) and external assessment (in form of End Term Exam) would consist of remaining 50% marks (50 marks). Detailed scheme of Internal and External Assessments as follows:

Internal Assessment

The distribution of Internal Assessment Marks is as follows:

Type	Details	Marks
Mid Term	One Mid-term Sessional	25
Marks obtained in various Tests, Assignments, Presentations, Quiz, Tutorials, etc.	Average of marks obtained	20
Attendance	75% + : 5 marks	5
TOTAL	**50**	

External Assessment

Type	Marks
Theory	50

EVALUATION SCHEME - PRACTICAL

The evaluation of the practical paper of B.Sc. Agriculture program would be based on Internal and External Assessments. Internal Assessment would consist of 50% of the marks (50 marks) and external assessment (in form of End Term Exam) would consist of remaining 50% marks (50 marks). Detailed scheme of Internal and External Assessment is as follows:

Internal Assessment

Type	Details	Marks
Marks obtained in various manuals, practical file, participation, any model prepared, output of practical	Average of marks obtained	45
Attendance	75%+: 5 marks	5
TOTAL	**50**	

External Assessment

Type	Marks
Practical	50

EVALUATION SCHEME- WORKSHOPS & SEMINARS & NCC/NSS

1. NCC/NSS will be completed from Semester I – Semester IV. It will be evaluated internally by the institute. The credit for this will be given at the end of Semester.

2. The students have to join club/clubs with the active participation in different activities of club. The students would be continuously assessed from Semester-I to Semester-IV and credits and marks would be given after the end of Semester.

CURRICULUM

Course Name: Principles of Integrated Pest and Disease Management

Course Code: 20016800

Course Outline

Unit I
Categories of insect pests and diseases, IPM: Introduction, history, importance, concepts, principles and tools of IPM. Economic importance of insect pests, diseases and pest risk analysis. Methods of detection and diagnosis of insect pest and diseases. Calculation and dynamics of economic injury level and importance of Economic threshold level. Methods of control: Host plant resistance, cultural, mechanical, physical, legislative, biological and chemical control.

Unit II
Ecological management of crop environment. Introduction to conventional pesticides for the insect pests and disease management. Survey surveillance and forecasting of Insect pest and diseases. Development and validation of IPM module. Implementation and impact of IPM (IPM module for Insect pest and disease. Safety issues in pesticide uses. Political, social and legal implication of IP.

Course Name: Principles of Integrated Pest and Disease Management Lab

Course Code: 20016900

Course Outline

1. Methods of diagnosis and detection of various insect pests, and plant diseases,
2. Methods of insect pests and plant disease measurement, Assessment of crop yield losses, calculations based on economics of IPM,
3. Identification of biocontrol agents, different predators and natural enemies. Mass multiplication of *Trichoderma, Pseudomonas*, *Trichogramma*, NPV etc.
4. Identification and nature of damage of important insect pests and diseases and their management. Crop (agroecosystem) dynamics of a selected insect pest and diseases.
5. Plan & assess preventive strategies (IPM module) and decision making. crop monitoring attacked by insect, pest and diseases .
6. Awareness campaign at farmers fields.

Course Name: Manures, Fertilizers and Soil Fertility Management

Course Code: 20017000

Course Outline

Unit I

Introduction and importance of organic manures, properties and methods of preparation of bulky and concentrated manures. Green/leaf manuring. Fertilizer recommendation approaches. Integrated nutrient management. Chemical fertilizers: classification, composition and properties of major nitrogenous, phosphatic, potassic fertilizers, secondary & micronutrient fertilizers, Complex fertilizers, nano fertilizers

Unit II

Soil amendments, Fertilizer Storage, Fertilizer Control Order. History of soil fertility and plant nutrition. criteria of essentiality. role, deficiency and toxicity, symptoms of essential plant nutrients, Mechanisms of nutrient transport to plants, factors affecting nutrient availability to plants. Chemistry of soil nitrogen, phosphorus, potassium, calcium, magnesium, sulphur and micronutrients.

Unit III

Soil fertility evaluation, Soil testing. Critical levels of different nutrients in soil. Forms of nutrients in soil, plant analysis, rapid plant tissue tests. Indicator plants. Methods of fertilizer recommendations to crops. Factor influencing nutrient use efficiency (NUE), methods of application under rainfed and irrigated conditions

Course Name: Manures, Fertilizers and Soil Fertility Management Lab

Course Code: 20017100

Course Outline

1. Introduction of analytical instruments and their principles, calibration and applications.
2. Colorimetry and flame photometry.
3. Estimation of soil organic carbon.
4. Estimation of alkaline hydrolysable N in soils.
5. Estimation of soil extractable P in soils. Estimation of exchangeable K; Ca and Mg in soils.
6. Estimation of soil extractable S in soils.
7. Estimation of DTPA extractable Zn in soils.
8. Estimation of N in plants.
9. Estimation of P in plants.
10. Estimation of K in plants.
11. Estimation of S in plants.

