THE ASSAM
ROYAL GLOBAL UNIVERSITY
GUWAHATI

CRITERION 1

CURRICULAR ASPECTS

METRIC NO. 1.2

Academic Flexibility

Minutes of Board of Studies Meeting

Royal School of Applied and Pure Sciences

Chemistry, Physics and Mathematics

The Assam Royal Global University
Guwahati – 35

THE ASSAM
ROYAL GLOBAL UNIVERSITY

First Meeting of the Board of Studies
Royal School of Applied and Pure Sciences

8th May, 2018

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: Board of Governors' Room, Block A, The Assam Royal Global University.

Members Present:

- Dean, RSAPS as Chairperson (Ex Officio)

1. Prof. (Dr.) Anuradha Devi,

- Registrar as Member-Secretary / Nominee of Member Secretary(Ex Officio)

2. Dr. Bimalendu Kalita, Assistant Professor, Department of Mathematics.

- All Professors as members (Ex Officio)

3. Prof. (Dr.) O. K. Medhi, Professor Emeritus, RSAPS
4. Prof. (Dr.) A. Rajput, Professor, RSAPS

- Heads of Departments, as members

5. Dr. Devika Phukan, Dy. Dean, RSAPS & HoD, Department of Physics
6. Dr. Pubalee Sarma, HoD, Department of Chemistry

- One External Expert for each department nominated by Board of Management

7. Prof (Dr.) Hemanta Kumar Sarmah, Professor, Department of Mathematics , Gauhati University.

- Two teachers of the School nominated by the Vice Chancellor as members

8. Dr. Sujata Deb , Assistant Professor, Dept. of Physics, RSAPS
9. Dr. Kamal Debnath, Assistant Professor , Dept. of Mathematics, RSAPS

Special Invitee Present:

10. Dr. Narayan Nayak, Assistant Professor, Dept. of Mathematics, RSAPS
11. Dr. Biswajit Sarma, Assistant Professor, Dept. of Chemistry, RSAPS

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS chaired the meeting and called the House to order.

1.1. **Agenda:** Welcoming and introduction of the members of the Board of Studies, RSAPS.

Deliberations/Suggestions: The meeting was commenced with the welcome address by Dr. Anuradha Devi, Dean, RSAPS . She presented the agenda and introduced the members of the Board. Dr. Anuradha Devi stressed on the importance of Board of Studies meeting.

Anuradha Devi
11/5/2018

She informed that the aim of Board of Studies to Give inputs on academic development of all the departments of RSAPS so that the students become academically enabled and employable and they can make a change their life and society at large. She also emphasized the importance of good and uniform course structure for Undegraduate and Post Graduate Program offered by RSAPS.

1.2. **Agenda**: To appraise the members about the role and functions of BOS as given in ordinance by Dr. Bimalendu Kalita.

Deliberations:
The functions and powers of Board of Studies were read out by Dr. Bimalendu Kalita as given in the ordinance point 1.6.9. The main topic of discussion of the meeting was to recommend the courses and syllabi of Studies in the various programmes of RSAPS.

Resolutions:

All members of Board of Studies expressed that Board will function according to the role and function laid down in the ordinance of the University.

1.3. **Agenda_:** Discussion on course structure for B.Sc (Honours) and M.Sc. Department of Mathematics.

- Presentation of course structure by Dr. Kamal Debnath, Assistant Professor, Mathematics.
- Discussion on the course structure of Mathematics.
- Resolution taken for course structure of Mathematics.

Deliberations:

- Dr. Kamal Debnath delivered a presentation regarding the course structure of undergraduate and post graduate level courses as suggested by the UGC. Also the proposed course structure of B.Sc (Honours) in Mathematics, and M.Sc in Mathematics was presented.
- Prof. O. K. Medhi and Prof. A. Rajput have expressed their concern on the credits assigned for CORE and DSE papers to be on higher side and suggested to revise the credit of B.Sc.(H) core and DSE paper from 6 to 5.
- On query by Prof A. Rajput on whether is it necessary to follow UGC's Structure or little deviation can be done, Prof. O. K. Medhi informs the Board that UGC has suggested that there may be a maximum variation of 30% in the course structure.
- The board member unanimously agreed on this point on revising the credits on Core and DSE papers as this will not violate the UGC norm where UGC has suggested that there may be maximum variation of 30% in the course structure.
- Prof. O. K. Medhi and Prof. A. Rajput also suggested that in 3rd semester M.Sc. Course minor project is not required and advised to introduce Seminar or Literature Survey in place of minor project. Prof Hemanta Kumar Sarma also on the opinion that the seminar will enhance the public speaking of the students.
- Prof. Hemanta Kumar Sarmah suggested that Mathematics Lab can be introduced where the relevant subjects of papers can be understood through Lab. He also advice the board to refer Delhi University structure.

Anuradha Dey
11/5/2018

- Professor Sarmah also emphasised on only one Text Book for a subject and several reference books to be included in the detailed syllabus. He also requested to find the best book available which can be taken as text book.
- Dr. Anuradha Devi suggested to introduce NET/ SLET course under ability enhancement course.

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level(B.Sc(H), Mathematics):

1.3.1 In the1st and 2nd semester total credit of Core papers has been revised from 18 to 15.

1.3.2. In the 3rd and 4th semester total credit of Core papers has been revised from 12 to 10.

1.3.3. In the 5th and 6th semester total credit of core and DSE papers has been revised from 12 to 10.

1.3.4. According to the discussion of members total credit for B.Sc. (H) courses has been revised from 146 to 128.

1.3.5. Also as per the suggestion of Dr. Hemanta K. Sarmah Core paper Hydrodynamics of 6th semester will be replaced by the paper Numerical Methods. Hydrodynamics will be shifted to 6th semester under DSE course.

1.3.6. The Ability Enhancement Elective Course on C can be introduced in place of C++ language.

1.3.7. Generic Elective courses 'Mathematics-I', 'Mathematics-II', 'Mathematics-III' and 'Mathematics-IV' are introduced from AY 2018-19. These papers will be offered for other departments. Another two GE papers 'Fundamental of Mathematics' and 'Aptitude and Quantitative Ability' are introduced under open (List-II) category of GE courses.

Postgraduate level(M.Sc, Mathematics):

1.3.8. The 1st semester total credit 22 and 2nd semester total credit 24 remain unchanged.

1.3.9. According to the discussion of committee members, minor project of 3rd semester will be eliminated and seminar or literature survey will be introduced in place of minor project .

1.3.10. In 3rd semester a paper on Financial Mathematics will be introduced on DSE courses.

1.3.11. In 4th semester the project credit will be revised from 8 to 6.

1.3.12. As per the suggestions of Dr. Hemanta K. Sarmah the core paper Differential Geometry of 4th semester will be replaced by Dynamical System. Differential Geometry will be considered as DSE course.

1.3.13. Total credit for M.Sc. courses has been revised from 102 to 96.

1.3.14. Course on NET/SLET will be introduced in the ability enhancement elective course.

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1.4. **Agenda:** Discussion on course structure for B.Sc. (Honours) and M.Sc., Department of Chemistry.

- Presentation of course structure by Dr. Pubalee Sarmah, HOD, Department of Chemistry.
- Discussion on the structure of Chemistry
- Resolution taken for course structure of Chemistry

Deliberations:

- Dr. Pubalee Sarmah delivered a presentation regarding the course structure of undergraduate and post graduate level courses of Chemistry, RSAPS. Important discussion was carried out on credit and subject of each semester.
- The members and expert has put their opinion that the course structure for Chemistry also should be in the same line as the course structure of Mathematics department.
- It is also viewed the total credit for B.Sc. and M.Sc. for all department should be same.

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level(B.Sc(H), Chemistry):

1.4.1. In the1st and 2nd semester total credit of core papers has been revised from 18 to 15.

1.4.2. In the 3rd and 4th semester total credit of core papers has been revised from 12 to 11.

1.4.3. In the 5th semester total credit of DSE papers has been revised from 12 to 8 and credit of core papers has been revised from 12 to 11.

1.4.4. In the 6th semester the total credit in the DSE and core paper has been revised from 24 to 19 where one seminar/ literature survey of credit 3 has been included.

1.4.5. Total credit for B.Sc. (H) courses has been revised from 148 to 128.

1.4.6. Generic Elective courses 'Chemistry-I', 'Chemistry-II', 'Chemistry -III' and 'Chemistry -IV' are introduced from AY 2018-19. These papers will be offered for other departments. Another two GE papers 'Environment and Green Chemistry' and 'Basic Analytical Chemistry' are introduced under open (List-II) category of GE courses.

Postgraduate level (M.Sc. Chemistry):

1.4.7. The 1st semester credit 22, 2nd semester credit 24 and third semester credit 27 remain unchanged.

1.4.8. In 4th semester the project credit will be revised from 8 to 6.

1.4.9. Total credit for M.Sc. course has been revised from 102 to 96.

Anuradha Dey
11/5/2018

1.4.10. Course on NET/SLET will be introduced in the ability enhancement elective course.

1.5. **Agenda:** Discussion on course structure for B.Sc (Honours) and M.Sc., Department of Physics.

- Presentation of course structure by Dr. Devika Phukan, HoD, Department of Physics.
- Discussion on the course structure of Physics.
- Resolution taken for course structure of Physics.

Deliberations:

- Dr. Devika Phukan delivered a presentation regarding the course structure of undergraduate and post graduate level courses of Physics, RSAPS. Important discussion was carried out on credit and subject of each semester.
- The members and expert has put their opinion that the course structure for Physics also should be in the same line as the course structure of Mathematics department.
- It is also suggested the total credit for B.Sc. and M.Sc. for all department should be same.

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level(B.Sc(H), Physics):

1.5.1. In the1st and 2nd semester total credit of core papers has been revised from 18 to 15.
1.5.2. In the 3rd and 4th semester total credit of core papers has been revised from 13 to 11.
1.5.3. In the 5th semester total credit of DSE papers has been revised from 12 to 8 and credit of core papers has been revised from 12 to 11 including a seminar of 3 credits.
1.5.4. In the 6th semester the total credit in the DSE and core paper has been revised from 24 to 19 where one seminar/ literature survey of credit 3 has been included.
1.5.5. Total credit for B.Sc. (H) courses has been revised from 148 to 128.
1.5.6. Generic Elective courses 'Mathematical Physics', 'Mechanics and Properties of Matter' 'Electricity and Magnetism', 'Optics and Atomic Physics' and 'Electronics and Nuclear Physics' are introduced from AY 2018-19. These papers will be offered for other departments. Another two GE papers 'Fundamentals of Physics' and 'Basics of practical physics' are introduced under open (List-II) category of GE courses.

Postgraduate level (M.Sc. Physics):

1.5.7. The 1st semester credit 22, 2nd semester credit 24 and 3rd semester credit 27 remain unchanged.
1.5.8. In the 3rd semester, one seminar of credit 4 has been introduced as one DSE paper, with no change in the total credit 27 of 3rd sem.
1.5.9. In 4th semester the project credit will be revised from 8 to 6 and one DSE paper has been reduced.
1.5.10. Total credit for M.Sc. course has been revised from 102 to 96.
1.5.11. Course on NET/SLET will be introduced in the ability enhancement elective course.

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11/5/2018

1.6. Agenda: To discuss point 1.6.9 as given in RGU ordinance.

Deliberation:

- Dr. Anuradha Devi informed the house that, 1.6.9 of Ordinance has 14 points defined as the role and functions of Board of studies. These fourteen points needs to be discussed in meeting of Board. In First Board Meeting , She highlighted on each point and delivered the following for Academic session July- June, 2018:

1) On teaching and research

Teaching:

RSAPS is currently having BSc honours program for Physics and Chemistry, M.Sc. in all three departments. The total number of students studying in different programs are 102. Apart from these, faculty are also engaged in different programs of different schools of the University such as B.Tech, BCA, BSc(IT), M.Tech, B.Com, M.Com, B.Arch., BA Economics, and BA Psychology.

With limited number of faculty RSAPS faculty are engaged in on average spent 16 to 20 Hours of teaching loads. The requirement of faculty have been already submitted to the Office of the Registrar. We hope to have few more faculty members in next academic session.

Research:

At individual level faculty are engaged in research work and publication of papers. Two of our faculty members have obtained their Ph.D. degree under Gauhati University during this academic session. They are:

Dr. Sujata Deb- Dept. of Physics

Dr. Biswajit Sarma- Dept. of Chemistry.

A Ph.D. student have enrolled in the department of Physics under the guidance of Dr. Devika Phukan.

We expect to have more number of Ph.D. students in next academic session. With the guidance of Prof O.K.Medhi sir and Prof A. Rajput , RSAPS will definitely enhance its research activity.

2) To appoint Committee of Courses for school's teaching:

As all the Departments of the School are having limited number of faculty, the need of committee formation was required. All faculty members led by HOD's and headed by Dean, RSAPS with consultation with Hon V.C have acted as the committee. The BOS may suggest to form committee of courses.

3) To recommend the courses and syllabi to Academic council

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The existing course structure and syllabi for first year of all programs have been examined by the experts in expert's conclave. The course structure as per UGC's CBCS system that has been discussed in today's BOS meeting. The recommendations and resolutions taken in this meeting will be forwarded to Academic Council and higher approving authority.

4) To recommend to the Vice Chancellor names of Paper setter, Examiners and Moderators

The List for Paper setter, Examiners and Moderators for first and second semesters have already submitted to the Vice Chancellor.

For the next session the list will be submitted before BOS for approval in the second meeting of BOS which we propose to have in the beginning of next session.

5), 6), 7) Schemes for advancement of standard of teaching, interaction with Industries, faculty development program

Few schemes have already been adopted such as RGUFSS-I , invited speakers from industry, academia and R&D organisations , field trips , workshops ,picnic have been organised for students and faculty . During Session July, 2017- June, 2018, the following activities have been conducted:

(a) Field trips –3
(b) Seminars/ Workshop: 2
(c) Invited talk by eminent personalities- 8

8) Feedback from passed out students: Will be taken in due course of time.

9) Proposal for revenue generation: few project proposals will be submitted in next session.

10) To perform other functions as prescribed in Act, Statues etc.:

All the faculty members are in different committees under RGU such as Examination core committee, Examination committee, Board of management, Academic Council, Human resource management, Research, publication and Patent, Disability Resource Centre. Also engaged in different committees of co-curricular and extracurricular activities organised in the University. T

11) Will be put forward in BOS as and when required.

12) This BOS is asked to finalise the course structure as per CBCS guideline as suggested by UGC which has been discussed and resolved.

13) Will consider as and when required.

14) Will consider as and when required.

Anuradha Dey
11/5/2018

1.7 **Agenda**: Reading out the resolutions of the BOS meeting to be forwarded to Board of Management .

Deliberation:

- The resolution taken for course structure of Mathematics (1.3.1. to 1.3.13.) has been read out by Dr. Narayan Nayak
- The resolution taken for course structure of Chemistry (1.4.1. to 1.4.9.) has been read out by Dr. Biswajit Sarma
- The resolution taken for course structure of Physics (1.5.1. to 1.5.10.) has been read out by Dr. Sujata Deb.

1.8. **Agenda**: Vote of Thanks by Dr. Sujata Deb.

The meeting concluded with a vote of thanks to the Chair and the members present by Dr. Sujata Deb, Assistant Professor, Physics, RSAPS.

Minutes recorded by Dr. Bimalendu Kalita.

Anuradha Devi 11/5/2018

Prof. (Dr.) Anuradha Devi,

Dean, RSAPS

THE ASSAM
ROYAL GLOBAL UNIVERSITY

Second Meeting of the Board of Studies
Royal School of Applied and Pure Sciences
3rd December, 2018

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: Board of Governors' Room, Block A, The Assam Royal Global University.

Members Present:

1. Prof. (Dr.) Anuradha Devi — (Member- Chairperson)
   Dean, RSAPS
2. Dr. Bimalendu Kalita — (Member Secretary –Nominated)
   Assistant Professor, Department of Mathematics.
3. Prof. (Dr.) O. K. Medhi — (Member)
   Professor Emeritus, RSAPS
4. Prof. (Dr.) A. Rajput, — (Member)
   Professor, Department of Physics, RSAPS
5. Dr. Devika Phukan — (Member)
   Dy. Dean, RSAPS & HoD, Department of Physics.
6. Dr. Pubalee Sarmah, — (Member)
   HoD, Department of Chemistry, RSAPS.
7. Prof (Dr.) Hemanta Kumar Sarmah — (Member- Academic Expert)
   Professor, Department of Mathematics ,
   Gauhati University
8. Prof. (Dr.) Joyanti Chutia, — (Member-Industry/Practice expert)
   Emeritus Scientist and Former Director, IASST
9. Dr. Sujata Deb , — (Member)
   Assistant Professor, Dept. of Physics, RSAPS
10. Dr. Kamal Debnath, — (Member)
    Assistant Professor , Dept. of Mathematics, RSAPS

Special Invitee Present:

11. Dr. Narayan Nayak, Assistant Professor, Department of Mathematics, RSAPS
12. Dr. Biswajit Sarma, Assistant Professor, Department of Chemistry, RSAPS
13. Dr. Debojit Sahu, Assistant Professor, Department of Chemistry, RSAPS
14. Dr. Monalisa Deka, Assistant Registrar, RGU

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS chaired the meeting and called the House to order.

2.1. Agenda: Welcoming the members of the Board of Studies, RSAPS and introduction of new members of BoS.

Deliberations/Suggestions: The meeting was commenced with the welcome address by Dr. Anuradha Devi, Dean, RSAPS. She welcomed Prof. (Dr.) Joyanti Chutia, Emeritus Scientist, IASST, Former Director, IASST as Industry/Practice Expert.

2.2. Agenda: Confirmation of the agenda

Deliberations: Dr. Anuradha Devi discussed the agenda in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

2.3. Ratifying the minutes of previous BoS meeting and Action Taken Report.

Dr. Bimalendu Kalita read out briefly the minutes of previous BoS meeting and indicates the major changes in the course structure of RSAPS.

Resolutions:

All members of Board of Studies expressed that Board will function according to the uniform course structure.

2.4. Agenda :

a. To apprise about the major development after first BoS meeting

Deliberations:

Dr. Sujata Deb delivered a presentation regarding the major development of each department of RSAPS. In her presentation she highlighted the strength of school statistics, results of 1st and 2nd semester, summary of various events, information of conduction of NET classes, outreach programme at Tetelia School by our students and faculty members, introduction of new faculty members, number of research scholars of our school etc.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields.

b. the modification of credits assigned for different courses under RSAPS.

Deliberations:

Dr. Anuradha Devi informed the board members about the need of modification of the course structures for both UG and PG. As suggested by the Honorable Vice Chancellor, RGU The credits assigned for course structures of UG and PG courses should be made with uniform for all schools of RGU. Hence with minor

modification of credits assigned for different courses under RSAPS the course structures have been modified and put for discussion and approval of BoS under agenda point 2.5.

2.5. Agenda : To discuss and approve of

a. course structure of B.Sc. and M.Sc. program of Physics Department.

Deliberations:

Dr. Devika Phukan delivered a presentation regarding the course structure of undergraduate and post graduate level courses of Physics, RSAPS. Important discussion was carried out on credit and subject of each semester.

Prof. Joyanti Chutia has suggested to discuss if interdisciplinary courses such as bio-physics can be introduced as a DSE paper for M.Sc courses.

Dr. Joyanti Chutia and Prof A. Rajput also emphasised on the introduction of interdisciplinary subject which may lead to new technologies and innovations.

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Physics): [Annexure-I]

2.5.1. In the1st and 2nd semester total credit of core papers has been revised from 15 to 18 by increasing 4 credit theory courses to 5 credits.

2.5.2. In the 3rd and 4th semester total credit of core papers has been revised from 11 to 13 by increasing 4 credit theory courses to 5 credits.

2.5.3. In the 5th semester total credit of DSE papers has been revised from 8 to 10 and credit of core papers has been revised from 11 to 15 by increasing 4 credit theory courses to 5 Credits as well as increasing credit of graduate seminar from 3 to 5.

2.5.4. In the 6th semester the total credit in the DSE and core paper has been revised from 19 to 21 where one project/ literature survey of credit 6 has been included.

2.5.5. The Ability Enhancement Elective Course on C++ in third semester has been introduced and LATEX in fourth semester will be introduced.

2.5.6. Total credit for B.Sc. (H) courses has been revised from 128 to 146.

Postgraduate level (M.Sc. Physics): [Annexure-II]

2.5.7. The 1st semester credits of 22, 2nd semester credits of 24 remain unchanged.

2.5.8. In the 3rd semester total credit has been changed from 27 to 29 by increasing 4 credit theory courses to 5 credits. One seminar of credit 4 has been introduced as one DSE paper

2.5.9. In the 4th semester total credit has been changed from 23 to 27 by increasing 4 credit theory courses to 5 credits and 6 credit, project/Dissertation/Seminar, to 8 credits.

2.5.10. The Ability Enhancement Elective Course on C++ language in second and LATEX/MATLAB have been introduced in third semester.

2.5.11. Total credit for M.Sc. course has been revised from 96 to 102.

2.5.12. Special classes for NET/SLET have been arranged

2.5.13. The suggestions given by Prof Joyanti Chutia and Prof A. Rajput were appreciated by all board members and in future, some courses will be introduced as DSE subjects with the availability of the resources.

b. course structure of B.Sc. and M.Sc. program of Chemistry department.

Deliberations:

Dr. Pubalee Sarmah delivered a presentation regarding the course structure of undergraduate and post graduate level courses of Chemistry, RSAPS. Important discussion was carried out on credit and subject of each semester.