Course Name: Pests of Crops and Stored Grain and their Management

Course Code: 20017200

Course Outline

Unit I

General account on nature and type of damage by different arthropods pests. Scientific name, order, family, host range, distribution, biology and bionomics, nature of damage, and management of major pests and scientific name, order, family, host range, distribution, nature of damage and control practice other important arthropod pests of various field crop, vegetable crop, fruit crop, plantation crops, ornamental crops, spices and condiments.

Unit II

Factors affecting losses of stored grain and role of physical, biological, mechanical and chemical factors in deterioration of grain. Insect pests, mites, rodents, birds and microorganisms associated with stored grain and their management. Storage structure and methods of grain storage and fundamental principles of grain store management.

Course Name: Pests of Crops and Stored Grain and their Management Lab

Course Code: 20017300

Course Outline

1. Identification of different types of damage.
2. Identification and study of life cycle and seasonal history of various insect pests attacking crops and their produce: (a) Field Crops; (b) Vegetable Crops; (c) Fruit Crops; (d) Plantation, gardens, Narcotics, spices & condiments.
3. Identification of insect pests and Mites associated with stored grain.
4. Determination of insect infestation by different methods. Assessment of losses due to insects. Calculations on the doses of insecticides application technique.
5. Fumigation of grain store / godown.
6. Identification of rodents and rodent control operations in godowns. Identification of birds and bird control operations in godowns.
7. Determination of moisture content of grain.
8. Methods of grain sampling under storage condition.
9. Visit to Indian Storage Management and Research Institute, Hapur and Quality Laboratory,
10. Department of Food., Delhi.
11. Visit to nearest FCI godowns.

Course Name: Diseases of Field and Horticultural Crops and their Management -I

Course Code: 20017400

Course Outline

Unit I

Symptoms, etiology, disease cycle and management of major diseases of following crops: Field Crops: Rice: blast, brown spot, bacterial blight, sheath blight, false smut, khaira and tungro;Maize: stalk rots, downy mildew, leaf spots; Sorghum: smuts, grain mold and anthracnose, Bajra :downy mildew and ergot; Groundnut: early and late leaf spots, wilt Soybean: Rhizoctonia blight, bacterial spot, seed and seedling rot and mosaic; Pigeonpea: Phytophthora blight, wilt and sterility mosaic; Finger millet: Blast and leaf spot; black & green gram: Cercospora leaf spot and anthracnose, web blight and yellow mosaic; Castor: Phytophthora blight; Tobacco: black shank, black root rot and mosaic.

Unit II

Horticultural Crops: Guava: wilt and anthracnose; Banana: Panama wilt, bacterial wilt, Sigatoka and bunchy top;Papaya: foot rot, leaf curl and mosaic, Pomegranate: bacterial blight; Cruciferous vegetables: Alternaria leaf spot and black rot; Brinjal: Phomopsis blight and fruit rot and Sclerotinia blight; Tomato: damping off, wilt, early and late blight, buck eye rot and leaf curl and mosaic; Okra: Yellow Vein Mosaic; Beans: anthracnose and bacterial blight; Ginger: soft rot; Colocasia: Phytophthora blight; Coconut: wilt and bud rot; Tea: blister blight; Coffee: rust.

Course Name: Diseases of Field and Horticultural Crops and their Management -I Lab

Course Code: 20017500

Course Outline

1. Identification of selected diseases of field crops covered in theory
2. Histopathological studies of selected diseases of field crops covered in theory
3. Identification of selected diseases of horticultural crops covered in theory
4. Histopathological studies of selected diseases of horticultural crops covered in theory
5. Field visit for the diagnosis of field problems.
6. Collection and preservation of plant diseased specimens for herbarium.

Course Name: Crop Improvement-I *(Kharif Crops)*

Course Code: 20017600

Course Outline

Unit I
Centers of origin, distribution of species, wild relatives in different cereals; pulses; oilseeds; fibres; fodders and cash crops; vegetable and horticultural crops; Plant genetic resources, its utilization and conservation, study of genetics of qualitative and quantitative characters; Important concepts of breeding self-pollinated, cross pollinated and vegetatively propagated crops.