Prof. O. K. Medhi has suggested to design a new paper in the next revised course structure, such as "mathematics for chemistry", as a AECC paper to clarify their mathematical concepts required for M.Sc. chemistry students.

Resolutions: [Annexure-III]

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level (B.Sc. Honours), Chemistry):

2.5.14. In the1st and 2nd semester total credit of core papers has been revised from 15 to 18 by increasing 4 credit theory courses to 5 Credits.

2.5.15. In the 3rd and 4th semester total credit of core papers has been revised from 11 to 13 by increasing 4 credit theory courses to 5 Credits.

2.5.16. In the 5th semester total credit of DSE papers has been revised from 8 to 10 and credit of core papers has been revised from 11 to 15 by increasing 4 credit theory courses to 5 Credits as well as increasing credit of graduate seminar from 3 to 5.

2.5.17. In the 6th semester the total credit in the DSE and core paper has been revised from 19 to 21 where one project/ literature survey of credit 6 has been included.

2.5.18. Total credit for B.Sc. (H) courses has been revised from 128 to 146.

Postgraduate level (M.Sc. Chemistry): [Annexure-IV]

2.5.19. The 1st semester credit 22, 2nd semester credit 24 and third semester credit 27 remain unchanged.

2.5.20. In 4th semester the project credit will be revised from 6 to 12. Total credit in the 4th semester has been revised from 23 to 29.

2.5.21. Total credit for M.Sc. course has been revised from 96 to 102.

2.5.22. The suggestion of introduction of "mathematics for Chemistry" will be designed by department of mathematics with consultation with department of chemistry and will be introduced as AEEC course.

c. course structure of B.Sc. and M.Sc. program of Mathematics Department.

Deliberations:

Dr. Kamal Debnath delivered a presentation regarding the uniform course structure of undergraduate and post graduate level courses as proposed by University and also mentioned the major changes in the course structure as discussed in the previous BoS.

Prof. (Dr.) Anuradha Devi gave a proposal to start a new course "M.Sc. in Mathematics and Computation" in the Department of Mathematics.

Prof. A. Rajput suggested to initiate the name "Department of Mathematics and Computational Sciences" instead of Department of Mathematics.

Prof. Hemanta Kumar Sarmah has discussed the importance of computational part

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level (B.Sc(H), Mathematics): [Annexure-V]

2.5.23 No major changes on the subject.

2.5.24. Credits of Core and DSE papers has been revised from 5 to 6 for all semesters

2.5.25 the revised total credit of the course is 146

Postgraduate level (M.Sc, Mathematics): [Annexure-VI]

2.5.26 the subjects remain same for all semesters.
2.5.27 No change in the credits assigned for Core and DSE papers.

2.5.28. The credits for major project of 4th semester has been revised from 8 to 12 credit.

2.5.29 The total credit of the M.Sc Mathematics is 102.

2.6 Agenda: Discussion and approval of starting M.Sc. in Mathematics and Computing under department of Mathematics.

Deliberations: Dr. Anuradha Devi shared with the Board that a proposal for starting M.Sc. in Mathematics and Computing under department of Mathematics has been put forward to the Governing Body for approval. The course structure of the programme has been done in consultation with the courses offered by IIT Guwahati and IIT BHU. The course structure of the same if approved by GB, will be placed in the next BoS meeting for discussion and approval. She has elaborated on the demand of the course and eligibility criteria.

Prof Hemanta Kumar Sarma has given inputs on the course and hopes the course will be very demanding.

Resolutions: All members appreciated the information and wish success of the programme.

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

Deliberations:

(a) Prof Joyanti Chutia enquired about the research facility for students and faculty in the departments. She emphasized on establishment of Integrated Basic research facility Laboratory for the final semester students so that they can do good project work.
She also suggested that, the analysis part can be done in different Research laboratory like IASST or IIT Guwahati where sophisticated equipment are available with some nominal fee. For this a letter to the Director should be addressed.

(b) Prof O.K. Medhi suggested to introduce a subject 'Foundation of Mathematics' for students of RGU whose mathematical knowledge is weak.

(c) Prof Hemanta Kumar Sarma and Prof A. Rajput give emphasis to change name of Department of 'Mathematics to Mathematics and Computational Science' and suggested to give proposal in this regard.

Resolution:

The suggestions were appreciated by the Board members and requested Dean, RSAPS to put forward the proposal to management.

2.8 Vote of Thanks : The meeting concluded with a vote of thanks by Prof. Anuradha Devi, Dean, RSAPS.

Minutes recorded by : Dr. Shankar Barman, Dr. Biswajit Sarma, Dr. Narayan Nayak
Compiled by : Dr. Bimalendu Kalita.

Prof. (Dr.) Anuradha Devi,

Dean, RSAPS

Third Meeting of the Board of Studies
Royal School of Applied and Pure Sciences
6th May, 2019

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: Board of Governors' Room, Block A, The Assam Royal Global University.

Members Present:

1. Prof. (Dr) Anuradha Devi, Dean, RSAPS — (Member- Chairperson)
2. Dr. Devika Phukan, Dy. Dean, RSAPS & HoD, Department of Physics. — (Member)-Acted as Member Secretary
3. Prof. (Dr.) O. K. Medhi, Professor Emeritus, RSAPS — (Member)
4. Prof. (Dr.) A. Rajput, Professor, Department of Physics, RSAPS — (Member)
5. Prof.(Dr.) Hemanta Kr. Baruah, Professor, Department of Mathematics. — (Member)
6. Prof. (Dr.) Joyanti Chutia, Emeritus Scientist and Former Director, IASST — (Member-Industry/Practice expert)
7. Dr. Pubalee Sarmah, HoD, Department of Chemistry, RSAPS. — (Member)
8. Dr. Navalakhi Hazarika, HoD, Department of Mathematics, RSAPS — (Member)
9. Dr. Sujata Deb , Assistant Professor, Dept. of Physics, RSAPS — (Member)
10. Dr. Kamal Debnath, Assistant Professor , Dept. of Mathematics, RSAPS — (Member)

Special Invitee Present:

11. Dr. Narayan Nayak, Assistant Professor, Department of Mathematics, RSAPS.
12. Dr. Biswajit Sarma, Assistant Professor, Department of Chemistry, RSAPS.
13. Dr. Sankar Barman, Assistant Professor, Department of Physics, RSAPS.

Leave of Absence:

1. Dr. Hemanta Kumar Sarmah (Member Academic Expert)
2. Dr. Bimalendu Kalita (Member Secretary BoS, RSAPS)
3. Dr. Monalisa Deka (Special Invitee)

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS chaired the meeting and called the House to order.

3.1. Agenda: Welcoming the members of the Board of Studies, RSAPS and introduction of new members of BoS.

Deliberations/Suggestions: The meeting was commenced with the welcome address by Dr. Anuradha Devi, Dean, RSAPS. She also welcomes Prof. H. K. Baruah, Professor Emeritus, Department of Mathematics, RSAPS.

3.2. Agenda: Confirmation of the agenda

Deliberations: Dr. Anuradha Devi discussed the agenda in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

3.3. Ratifying the minutes of previous BoS meeting and Action Taken Report.

Dr. Devika Phukan read out the Action Taken Report on the minutes of 2nd BoS meeting.

Resolutions:

All members of Board of Studies appreciated the action taken after 2nd BOS and approved the minutes of 2nd BOS.

3.4. To apprise about the major development after 2nd BoS meeting.

Deliberations:

Dr. Narayan Nayak delivered a presentation regarding school activity after 2nd BoS. In his presentation he highlighted about the activities like PTI, National Science day, Pi-Day, field trips etc. organised by RSAPS . He also apprised the board members about the approval of BSc (H) and MSc in 'Mathematics and Computing' by the governing body of RGU. The process for admission for the courses from July, 2019 has been initiated.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields and start of the new course.

3.5. Agenda: To discuss and approve of

a. course structure of B.Sc. 5th and 6th semester syllabus of Physics Department.

Deliberations:

Dr. Sujata Deb delivered a presentation regarding the course structure of 5th and 6th semester undergraduate level courses of Physics, RSAPS. Important discussion was carried out on credit and subject of each semester.

Resolutions:

After the detailed discussion and deliberations on 5th and 6th semester of undergraduate, the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Physics): [Annexure-I]

3.5.1. The 5th and 6th semester course structure and syllabus are accepted as it proposed with the following suggestions in the seminar in 5th semester and project/literature survey in 6th semester

3.5.2. Prof. O. K. Medhi has suggested to name the undergraduate seminar of 5th semester as Graduate Seminar

3.5.3. Prof. O. K. Medhi has suggested to name the undergraduate project/literature survey of 6th semester as Graduate Project/Literature Survey.

b. course structure of B.Sc. 5th and 6th semester syllabus Chemistry department.

Deliberations:

Dr. Biswajit Sarma delivered a presentation regarding the course structure of 5th and 6th semester of undergraduate courses of Chemistry, RSAPS.

Resolutions: [Annexure-II]

Undergraduate level (B.Sc. Honours), Chemistry)

3.5.4. No major change in 5th and 6th semester courses.

c. course structure of B.Sc. Mathematics & Computing and M.Sc. in Mathematics & Computing program of Mathematics Department.

Deliberations:

Dr. Kamal Debnath delivered a presentation regarding the course structure of B.Sc. and MSc. "Mathematics and Computing" courses.

Resolutions:

After the detailed discussion and deliberations on course structure of BSc Mathematics and Computing, the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Mathematics and Computing): [Annexure-III]

3.5.5. Data structure & Algorithm using C has been removed to Algorithm & Data Structure using C and Data Structure & Algorithm using C-lab has been removed to Algorithm & Data Structure using C Lab.

3.5.6. In 2nd semester ODE course has been replaced by Differential Equation where both ODE & PDE will be incorporated and therefore the 'Partial Differential Equation' in 5th semester is removed.

3.5.7. In 5th semester in place of PDE, "Integral transform" is introduced. In the DSE paper 'Computer Network' and 'Computer Network Lab' paper has been removed and Java Programming & Java Programming Lab has been introduced. The 'Neural Network and Fuzzy Logic' has been removed as Neural Network.

3.5.8. In the 6th semester 'Gp A' DSE paper 'Special Function' is replaced by 'Introduction to Mathematical Modelling'. In 6th semester 'Gp B' DSE paper 'Cyber Law' is replaced by 'Computer Animation' and 'Computer Animation Lab'.

3.5.9. No major changes in 3rd and 4th semester courses.

3.5.10. As per the suggestion of Prof. O. K. Medhi Physics/ Chemistry will be included as Generic electives.

3.5.11. Graduate seminar has been included in 5th semester and Project/Literature review in 6th semester.

Postgraduate level (M.Sc., Mathematics and Computing): [Annexure-IV]

3.5.11. In 2nd semester the subject 'Data Structure & Algorithm' and 'Data Structure & Algorithm Lab' has been renamed as 'Algorithm & Data Structure' and 'Algorithm & Data Structure Lab' respectively as per the suggestion of Prof. H.K. Baruah.

3.5.12. After the discussion and suggestion by Prof. O. K. Medhi and Prof. Hemanta K. Baruah, the DSE paper 'Numerical Analysis' of 2nd semester has been suggested to change to 'Numerical Methods and Computing.'

3.5.13. Graduate seminar /literature review is suggested to introduced in 3rd semester.

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

3.6.1. It is advised by board members that, detail syllabus of BSc (H) and MSc 'Mathematics and Computing' will be sent to academic experts for their suggestion and will be placed in 4th BoS and Academic Council for approval.

3.6.2. Board members have discussed on the format of the Project Report to be submitted by MSC 4th semester students it is decided that

i) colour of the cover of the report will be Navy Blue.

ii) students will submit soft bounded report and after presentation and evaluation the final copy will be submitted in hard bounded.

iii) The HoD of Physics , Chemistry and Mathematics will Discuss and finalize the format of the report.

3.6.3. Dr. Joyanti Chutia expressed her happiness on the development of the Royal School of Applied & Pure Sciences.

3.7 Vote of Thanks : The meeting concluded with a vote of thanks by Prof. Anuradha Devi, Dean, RSAPS.

Minutes recorded by : Dr. Shankar Barman, Dr. Biswajit Sarma, Dr. Navalakhi Hazarika
Compiled by : Dr. Bimalendu Kalita.

Prof. (Dr.) Anuradha Devi,

Dean, RSAPS

4th Meeting of the Board of Studies
Royal School of Applied and Pure Sciences
19th May, 2020

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: Online mode (Cisco webex meeting).

Tuesday, May 19, 2020 11:00 am | 1 hour 30 minutes | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
Meeting number: 584 331 577
Password: rgu@1 (74811 from phones and video systems)
https://meetingsapac6.webex.com/meetingsapac6/j.php?MTID=mb9dc195df2a3697f9aa1d3894f5728f3

Members Present:

1. Prof. (Dr) Anuradha Devi — (Member- Chairperson)
   Dean, RSAPS
2. Dr. Bimalendu Kalita — (Member)-Acted as Member Secretary
   Assistant Professor, Department of Mathematics
3. Dr. Devika Phukan — (Member)
   Dy. Dean, RSAPS & HoD, Department of Physics.
   .
4. Prof. (Dr.) A. Rajput, — (Member)
   Professor, Department of Physics, RSAPS
5. Prof. (Dr.) Hemanta Kumar Baruah, — (Member)
   Professor, Department of Mathematics, RSAPS
6. Prof.(Dr.) Pranjal Saikia, — (External Academic Expert)
   Professor, Department of Chemistry, GU.
7. Prof. (Dr.) Joyanti Chutia, — (Member-Industry/Practice expert)
   Emeritus Scientist and Former Director, IASST
8. Dr. Pubalee Sarmah, — (Member)
   HoD, Department of Chemistry, RSAPS.
9. Dr. Navalakhi Hazarika, — (Member)
   HoD, Department of Mathematics, RSAPS
10. Dr. Sujata Deb , — (Member)
    Assistant Professor, Dept. of Physics, RSAPS
11. Dr. Kamal Debnath, — (Member)
    Assistant Professor , Dept. of Mathematics, RSAPS

Special Invitee Present:

11. Dr. Narayan Nayak, Assistant Professor, Department of Mathematics, RSAPS.
12. Dr. Biswajit Sarma, Assistant Professor, Department of Chemistry, RSAPS.
13. Dr. Sankar Barman, Assistant Professor, Department of Physics, RSAPS.
14. Dr. Debojeet Sahu, Assistant Professor, Department of Chemistry, RSAPS.
15. Dr. Israfil Hussain, HoD, Electrical Engineering Department, RSET
16. Mr. Debsundar Swami, HoD, Electronics and Communication Engineering Department, RSET
17. Dr. Monalisa Deka, Assistant Registrar, RGU

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS chaired the meeting and called the House to order.

4.1 Agenda: Welcoming the members of the Board of Studies, RSAPS and introduction of new members of BoS.

Deliberations/Suggestions: The meeting was commenced with the welcome address by Dr. Anuradha Devi, Dean, RSAPS. She also welcomes external expert members Dr. Pranjal Saikia, Associate Professor, Department of Applied Sciences, GU and Dr. Joyanti Chutia, Emeritus Scientist and Former Director, IASST. Dean, RSAPS emphasized the need of conduct of 4th BoS online due to the unprecedented lockdown due to COVID -19. In her opening remark, she appreciated the contribution of Professor Hemanta Kumar Sarmah, Professor , Gauhati University for his contribution as an academic expert for last two years. She also appreciated the guidance of senior and Emeritus professors of RSAPS for their guidance for academic growth of the school. Dr Anuradha Devi also mentioned and appreciated tremendous efforts put forward by faculty members of RSAPS during the lockdown period for reaching out to each and every students of RSAPS through online video and audio classes as well as uploading study materials in the Royalnet and Google classes. The total number of online classes till date was 1653 and counting and total number of material uploaded are 1065 which is worth mentioning, Dr. Devi informed the Board.

Dr. Anuradha Devi discussed the agenda of 4th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

4.2 Introduction of external academic expert member Dr. Pranjal Saikia**,** Department of Applied Sciences, GU

Dr. Pubalee Sarmah read out the profile of external academic expert member Dr. Pranjal Saikia**,** Associate Professor, Department of Applied Sciences, GU who has been nominated by Board of Management to the newly constituted Board of Studies, RSAPS.

4.3. Ratifying the minutes of previous BOS meeting and Action Taken Report.

Dr. Bimalendu Kalita read out the Action Taken Report on the minutes of 3rd BoS meeting.

Resolutions:

All members of Board of Studies appreciated the action taken after 3rd BOS and approved the minutes of 3rd BOS. The minutes of 3rd BoS has been accepted by all members.

4.4. A presentation regarding school activity after 3rd BoS meeting.

Deliberations:

Dr. Narayan Nayak delivered a presentation regarding school activity after 3rd BoS. In his presentation he highlighted about the activities undertaken by RSAPS after 3rd BoS. The major events are National Science day, Pi-Day, field trips etc. and the webinar organised by RSAPS during lockdown .

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields

4.5.Discussion on course structure for B.Sc. (Honours) and M.Sc., Department of Physics.

Deliberations:

Dr. Sujata Deb delivered a presentation regarding the course structure of 5th and 6th semester undergraduate level courses of Physics, RSAPS. Important discussion was carried out on credit and subject of each semester. The Course curriculum has been framed as per UGC's LOCF format.

Resolutions:

After the detailed discussion and deliberations on 5th and 6th semester of undergraduate, the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Physics): [Annexure-I]

4.5.1. The 5th and 6th semester course structure and syllabus are renamed as suggestions for the seminar in 5th semester and project/literature survey in 6th semester

4.5.2. As suggested by Prof. O. K. Medhi in 3rd BOS, the naming the undergraduate seminar of 5th semester changed to Graduate Seminar.

4.5.3. Prof. O. K. Medhi has suggested in 3rd BOS naming the undergraduate project/literature survey of 6th semester as Graduate Project/Literature Survey, and it was renamed as Graduate Project/Literature Survey.

Postgraduate level (M.Sc., Physics): [Annexure II]

4.5.4. M.Sc. Physics course structure and syllabus with no major changes and is incorporated in LOCF has been accepted.

4.6 Discussion on course structure for B.Sc. in Electronics and BSc. in Electrical and Electronics.

Deliberations:

Dr. Israfil Hussain delivered a presentation regarding the course structure of 1st and 2nd semester undergraduate level courses of B.Sc. in Electronics and BSc. in Electrical and Electronics Physics, RSAPS. Important discussion was carried out on credit and subject of each semester.

Resolutions:

After the detailed discussion and deliberations on 1st and 2nd semester of undergraduate, the following resolutions are adopted:

Undergraduate level (B.Sc. in Electronics and BSc. in Electrical and Electronics Physics): [Annexure-III and Annexure IV]

4.6.1. The course structure of B.Sc. (H) , Electronics and B.Sc. (H) in Electrical and Electronics and 1ST and 2nd semester syllabus are accepted as proposed.

4.6.2. Prof. Joyanti Chutia suggested of introducing Plasmonic in any of the higher semesters.

4.7 Discussion on course structure for M. SC in Electronics.

Deliberations:

Mr. Debsunder Swami delivered a presentation regarding the course structure of 1st and 2nd semester postgraduate level courses of M.Sc. in Electronics , RSAPS which is made as per UGC's LOCF guidelines . Important discussion was carried out on credit and subject of each semester.

Resolutions:

After the detailed discussion and deliberations on **Electronics** semester of postgraduate, the following resolutions are adopted:

Postgraduate level (M.Sc. , Electronics): [Annexure-V]

4.7.1. The course structure of M.Sc. , Electronics and 1ST and 2nd semester syllabus are accepted as proposed.

4.7.2 Prof. Joyanti Chutia suggested of introducing Plasmonic in any of the higher semesters.

4.8 course structure of B.Sc. (Honours) and M.Sc. syllabus Chemistry department.

Deliberations:

Dr. Biswajit Sarma delivered a presentation regarding the course structure of all semester of undergraduate and postgraduate courses of Chemistry, RSAPS.

Resolutions:

Undergraduate level (B.Sc. Honours, Chemistry): [Annexure-VI]

4.8.1. No major changes in the syllabus of the B.Sc., Chemistry (H). However, the format of the syllabus has been modified to Learning Outcomes based Curriculum Framework (LOCF) pattern as per the recent guideline of UGC.

Postgraduate level (M.Sc., Chemistry): [Annexure-VII]

4.8.2. In the course structure of M.Sc. 4th semester, Project or literature survey & review article has been replaced by **Project OR Advance Practical & Literature Survey**. The format of the syllabus of M.Sc. course has been modified to Learning Outcomes based Curriculum Framework (LOCF) pattern.

4.9 Course structure of B.Sc. (Honours) Mathematics & Computing and M.Sc. in Mathematics & Computing; B.Sc. (H) Mathematics, M.Sc., Mathematics

Deliberations:

Dr. Bimalendu Kalita delivered a presentation regarding the course structure of B.Sc. and MSc. "Mathematics" and "Mathematics and Computing" courses. He informed that there is no major changes in B.Sc. (H) mathematics and M.Sc. Mathematics Course structure as well as detailed syllabus. Few minor changed are there in the syllabus which has already been incorporated at the time of framing the course curriculum as per LOCF guidelines.

Resolutions:

Undergraduate level (B.Sc. (H), Mathematics and Computing): [Annexure-VIII]

4.9.1. As per resolution of 3rd BOS the syllabus of B.Sc.(H), Mathematics and Computing is incorporated and is accepted. No major change in the course. The course curriculum is prepared in LOCF format.