Unit II
Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, adaptability, stability, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional); Hybrid seed production technology in Maize, Rice, Sorghum, Pearl millet and Pigeonpea, etc. Ideotype concept and climate resilient crop varieties for future.

Course Name: Crop Improvement-I Lab *(Kharif Crops)*

Course Code: 20017700

Course Outline

1. Floral biology, emasculation and hybridization techniques in different crop species; viz., Rice, Jute, Maize, Sorghum, Pearl millet, Ragi, Pigeonpea, Urdbean, Mungbean, Soybean, Groundnut, Seasame, Caster, Cotton, Cowpea, Tobacco, Brinjal, Okra and Cucurbitaceous crops.
2. Maintenance breeding of different *kharif* crops.
3. Handling of germplasm and segregating populations by different methods like pedigree, bulk and single seed decent methods;
4. Study of field techniques for seed production and hybrid seeds production in *Kharif* crops;
5. Estimation of heterosis, inbreeding depression and heritability;
6. Layout of field experiments;
7. Study of quality characters, donor parents for different characters;
8. Visit to seed production plots;
9. Visit to AICRP plots of different field crops.

Course Name: Food Safety & standards

Course Code: 20017800

Course Outline

Unit I

Food Safety – Definition, Importance, Scope and Factors affecting Food Safety. Hazards and Risks, Types of hazards - Biological, Chemical, Physical hazards. Management of hazards - Need. Control of parameters. Temperature control. Food storage. Product design. Hygiene and Sanitation in Food Service Establishments- Introduction. Sources of contamination and their control. Waste Disposal. Pest and Rodent Control. Personnel Hygiene. Food Safety Measures. Food Safety Management Tools- Basic concepts. PRPs, GHPs, GMPs, SSOPs etc. HACCP. ISO series. TQM - concept and need for quality, components of TQM, Kaizen. Risk Analysis.

Unit II

Accreditation and Auditing, Water Analysis, Surface Sanitation and Personal Hygiene. Food laws and Standards- Indian Food Regulatory Regime, FSSA. Global Scenario CAC. Other laws and standards related to food. Recent concerns- New and Emerging Pathogens. Packaging, Product labeling and Nutritional labeling. Genetically modified foods transgenics. Organic foods. Newer approaches to food safety. Recent Outbreaks. Indian and International Standards for food products.

Course Name: Food Safety & standards Lab

Course Code: 20017900

Course Outline

1. Water quality analysis physico-chemical and microbiological.
2. Preparation of different types of media.
3. Microbiological Examination of different food samples.
4. Assessment of surface sanitation by swab/rinse method.
5. Assessment of personal hygiene.
6. Biochemical tests for identification of bacteria.
7. Scheme for the detection of food borne pathogens.
8. Preparation of plans for Implementation of FSMS - HACCP, ISO: 22000.

Course Name: Practical Crop Production – I (*Kharif* crops)

Course Code: 20018200

Course Outline

1. Crop planning, raising field crops in multiple cropping systems:
2. Field preparation, seed, treatment, nursery raising, sowing, nutrient,
3. water and weed management and management of insect-pests diseases of crops,
4. harvesting, threshing, drying winnowing,
5. storage and marketing of produce.
6. The emphasis will be given to seed production, mechanization, resource conservation and integrated nutrient, insect-pest and disease management technologies.
7. Preparation of balance sheet including cost of cultivation, net returns per student as well as per team of 8-10 students

Course Name: Intellectual Property Rights

Course Code: 20018300

Course Outline

Unit I

Introduction and meaning of intellectual property, brief introduction to GATT, WTO, TRIPs and WIPO, Treaties for IPR protection: Madrid protocol, Berne Convention, Budapest treaty, etc. Types of Intellectual Property and legislations covering IPR in India:- Patents, Copyrights, Trademark, Industrial design, Geographical indications, Integrated circuits, Trade secrets. Patents Act 1970 and Patent system in India, patentability, process and product patent, filing of patent, patent specification, patent claims, Patent opposition and revocation, infringement, Compulsory licensing, Patent Cooperation Treaty, Patent search and patent database.

Unit II

Origin and history including a brief introduction to UPOV for protection of plant varieties, Protection of plant varieties under UPOV and PPV&FR Act of India, Plant breeders rights, Registration of plant varieties under PPV&FR Act 2001, breeders, researcher and farmers rights. Traditional knowledge-meaning and rights of TK holders. Convention on Biological Diversity, International treaty on plant genetic resources for food and agriculture (ITPGRFA). Indian Biological Diversity Act, 2002 and its salient features, access and benefit sharing.