Postgraduate level (M.Sc., Mathematics and Computing): [Annexure-IX]

4.9.2 As per resolution of 3rd BOS the syllabus of M.Sc., Mathematics and Computing is incorporated and is accepted. No major change in the course. The course curriculum is prepared in LOCF format

Undergraduate level (B.Sc. (H), Mathematics : [Annexure-X]

4.9.3 No major change in the course. Only in the paper Real Analysis of 3rd semester, some minor changes are done as per suggestion of Prof. (Dr.) Hemanta Kumar Baruah and is incorporated and accepted. The course curriculum is prepared in LOCF format

Postgraduate level (M.Sc., Mathematics : [Annexure-XI]

4.9.4 No major change in the course structure. Only for the papers Real Analysis of 1st semester and Measure theory of 4th semester, Prof. (Dr.) Hemanta Kumar Baruah has suggested to remove some topics, which will be incorporated before next semester. The course curriculum is prepared in LOCF format.

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

4.10.1 The conduct of remaining laboratory classes and project work for final semester has been discussed. The members gave their valuable suggestions. Dr. Joyanti Chutia enquired about the laboratory facilities for project work. Dr. Devika Phukan , HoD , Physics and Dr. Pubalee Sarmah, HoD , Chemistry met all the queries of Dr. Joyanti Chutia on the instruments in the laboratory.

4.10.2 Dr. Pranjal Saikia expressed his concerns on the conduct of lab classes on the uncertainties of lockdown. He agreed on the Literature review based Project work due to paucity of time but emphasized on good review work.

4.11 Vote of Thanks : The meeting concluded with a vote of thanks by Dr. Devika Phukan, Dy Dean, RSAPS.

Minutes compiled by : Dr. Devika Phukan, Dr. Pubalee Sarmah, Dr. Navalakhi Hazarika , Dr. Bimalendu Kalita.

Prof. (Dr.) Anuradha Devi

Dean, RSAPS

THE ASSAM
ROYAL GLOBAL UNIVERSITY

5th Meeting of the Board of Studies
Royal School of Applied & Pure Sciences
14th July, 2021

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: Online mode (Zoom meeting).

Wednesday, July 14, 2021 11:00 am | 3 hours | Chennai, Kolkata, Mumbai, New Delhi

Meeting ID: 928 1358 9135

Passcode: maths@1

Zoom Meeting:

https://zoom.us/j/92813589135?pwd=OUhjWExBdVpvY00zeHQwVEVQbm5Mdz09

Member Present:

Sl. No.	Name & Profile of Members	Category of Nomination	Designation in the Body
1	Prof. (Dr.) Anuradha Devi,Professor & Dean	Ex-Officio	Chairperson
2	Ms. Angira Mimani, Registrar	Ex-Officio	member-secretary
3	(a) Dr. Biswajit Sarma, Assistant Professor, HoD(Chemistry) (b) Dr. Sujata Deb, Assistant Professor, HoD (Physics) (c) Dr. Kamal Debnath, Assistant Professor, HOD (Maths)	Ex-Officio	Member
4	Prof. (Dr.) Amarendra Rajput Prof. (Dr.) Hemanta Kr. Baruah Prof. (Dr.) PK Dhar	Ex-Officio	Member

One External Member(Academic)			
5	Dr. Pranjal Saikia,Associate Professor Department of Applied Sciences (Chemical Science Division) ,GUIST, Gauhati University	Nominated member	Member
One External Member (Industry)			
6	Prof. Joyanti Chutia, Emeritus scientist, IASST, Former Director, IASST	Nominated member	Member
Two Teachers of the School nominated by Vice-Chancellor			
7	Dr. Devika Phukan, Associate Professor & Dy. Dean,	Nominated member	Member
8	Dr. Pubalee Sarmah, Assistant Professor	Nominated member	Member

ADDITIONAL NOMINATED MEMBERS AND SPECIAL INVITEE

Royal School of Applied & Pure Sciences			
Sl. No.	**Name & Profile of Members**	**Category of Nomination**	**Designation/Purpose in the Body**
1	Dr. Bimalendu Kalita	Nominated by Dean, RSAPS	Co-ordinator of the meeting
2	Dr. Dr. Sankar Barman	Nominated by Dean, RSAPS	To present the activity of RSAPS after 4th BOS.
3	Dr. Debajit Sahu	by Dean, RSAPS	To make note of the discussions of the meeting
4	Dr. Aniruddha Deka	Nominated by Registrar	Special Invitee
5	Ms. Moonmoon Ahmed	Nominated by Registrar	Special Invitee

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS chaired the meeting and called the House to order.

5.1 Agenda: Welcoming the members of the Board of Studies, RSAPS and introduction of new members of BoS.

Deliberations/Suggestions: The meeting was commenced with offer of condolence to Emeritus Professor O.K. Medhi who passed by Dr. Anuradha Devi and expressed her gratitude towards his contribution to growth of RSAPS. Then Dr. Anuradha Devi, Dean, RSAPS. welcomes external expert members **Dr. Pranjal Saikia**, Associate Professor, Department of Applied Sciences, GU and **Dr. Joyanti Chutia,** Emeritus Scientist and Former Director, IASST. Dean, RSAPS and all other members of Board of Studies, RSAPS. She has introduced new member Prof P.K.Dhar who has joined the department of Physics recently. The 5th BoS was also attended by Hon'ble Vice Chancellor, The Assam Royal Global University. Chairperson welcomed him . Professor Devi emphasized the objective of conduct of 5th BoS. In her opening remark, She also appreciated the guidance of Hon'ble Vice Chancellor , Academic Chairperson and senior and Emeritus professors of RSAPS for their guidance for academic growth of the school. She emphasised on the main discussion point to be the inclusion of upto a maximum 20% courses of all programs from available online courses as per the guidelines of UGC. Hon'ble Vice Chancellor on his opening remark wished success of 5th BOS and requested members to give suggestions which can be incorporated in the structure and the syllabus of all programs of RSAPS for overall academic development of the School as well the University.

Dr. Bimalendu Kalita discussed the agenda of 5th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

Dr. Sujata Deb read out the profile of Prof (Dr.) P.K.Dhar, Professor, Department of Physics recently joined in the department of Physics who has been nominated as the Ex-officio member by Board of Management to the newly constituted Board of Studies, RSAPS.

5.2 Action taken report on the minutes of 4th BoS meeting

Dr. Bimalendu Kalita read out the Action Taken Report on the minutes of 4th BoS meeting.

Resolutions:

All members of Board of Studies appreciated the action taken after 4th BOS and approved the minutes of 4th BOS. The minutes of 4th BoS has been accepted by all members.

5.3 A presentation regarding RSAPS activity during period after 4th BOS.

Deliberations:

Dr. Sankar Barman presented a brief report of RSAPS and all academic and non academic activity taken by RSAPS after 4th BoS. In his presentation he highlighted about the activities undertaken by RSAPS after 4th BoS. The major events are National Science day, Pi-Day, Parent Teacher interaction , International Conference , field trips etc. and the webinar organised by RSAPS during lockdown .

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields

5.4 Discussion on introduction of maximum 20% MOOCS/SWAYAM courses in the course structure of different courses as per guidelines of UGC.

Dr. Anuradha Devi gave a deliberation on the aspects of inclusion of Courses to be offered on Online mode as per guidelines of UGC. The students of all programs of RSAPS may be offered the available online courses upto a maximum of 20% courses. While offering the courses, the similarity of the contents of the courses will be taken care of. The online courses may be offered as

(i) **Full certification Mode:** Student may opt a course offered by MOOCS/ SWAYAM or any other platform . The course must have at least 80% similarity. The students who opted for full course online must register themselves for the course, will undergo the all lectures given online , they will appear for examination and the grades acquired by them will be forwarded to the COE, RGU for transfer of grade. The whole process will be monitored by concerned faculty assigned for the particular subject.

(ii) **Blended mode:** The existing course which have less similarity may be offered in a blended mode where student may be offered one or two modules of existing courses to be taught in

online platform and rest of the syllabus will be taken by assigned faculty. Depending upon the modules covered online , Credits will be counted accordingly. For e.g if one module of a 4 credit course is offered it may be counted as 1 credits , if offered two modules it will be counted as 2 credits etc. The evaluation of the course will be as per RGU examination Rule.

(iii) **Bringing faculty to teach online.**: If there is non availability to teach a particular specialized course/ topics, guest faculty may be invited to teach online. The remuneration for such faculty will be as per RGU policy.

After the deliberation on the need of online courses for the students, she requested the members to give their suggestions on how to go ahead with this proposal.

During the deliberation, Dr. Pranjal Saikia enquired about the selection of online courses and method of evaluation which was clarified by Dean, RSAPS. Dr. Joyanti Chutia expressed her concerts on the implementation on the courses. Prof. Amarendra Rajput , Prof hemanta Kumar Baruah and Prof. P.K.Dhar expressed their views on the inclusion of online courses and the benefits of giving extra learning to the students through the lectures of professors from reputed Universities.

5.5 (a) Discussion on the course structures and detailed syllabus of all programs of Mathematics as per agenda point 5.4

Dr. Anuradha Devi delivered a presentation regarding the course structure of BSc (H) Mathematics, MSc Mathematics and BSc (H) Mathematics with NEP. Important discussion was carried out on credit and subject of each semester. During the deliberation, all members expressed their views on each course structures.

Resolutions:

After the detailed discussion and deliberations the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Mathematics): Learning Outcomes based Curriculum Framework (LOCF)(Upto 20% MOOCs/Blended Mode) [Annexure-I-Mathematics]

5.5.1. There will be no blended mode /Full certification Mode in the 1st semester course, The following semester subjects are blended as per the availability in MOOCS/ SWAYAM/other online courses and after the discussion with faculty members.

(a) In 2nd semester, Linear Algebra (25% Blended) which is equivalent to 1 credit
(b) In 4th semester, Complex Analysis(25%Blended) which is equivalent to 1 credit
(c) In 5th Semester, Numerical Methods & LPP(50% blended) which is equivalent to 2 credits Fourier Series and Transform Calculus (25% Blended) which is equivalent to 1 creditand Essential Mathematics for Machine Learning (MOOCs)

(d) In 6th semester, Abstract Algebra (25% Blended) which is equivalent to 1 credit , Introduction to Probability &Statistics (25% Blended) which is equivalent to 1 credit, Combinatorics & Mathematical Logic (25% Blended) which is equivalent to 1 credit, Introduction To R Software (MOOCs).

% of Blended +MOOCs : 18.5%

All members of Board of Studies appreciated and accepted the blended mode of teaching.

The correction/modification sheet of blending are attached as Annexure-I-mathematics

Postgraduate level (M.Sc., Mathematics): Learning Outcomes based Curriculum Framework (LOCF)(Upto 20% MOOCs/Blended Mode) [Annexure-II-Mathematics]

5.5.2. The following semester subjects are blended as per the availability in MOOCS/ SWAYAM and after the discussion with faculty members.

(a) In 1st semester, Algebra-I (25% blended), Linear Algebra (25% blended), Probability and Statistics (25% blended), Operation Research-I (25% blended)
(b) In 2nd semester, Partial Differential Equations (25% Blended), Complex Analysis (25% blended), Numerical analysis (50% blended).
(c) In 3rd Semester, Mathematical Methods (25% blended), Classical Mechanics (25% blended)
(d) In 4th semester, Measure Theory (25% blended), Fuzzy Set Theory (50% blended).

% of Blended papers credit : 16.25 %

All members of Board of Studies appreciate and accepted the blended mode of teaching.

The correction/modification sheet of blending are attached as Annexure-II

Undergraduate level (B.Sc. Mathematics) as per NEP (Upto 20% MOOCs/Blended Mode) [Annexure III-Mathematics]

5.5.3. Multiple Exit as per NEP

- After 1st Year: Certificate in Mathematics (Data Science)
- After 2nd Year: Diploma in Mathematics

- After 3rd Year: B.Sc. Mathematics Honours Degree
- After 4th Year: B.Sc. Mathematics Honours Degree with Research

The course structure and details of blending mode on semester subjects is attached as Annexure-III- Mathematics

As per the discussion in BoS meeting with the experts members the following changes and modification in the course structure has been done

In **7th semester course**,

- the subject name 'Introduction to Research Methodology (MAT012C701)' was replaced by 'Research Methodology and Applications to mathematics (L T P C: 5 1 0 6)' with 50% Blended mode
- the subject name 'Computer Basics with one programming code (MAT012C702)' was replaced by 'Computational Tools and Techniques', where Module I : Basic of Computer, ModuleII: Text editing tools, Module III, IV: Basic of MatLab and Python. (L T P C: 3 1 4 6)
- No change in subject, Introduction to Intellectual Property Rights (50% blended), only change in the credit (L T P C: 3 1 0 4)
- No change in subject, Literature review and Review a Paper, only change in the credit (L T P C: 0 0 16 8)
- A new subject was included as subject code (MAT012705) and name Advanced Mathematics (Guide specific) subject credit (L T P C: 3 0 0 3)

5.5 (b) Other discussion:

Members of BoS were appraised on some subjects of Mathematics which are taught in many departments of different schools of RGU. The syllabus was prepared by the respective departments and forwarded to Mathematics department and faculty of mathematics are assigned to teach those subjects. The syllabus were not made uniform. To keep uniformity, syllabus of two subjects have been modifies to contain same contents for the respective departments. The syllabus of two subjects namely

- (i) Operations Research for MA economics 4th semester, M.Com 2nd semester and MPT 2nd semester with the subject code forwarded by respective departments. COM044C201/ PHT244D201 [(2^{nd} semester) / ECO184D404 (4^{th} semester)
- (ii) Probability and Statistics : ENV164C201/CAP054C204 [2^{nd} semester]

The details syllabus of these two subjects are attached as Annexure-IV-Mathematics

Both syllabus were presented before the members for approval.

Resolution: All members of the Board of Studies have accepted and approved the proposed syllabus

5.6 (a) Discussion on the course structures and detailed syllabus of all programs of Physics as per agenda point 5.4

Dr. Sujata Deb, HoD, Department of Physics, delivered a presentation on the course structure and syllabus of (i) B.Sc. (H) Physics Existing course with MOOCs, (ii) M.Sc. Physics Existing course with MOOCs and (iii) B.Sc. (H) Physics NEP course structure with MOOCs.

Valuable discussion was carried out on credits and implementation of MOOCs Courses in various subjects of each semester of all the categories.

Resolutions:

After the detailed discussion and deliberations, the following resolutions are adopted:

Undergraduate level (B.Sc. (H) Physics): Learning Outcomes based Curriculum Framework (LOCF) (Upto 20% MOOCs/Blended Mode) [Annexure-I-Physics]

5.6.1. The following semester subjects are blended as per the availability in MOOCS/ SWAYAM and after the discussion with faculty members.

a. In 2nd semester, Wave, oscillation and ray optics (50% Blended)

b. In 5th semester, Classical Mechanics (50% Blended) and Solid State Physics (50% Blended)

% of Blended +MOOCs: 7.5%

The correction/modification sheet of blending are attached as Annexure-I-Physics

All members of the Board of Studies appreciate and accepted the blended mode of teaching.

Postgraduate level (M.Sc. Physics): Learning Outcomes based Curriculum Framework (LOCF) (Upto 20% MOOCs/Blended Mode) [Annexure-II-Physics]

5.6.2. The following semester subjects are blended as per the availability in MOOCS/ SWAYAM and after the discussion with faculty members.

a. In 1st semester, Classical Mechanics (50% Blended) and Nuclear and Particle Physics (25% Blended)

b. In 2nd semester, Condensed Matter Physics (50% Blended)

% of Blended +MOOCs: 5 %

The correction/modification sheet of blending are attached as Annexure-II-Physics

All members of Board of Studies appreciate and accepted the blended mode of teaching.

Undergraduate level (B.Sc. (H) Physics) as per NEP (Upto 20% MOOCs/Blended Mode)

5.6.3. **Multiple Exit as per NEP**

- After 1st Year: Certificate in Physics of Electrical Devices
- After 2nd Year: Diploma in Physics of Electrical & Electronics Devices
- After 3rd Year: B. Sc. Honours Degree in Physics
- After 4th Year: B.Sc. Honours Degree in Physics with research

T**he course structure and details of blending mode on semester subjects is attached as Annexure-III-physics**

As per the discussion in BoS meeting with the experts members the following changes and modification in the course structure has been done:

In 7th semester course,

- the subject name Introduction to Research Methodology (PHY012C701) (50% blended) was replaced by Research Methodology and Applications to Physics (L T P C: 5 1 0 6)
- the subject name Computer Basics with one programming code (PHY012C702) was replaced by Computational Tools and Techniques. (L T P C: 3 1 2 6)
- No change in subject, Introduction to Intellectual Property Rights (50% blended), only change in the credit (L T P C: 3 1 0 4)
- No change in subject, Literature review and Review a Paper, only change in the credit (L T P C: 0 0 16 8)

- A new subject was included as subject code (PHY012715) and name Physics Research Lab (Guide specific) subject credit (L T P C: 0 0 3 3)

Resolution: All members of the Board of Studies appreciated and accepted the blended mode of teaching.

5.6. (b) Other discussion:

On the basis of mutual discussions of the faculty members of Department of Physics and Department of Physiotherapy it has been decided that the 3rd Semester existing Generic Physics paper of Physics Department, **Optics and Atomic physics** (**PHY01G301** / **PHT242G301**), will also be the common Generic Physics paper for the 3rd Semester student of Bachelor of Physiotherapy, RSMAS.

Resolution: All members of the Board of Studies have accepted and approved the proposed syllabus

5.7 (a)Discussion on the course structures and detailed syllabus of all programs of Chemistry as per agenda point 5.4

Dr. Debajit Sahu delivered a presentation regarding the course structure of BSc (H) Chemistry, M.Sc. Chemistry and BSc (H) Chemistry NEP. Important discussion was carried out on benefits and about the planning of implementation of MOOCS Courses in various subjects of each semester.

Resolutions:

After the detailed discussion and deliberations the following resolutions are adopted:

Undergraduate level (B.Sc. (H), Chemistry): Learning Outcomes based Curriculum Framework (LOCF)(Upto 20% MOOCs/Blended Mode) [Annexure-I-Chemistry]

5.7.1. The following semester subjects are blended as per the availability in MOOCS/ SWAYAM and after the discussion with faculty members.

a. In 1 st semester, Physical Chemistry I (50 % Blended); Organic Chemistry I (25% Blended).

b. In 2 nd semester, Organic Chemistry II (50% Blended)

c. In 4th semester, Inorganic Chemistry IV (25% Blended)

d. In 5th Semester, Organic Chemistry IV (25% Blended)

e. In 6th semester, Quantum Chemistry (50% Blended)

% of Blended +MOOCs : 13%

The correction/modification sheet of blending are attached as Annexure-I-Chemistry

All members of Board of Studies appreciate and accepted the blended mode of teaching.

Postgraduate level (M.Sc., Chemistry): Learning Outcomes based Curriculum Framework (LOCF)(Upto 20% MOOCs/Blended Mode) [Annexure-II-Chemistry]

5.7.2. The following semester subjects are blended as per the availability in MOOCS/ SWAYAM and after the discussion with faculty members.

a. In 2nd semester, Biochemistry (25% Blended).
b. In 3rd semester, Organic Chemistry II (25% Blended), Bio-inorganic Chemistry (25% Blended).
c. In 4th Semester, Catalysis & Surface Chemistry (25% Blended), Medicinal Chemistry (25% Blended), Organometallic Chemistry & Catalysis (25% Blended).

% of Blended +MOOCs : 9%

The correction/modification sheet of blending are attached as Annexure-II-Chemistry

All members of Board of Studies appreciate and accepted the blended mode of teaching.

Undergraduate level (B.Sc. Chemistry) as per NEP (Upto 20% MOOCs/Blended Mode) [Annexure-III-Chemistry]

5.7.3. Multiple Exit as per NEP

- After 1st Year: Certificate in Analytical Chemistry
- After 2nd Year: Diploma in Chemistry
- After 3rd Year: B. Sc. Honours Degree in Chemistry
- After 4th Year: Honours Degree in B. Sc. Chemistry with Research

- **The course structure and details of blending mode on semester subjects is attached as Annexure-III-Chemistry.**

As per the discussion in BoS meeting with the experts members the following changes and modification in the course structure has been done

In 7th semester course,

- the subject name Introduction to Research Methodology (CHY012C701) was replaced by Research Methodology and application to Chemistry (L T P C: 5 1 0 6)
- the subject name Computer Basics with one programming code (CHY012C702) was replaced by Computational Tools and Techniques (L T P C: 3 1 4 6)
- No change in subject, Introduction to Intellectual Property Rights (50% blended), only change in the credit (L T P C: 3 1 0 4)
- No change in subject, Literature review and Review a Paper, only change in the credit (L T P C: 0 0 16 8)
- A new subject was included as subject code (CHY012C715) and name Chemistry Research Lab (Guide specific) (L T P C: 0 0 6 3)

Resolution: All members of the Board of Studies have accepted and approved the proposed course structure of B.Sc (Honours) Chemistry as per NEP

5.7 (b) Other discussion:

On the basis of mutual discussions of the faculty members of Department of Chemistry and Department of Physiotherapy it has been decided that the 4th Semester existing Generic Chemistry paper of Chemistry Department, Chemistry IV (CHY012G401/ PHT242G401), will also be the common Generic Chemistry paper for the 4th Semester student of Bachelor of Physiotherapy.