Course Name: Ability and Skill Enhancement V

Course Code: 20018400

Course Outline – Final Assessment - Interview with an Entrepreneur /Leader

Unit I: Leadership
What is leadership? Traits of Leadership, Identifying leaders and traits of Leadership, Movie/ Story/ Interviews of leaders: Identify leadership qualities, Debate/ Discussion/ Presentations on leaders.

Unit II: Entrepreneurship
What is Entrepreneurship, Traits of Successful Entrepreneurs, Movie/ Story/Interviews of Entrepreneurs: Identify Entrepreneurial qualities, Debate/ Discussion/Presentation on Entrepreneurs.

Unit III: Organisational Skills & Employability Skills
What are organizational skills, how to develop them, the skills needed to become a successful entrepreneur/administrator, good communication, ambition, courage, hardwork, planning, accountability. Organizational skills can be developed by discipline making a system, rules, delegation of power at workplace, etc.
How to enhance employability; skills, why do we need them, different workplaces, having different needs, different skills, how to recognize different work skills.

Unit IV: Decision making
The process of decision making, its steps, what are its basics, what are the basics of organizational decision making process, entrepreneurial decision making, how to make a right decision at right time, dilemma.

Unit V: Interview Skills
Conducting Interviews with Leaders/ Entrepreneurs, Preparing Questions, Interviewing the fellow person, do's & don'ts while taking interview.

Course Name: Geoinformatics, Nano-technology and Precision Farming

Course Code: 20018600

Course Outline

Unit I
Precision agriculture: concepts and techniques; their issues and concerns for Indian agriculture; Geo-informatics- definition, concepts, tool and techniques; their use in Precision Agriculture. Crop discrimination and Yield monitoring, soil mapping; fertilizer recommendation using geospatial technologies; Spatial data and their management in GIS; Remote sensing concepts and application in agriculture; Image processing and interpretation; Global positioning system (GPS), components and its functions;

Unit II

Introduction to crop Simulation Models and their uses for optimization of Agricultural Inputs; STCR approach for precision agriculture; Nanotechnology, definition, concepts and techniques, brief introduction about nanoscale effects, nano-particles, nano-pesticides, nano-fertilizers, nano-sensors, Use of nanotechnology in seed, water, fertilizer, plant protection for scaling-up farm productivity.

Course Name: Geoinformatics, Nano-technology and Precision Farming Lab

Course Code: 20018700

Course Outline

1. Introduction to GIS software, spatial data creation and editing.
2. Introduction to image processing software.
3. Visual and digital interpretation of remote sensing images.
4. Generation of spectral profiles of different objects.
5. Supervised and unsupervised classification and acreage estimation.
6. Multispectral remote sensing for soil mapping.
7. Creation of thematic layers of soil fertility based on GIS.
8. Creation of productivity and management zones.
9. Fertilizers recommendations based of VRT and STCR techniques.
10. Crop stress (biotic/abiotic) monitoring using geospatial technology.
11. Use of GPS for agricultural survey.
12. Formulation, characterization and applications of nanoparticles in agriculture.
13. Projects formulation and execution related to precision farming.

Course Name: Weed Management

Course Code: 20018900

Course Outline

Unit I

Introduction to weeds, characteristics of weeds their harmful and beneficial effects on ecosystem. Classification, reproduction and dissemination of weeds. Herbicide classification, concept of adjuvant, surfactant, herbicide formulation and their use. Introduction to mode of action of herbicides and selectivity. Allelopathy and its application for weed management.

Unit II

Bio-herbicides and their application in agriculture. Concept of herbicide mixture and utility in agriculture. Herbicide compatibility with agro-chemicals and their application. Integration of herbicides with non chemical methods of weed management. Herbicide Resistance and its management.

Course Name: Weed Management Lab

Course Code: 20019000

Course Outline

1. Techniques of weed preservation.
2. Weed identification and their losses study.
3. Biology of important weeds.
4. Study of herbicide formulations and mixture of herbicide.
5. Herbicide and agro-chemicals study.
6. Shift of weed flora study in long term experiments.
7. Study of methods of herbicide application, spraying equipments.
8. Calculations of herbicide doses and weed control efficiency and weed index.