There was a minor modification of 2nd Semester existing Generic Chemistry paper First module of 2nd Semester existing Generic Chemistry paper (Chemistry- II; Code: CHY012G201) of Chemistry Department has been modified with a new module. The new first module of this paper is "introduction to Biochemistry".

The details syllabus of these two subjects are attached as Annexure-IV-Chemistry

All members of Board of Studies appreciate and accepted the blended mode of teaching.

5.8 Suggestions from Expert members.

The expert members have appreciated about the positive approach by all the departments of RSAPS on inclusion of Courses in online platform which will give new direction to the academic development of the School. Dr. Joyanti Chutia expressed her happiness on the student's achievements and faculties involvement in research activities. Dr. Pranjal Saikia emphasized on proper monitoring of the classes blended for online. Expert members suggested on some changes in the NEP course structure.

Prof. Amarendra Rajput have suggested to improve course structure of 7th semester and also to introduce some department related subject with research methodology and illustration of research problem.

Dr. Joyanti Chutia have suggested the importance of Mathematical Analysis for Physics research, specially for theoretical Physics. Also suggested the importance of Statistics in Physics and Chemistry research.

Prof. P.K.Dhar have suggested about the Python oriented programming.

Dr. Pranjal Saikia have suggested to add laboratory classes in major projects.

5.9 Resolution of 5th BOS

The following resolution have been taken in the meeting

1. The inclusion of Blending mode of courses as per availability and similarity of the On Line courses in all programs of RSAPS
2. Upto a maximum 20% courses will be offered online.
3. The modified course structure and detailed syllabus for existing B.Sc. (Honours) and M.Sc. in Physics, Chemistry and Mathematics with inclusion of On line courses have been accepted and approved.
4. The Course structure of B.Sc. as per NEP guideline and with 20% courses online is accepted with certain modification in 7th semester course.

5.10 Any other matter with permission of the Chair.

Members have a short discussion the planning for next semester classes and other academic activities to be taken by RSAPS

5.11 Concluding remarks by Dean, RSAPS

Dr. Anuradha Devi appreciated the valuable suggestions made during the deliberations of the meeting.

5.12 Vote of Thanks by Deputy Dean, RSAPS. The meeting concluded with a vote of thanks by Dr. Devika Phukan, Dy Dean, RSAPS.

Minutes compiled by : Dr. Bimalendu Kalita, Dr. Kamal Debnath , Dr. Sujata Deb, Dr. Debajit Sahu.

Prof. (Dr.) Anuradha Devi
Dean, RSAPS

THE ASSAM
ROYAL GLOBAL UNIVERSITY

7th MEETING OF BOARD OF STUDIES,
ROYAL SCHOOL OF APPLIED & PURE SCIENCES
9 December, 2022

Minutes of the Meeting

Start time: 11:00 A.M.

Venue: D-block seminar hall

Member Present:

School Board, Royal School of Applied & Pure Sciences			
Sl. No.	**Name & Profile of Members**	**Category of Nomination**	**Designation in theBody**
1	• Prof. (Dr.) Anuradha Devi, Professor &Dean	Ex-Officio	Chairperson
2	• Dr. Kamal Debnath, Associate Professor & HOD, Department of Mathematics. • Dr. Pubalee Sarmah, Associate Professor & HOD, Department of Chemistry.	Ex-Officio	Member
3	• Prof. (Dr.), Rita Choudhury, Professor, Department of Mathematics. • Prof. (Dr.), Amarendra Rajput, Professor, Department of Physics	Ex-Officio	Member
External Member (Department of Mathematics)			
4	Prof. (Dr.) Dipak Sarma, Professor, Department of Mathematics, Cotton University.	Nominated member	Member
External Member (Department of Physics)			

5	Prof. (Dr.) Anurup Gohain Barua,, Professor, Department of Physics, Gauhati University.	Nominated member	Member
External Member (Department of Chemistry)			
6	Prof. (Dr.) Pranjal Saikia,, Professor, Department of Chemistry, Gauhati University.	Nominated member	Member
Two Teachers of School nominated by Vice Chancellor			
8	• Dr. Bimalendu Kalita, Associate Professor, Department of Mathematics. • Dr. Sankar Barman, Assistant Professor, Department of Physics	Nominated members	Member
9	Ms. Moon Moon Ahmed, Assistant Manager,Academic Section.	Nominee of Registrar	Member

Leave of Absence:

1. Dr. Devika Phukan, Associate Professor , Dy. Dean & HOD, Department of Physics.
2. Prof. (Dr.) Joyanti Chutia, Emeritus scientist, IASST,Former Director, IASST. (**External Member (Industry)).**

PROCEEDINGS OF THE MEETING

Dr. Anuradha Devi, Professor &Dean.chaired the meeting.

7.1 Agenda: Welcome and objective by Dean, RSAPS.

Deliberations/Suggestions: Dr. Anuradha Devi, Dean, RSAPS. welcomes and emphasized the objective of conduct of 7th BoS. She emphasized on the main agenda points, structure, modification of the syllabus in the context of NEP and contains all component such as VAC, SEC, AECC as mentioned in NEP 2020. The course outcome (CO) and programme outcome (PO) have been included in the syllabus. The course outcome has been incorporated using Bloom's Taxonomy.

Dr. Bimalendu Kalita discussed the agenda of School Board of 7th BoS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

7.2 Introduction of new members Prof. (Dr.) Dipak Sarma, Professor, Department of Mathematics, Cotton University and Prof. (Dr.) Anurup Gohain Barua,, Professor, Department of Physics,

Gauhati University in the Board of Studies, Royal School of Applied & Pure Sciences, RGU by Dr. Anuradha Devi.

Deliberations: Dr. Anuradha Devi welcomes Prof. (Dr.) Dipak Sarma, Professor, Department of Mathematics, Cotton University and Prof. (Dr.) Anurup Gohain Barua, Professor, Department of Physics, Gauhati University as an external member of School Board, RSAPS.

7.3 Ratifying the minutes of 6th BoS meeting and Action taken report.

Deliberations: Dr. Bimalendu Kalita read out the Action Taken Report and highlighted all implementations which was suggested by expert members during 6th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 6th BOS and approved the minutes of 6th BOS.

7.4 **To apprise about the major development of RSAPS after 6th BOS**.

Deliberations: Dr. Sankar Barman presented a brief report of RSAPS and all academic and non academic activity taken by RSAPS after 6th BoS.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields. It was also suggested to include research activities of faculty members and workshop, training programme, FDP attended by faculty members in the next BoS.

7.5 Meeting of Departmental Board, Department of Physics (Chaiperson: Dr. Sankar Barman Associate Professor , Department of Physics) as per agenda of 7th BoS, Physics.

PROCEEDINGS OF THE MEETING

Prof. (Dr.) Anuradha Devi, Dean, RSAPS handed over the Chairmanship to Dr. Sankar Barman, HoD (I/C), Department of Physics to conduct the Board of Study meeting of the Department of Physics

7.5.1 Agenda: Welcome and introduction of the members of the Board of Studies of the Department of Physics by Dr. Sankar Barman.

Dr. Sankar Barman discussed the agenda of 7th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

7.5.2. Ratifying the minutes of 6th BoS meeting and Action taken report.

Dr. Sankar Barman read out the Action Taken Report on the minutes of 6th BoS meeting and highlighted all implementations which was suggested by expert members during 6th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 6th BOS and approved the minutes of 6th BOS.

The minutes of 6th BoS has been accepted by all members.

7.5.3. To apprise about the major development of Department of Physics after 6th BOS

Dr. Sankar Barman delivered a presentation on the major activities of the department of Physics including both academic and non-academic.

Resolution: All the members present appreciated the activities of the department.

7.5.4. Discussion on course structures and detailed syllabus of B.Sc. programs of the department of Physics:

Dr. Sankar Barman delivered a presentation regarding the course structure of all semesters of B.Sc.(H) Physics. Dr. Barman also presented all syllabuses of 1st semester to 4th semester. A few minor modifications were proposed in the course structure. Important discussion was carried out on Core and DSE subject of each semester. During the deliberation, all members expressed their views on each course structures.

Resolutions:

After the detailed discussion and deliberation, the following resolutions are adopted:

(a) Incorporation of Mathematical Physics-III paper in 5th semester in place of Research Methodology paper.

(b) Clubbing of Research Methodology with minor project in 6th Semester.
(c) In the 5th semester, option of DSE paper will be "Classical Mechanics and any one" instead of choose "any two" from the group four papers.
(d) In the 6^{th} semester, option of DSE paper will be 'Research Methodology and Minor project' and any two instead of choose "any three" from the group four papers

All members of Board of Studies appreciated and accepted the correction in the course structure and syllabuses.

The correction/modification sheet are attached as Annexure-I

7.5.5.Comments and Suggestions from Expert members:

The expert members appreciated the overall course structure and the presented syllabus and suggested the following point to include in the B.Sc(H) programme.

(a) Basic components of electrical and electronics like resistor, diode, transistor etc to be introduced to the students.
(b) Hands on practical on Electronics using bread board to be included in the basic skill class.
(c) Platinum Resistance thermometer experimental to be included in the practical paper in 2^{nd} semester.

7.5.6. Any other matter with permission of the Chair.

With the permission of the chair, Dr. Maidul Islam placed in front of the board if more mathematical physics papers are required to incorporate in the B.Sc Physics (H) program, to which Professor A. Rajput commented that with the inclusion of Mathematical Physics-III, most of the important topic for B.Sc Physics (H) level will be covered.

7.5.7. Vote of thanks and handing over to the school board

The meeting concluded with a vote of thanks by Dr. Sankar Barman, HoD (I/C), Department of Physics, RSAPS. Dr. Barman handed over the comments, suggestions and resolutions of the departmental board of studies to Prof. (Dr.) Anuradha Devi, Dean, RSAPS, Chairperson, Board of Studies of the school (RSAPS).

In the BoS of Royal School of Applied & Pure Sciences, the resolution are accepted and approved to placed before the competent authority and Academic Council for final approval.

7.6 Meeting of Departmental Board, Department of Chemistry (Chaiperson: Dr. Pubalee Sarmah, Associate Professor & HOD, Department of Chemistry) as per agenda of 7th BoS, Chemistry.

PROCEEDINGS OF THE MEETING

Dr. Pubalee Sarmah, Associate Professor & HOD. chaired the meeting.

7.6.1 Agenda: Welcome and objective by Dean, RSAPS.

Deliberations/Suggestions: Welcome and introduction of the members of the Board of Studies of the Department of Chemistry by Dr. Pubalee Sarmah.

Dr. Pubalee Sarmah discussed the agenda of 7th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

7.6.2 Ratifying the minutes of 6th BoS meeting and Action taken report.

Deliberations: Dr. Pubalee Sarmah read out the Action Taken Report and highlighted all implementations which was suggested by expert members during 6th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 6th BOS and approved the minutes of 6th BOS.