Suggested Readings

1. Saraswat, V.N., Bhan, V.M. and Yaduraju, N.T. 2003. Weed Management , ICAR, NewDelhi.
2. Gupta, O.P. 2015. Weed Management: Principles and Practices (2nd Ed.), Agribios (India), Jodhpur.
3. Gupta, O.P. 2016. Modern Weed Management , Agribios (India), Jodhpur
4. Das, T.K. 2008. Weed Science : Basics and Applications , Jain Brothers, New-Delhi.
5. Rao, V.S. 2000. Principals of Weed Science (2nd edition), Oxford and IBH Publishing Co., New Delhi.

Course Name: Micro propagation Technologies

Course Code: 20019100

Course Outline

Unit I

Introduction, History, Advantages and limitations; Types of cultures (seed, embryo, organ, callus, cell), Stages of micropropagation, Axillary bud proliferation (Shoot tip and meristem culture, bud culture).

Unit II

Organogenesis (callus and direct organ formation), Somatic embryogenesis, cell suspension cultures, Production of secondary metabolites, Somaclonal variation, Cryopreservation.

Course Name: Micro propagation Technologies Lab

Course Code: 20019200

Course Outline

1. Identification and use of equipments in tissue culture laboratory.
2. Nutrition media composition.
3. Sterilization techniques for media, containers and small instruments.
4. Sterilization techniques for explants.
5. Preparation of stocks and working solution, Preparation of working medium.
6. Culturing of explants :Seeds, shoot tip and single node.
7. Callus induction.
8. Induction of somatic embryos regeneration of whole plants from different explants.
9. Hardening procedures.

Suggested Readings

1. Chawala H S (2000). Introduction to Plant Biotechnology. Oxford & IBH, New Delhi
2. Gupta, P. K. (2008). Elements of Biotechnology. Rastogi Publications, Meerut
3. Ray V. Herren (2005). Introduction to Biotechnology (An Agricultural revolution)
4. Shekhawat, M. S. (2011) Plant Biotechnology, In vitro Principles, Techniques and Applications. MJP Publishers, Chennai
5. Mascarenhas, A. F. (2008). Hand Book of Plant Tissue Culture. ICAR,New Delhi
6. Singh BD. 2005. Biotechnology, Expanding Horizons. Kalyani Publishers, New Delhi.

Course title: Biopesticides & Biofertilizers

Course Code: 20018000

Course Outline

Unit I

History and concept of biopesticides. Importance, scope and potential of biopesticide. Definitions, concepts and classification of biopesticides viz. pathogen, botanical pesticides, and biorationales. Botanicals and their uses. Mass production technology of bio-pesticides. Virulence, pathogenicity and symptoms of entomopathogenic pathogens and nematodes. Methods of application of biopesticides. Methods of quality control and

Techniques of biopesticides. Impediments and limitation in production and use of biopesticide.

Unit II

Biofertilizers - Introduction, status and scope. Structure and characteristic features of bacterial biofertilizers- *Azospirillum, Azotobacter, Bacillus, Pseudomonas, Rhizobium* and *Frankia*; Cynobacterial biofertilizers- *Anabaena*, *Nostoc*, Hapalosiphon and fungal biofertilizers- AM mycorrhiza and ectomycorhiza. Nitrogen fixation -Free living and symbiotic nitrogen fixation. Mechanism of phosphate solubilization and phosphate mobilization, K solubilization.

Unit III

Production technology: Strain selection, sterilization, growth and fermentation, mass production of carrier based and liquid biofertiizers. FCO specifications and quality control of biofertilizers. Application technology for seeds, seedlings, tubers, sets etc. Biofertilizers -Storage, shelf life, quality control and marketing. Factors influencing the efficacy of biofertilizers.

Course Name: Biopesticides & Biofertilizers Lab

Course Code: 20018100

Course Outline

Practical

1. Isolation and purification of important biopesticides: *Trichoderma Pseudomonas, Bacillus, Metarhyzium* etc. and its production.
2. Identification of important botanicals.
3. Visit to biopesticide laboratory in nearby area.
4. Field visit to explore naturally infected cadavers.
5. Identification of entomopathogenic entities in field condition.
6. Quality control of biopesticides.
7. Isolation and purification of *Azospirillum , Azotobacter, Rhizobium*, P-solubilizers and cyanobacteria.
8. Mass multiplication and inoculums production of biofertilizers.
9. solation of AM fungi -Wet sieving method and sucrose gradient method.
10. Mass production of AM inoculants.

Note: The review of Syllabus happens on periodic basis for the benefit of the students. In case there are changes in curriculum due to review, students would be intimated in writing.

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