7.6.3 To apprise about the major development of Department of Chemistry after 6th BOS.

Deliberations: Dr. Sankar Barman presented a brief report of RSAPS and all academic and non academic activity taken by RSAPS after 6th BoS.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields. It was also suggested to include research activities of faculty members and workshop, training programme, FDP attended by faculty members in the next BoS.

7.6.4. a) Presentation of revised syllabus by Dr. Pubalee Sarmah

b) **Any other modifications in the revised syllabus**.

Deliberations: Dr. Pubalee Sarmah delivered a presentation on the complete course structure and revised syllabus (upto 4th semester) of B.Sc. Chemistry (H). During the deliberation, expert member expressed his views on each course structures.

Resolutions:

After the detailed discussion and deliberation, the following resolutions are adopted:

Undergraduate level (B.Sc. Chemistryt (H)) [Annexure-I-Chemistry]

- Replace the subject name "Advanced Chemistry Lab" by "Chemistry Lab IV (CHY012C412) in the B.Sc. 4th semester.
- Replace the Discipline Specific Elective (DSE) paper "Chemistry in Daily life" by "Chemistry of Life (CHY012D302)" in 3rd semester course structure and prepare a new syllabus for Chemistry of Life.
- Replace the subject name of Skill Enhancement Course (SEC) paper "Material Chemistry" (CHY012S201) by Materials Chemistry (CHY012S201) in B.Sc. 2nd semester.
- Replace the subject name of "Inorganic IV" and "Physical IV" in B.Sc. 5th Semester and "Organic IV" in B.Sc. 6th Semester by some other different suitable name on the basis of their contents of the syllabi.

The correction/modification sheet are attached as Annexure-I-Chemistry.

7.6.5 Comments and suggestions from Expert member.

- Dr. Pranjal Saikia suggested all the above changes in the course structure of B.Sc. Chemistry (H) as mentioned in the point 7.5. and also suggested to add few new papers as Discipline Specific Elective (DSE) paper or Skill Enhancement Course (SEC) paper like Supramolecular chemistry, Nano chemistry, Polymer chemistry, Energy storage, etc.

7.6.6 Any other matter with permission of the Chair.

Members have a short discussion on the planning for next semester classes and other academic activities to be taken by RSAPS. Dr. Anuradha Devi appreciated the valuable suggestions made during the deliberations of the meeting.

7.6.7. Vote of Thanks:

The meeting concluded with a vote of thanks by Dr. Pubalee Sarmah, Associate Professor Department of Chemistry.

7.7. **Meeting of Departmental Board, Department of Mathematics (Chaiperson: Dr. Kamal Debnath, Associate Professor & HOD, Department of Mathematics) as per agenda of 7th BoS, Mathematics**.

PROCEEDINGS OF THE MEETING

Dr. Kamal Debnath, Associate Professor & HOD .chaired the meeting.

7.7.1 Agenda: Welcome and objective

Deliberations/Suggestions: Welcome and introduction of the members of the Board of Studies of the Department of Mathematics by Dr. Kamal Debnath.

Dr. Kamal Debnath discussed the agenda of 7th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board

7.7.2 Ratifying the minutes of 6th BoS meeting and Action taken report.

Deliberations: Dr. Bimalendu Kalita read out the Action Taken Report and highlighted all implementations which was suggested by expert members during 6th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 6th BOS and approved the minutes of 6th BOS.

7.7.3 **To apprise about the major development of Department of Mathematics after 6th BOS**.

Deliberations: Dr. Sankar Barman presented a brief report of RSAPS and all academic and non academic activity taken by RSAPS after 6th BoS.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields. It was also suggested to include research activities of faculty members and workshop, training programme, FDP attended by faculty members in the next BoS.

7.7.4 a) Presentation of revised syllabus by Dr. Kamal Debnath.

b) **Any other modifications in the revised syllabus**.

Deliberations: Dr. Kamal Debnath delivered a presentation on the complete course structure and revised syllabus (upto 4th semester) of B.Sc Mathematics (H). During the deliberation, expert member expressed his views on each course structures.

Resolutions:

After the detailed discussion and deliberation, the following resolutions are adopted:

Undergraduate level (B.Sc. Mathematics (H)) [Annexure-I-Mathematics]

- Theory of Equation to be added in 2nd semester GE Paper Mathematics II (MAT012G201) as module I .
- To modify module of vector calculus and add in the 3rd semester GE paper Mathematics III (MAT012G301).
- Replace the core paper "Statics and Particle Dynamics" by "Mechanics-I" (MAT012C302) in 3rd semester course structure and prepare a new syllabus for Mechanics-I.
- Replace the DSE paper "Tensor Calculus" by Mechanics-II in 4th semester course structure and prepare a new syllabus for Mechanics-II (MAT012D402).
- Include the DSE paper "Hydrodynamics and Tensor Calculus" (MAT012D504) in 5th semester course structure. 60% basic of Hydrodynamics and 40% basic of Tensor Calculus to be given in the syllabus.
- In the 6th semester add the "Data Analysis and Lab (Python)" (MAT012D604) to be added as 3-0-2 credit.
- Replace the subject name "Real Analysis" by "Real Analysis-I" (MAT012C301) in the 3rd semester and add "Real Analysis-II" (MAT012D602) in the 6th semester as DSE paper. Modify structure of both the papers "Real Analysis-I" and "Real Analysis-II"(MAT012D602).

The correction/modification sheet are attached as Annexure-I-mathematics.

7.7.5 Comments and suggestions from Expert member.

- Prof. (Dr.) Rita Choudhury suggested to remove mathematical notations from syllabus and include only applications part of major theorems such as Green's Theorem, Stoke's Theorem, Gauss theorem (without proof) in vector calculus portion of 3rd semester GE paper Mathematics III (MAT012G301).
- Prof. (Dr.) Dipak Sarma suggested all the above major changes in the course structure of BSc Mathematics (H) as mentioned in the point 7.5. and also suggested to improve Business Mathematics (MAT012D302) 3rd semester DSE paper and to add more number of reference books.

7.7.6 Any other matter with permission of the Chair.

Members have a short discussion on the planning for next semester classes and other academic activities to be taken by RSAPS. Dr. Anuradha Devi appreciated the valuable suggestions made during the deliberations of the meeting.

7.7.7 Vote of Thanks:

The meeting concluded with a vote of thanks by Dr Bimalendu Kalita, Associate Professor, Department of Mathematics.

Minutes compiled by: Dr. Bimalendu Kalita.

Prof. (Dr.) Anuradha Devi
Dean, RSAPS

THE ASSAM
ROYAL GLOBAL UNIVERSITY

8th MEETING OF BOARD OF STUDIES,
ROYAL SCHOOL OF APPLIED & PURE SCIENCES
24th April, 2023

Minutes of the Meeting

Start time: 3:00 PM

Venue: BoG Room

Member Present:

School Board, Royal School of Applied & Pure Sciences			
Sl. No.	**Name & Profile of Members**	**Category of Nomination**	**Designation in theBody**
1	• Prof. (Dr.) Anuradha Devi, Professor &Dean	Ex-Officio	Chairperson
2	• Dr. Kamal Debnath, Associate Professor & HOD, Department of Mathematics. • Dr. Pubalee Sarmah, Associate Professor & HOD, Department of Chemistry.	Ex-Officio	Member
3	• Prof. (Dr.), Rita Choudhury, Professor, Department of Mathematics. • Prof. (Dr.), Amarendra Rajput, Professor, Department of Physics	Ex-Officio	Member
External Member (Department of Mathematics)			
4	Prof. (Dr.) Dipak Sarma, Professor, Department of Mathematics, Cotton University.	Nominated member	Member
External Member (Department of Physics)			

5	Prof. (Dr.) Anurup Gohain Barua,, Professor, Department of Physics, Gauhati University.	Nominated member	Member
External Member (Department of Chemistry)			
6	Prof. (Dr.) Pranjal Saikia,, Professor, Department of Chemistry, Gauhati University.	Nominated member	Member
Two Teachers of School nominated by Vice Chancellor			
8	• Dr. Bimalendu Kalita, Associate Professor, Department of Mathematics. • Dr. Sankar Barman, Assistant Professor, Department of Physics	Nominated members	Member
9	Ms. Moon Moon Ahmed, Assistant Manager,Academic Section.	Nominee of Registrar	Member

Leave of Absence:

1. Ms. Moon Moon Ahmed, Assistant Manager,Academic Section.

PROCEEDINGS OF THE MEETING

Dr. Anuradha Devi, Professor & Dean. chaired the meeting.

8.1 Agenda: Welcome and objective by Dean, RSAPS.

Deliberations/Suggestions:

Dr. Anuradha Devi, Dean, RSAPS. welcomes and emphasized the objective of conduct of 8th BoS. She emphasized on the main agenda points, structure, modification of the syllabus of UG 5th and 6th semester. The course outcome has been incorporated using Bloom's Taxonomy.

Dr. Bimalendu Kalita discussed the agenda of 8th BoS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

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8.2 Ratifying the minutes of 7th BoS meeting and action taken report.

Deliberations: Dr. Bimalendu Kalita read out the Action Taken Report and highlighted all implementations which was suggested by expert members during 7th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 7th BOS and approved the minutes of 7th BOS.

8.3 **To apprise about the major development of RSAPS after 7th BOS**.

Deliberations: Dr. Sankar Barman presented a brief report on all academic activity e.g. research publications, patents , protect grants and non academic activity e.g workshop, training programme, FDP attended by faculty members of RSAPS after 7th BoS.

Resolutions :

The members appreciate the development of the school in both academic and non-academic fields.

8.4 Meeting of Departmental Board, Department of Physics (Chairperson: Dr. Devika Phukan, Associate Professor , Dy. Dean & HOD, Department of Physics) as per agenda of 8th BoS, Physics.

Prof. (Dr.) Anuradha Devi, Dean, RSAPS handed over the Chairmanship to Dr. Devika Phukan, HoD, Department of Physics to conduct the Board of Study meeting of the Department of Physics

8.4.1 Agenda: Welcome and introduction of the members of the Board of Studies of the Department of Physics by Dr. Devika Phukan.

Deliberations/Suggestions: Dr. Devika Phukan, HoD, Department of Physics, welcomes members of the 8th BoS, Physics. Dr. Phukan emphasized the objective of conduction of 8th BoS. Dr. Phukan also emphasized on the main agenda points, structure and content of the syllabus of 5th and 6th semester as per the guidelines of UGC and NEP such as inclusion or deletion of DSE paper, project work etc.

Dr. Devika Phukan discussed the agenda of 8th BOS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

8.4.2. Ratifying the minutes of the 7th BoS meeting and the Actions taken report.

Dr. Sankar Barman read out the Action Taken Report on the minutes of the 7th BoS meeting and highlighted all implementations which were suggested by expert members during the 7th BoS.

Resolutions:

All members of the Board of Studies appreciated the action taken after 7th BOS and approved the minutes of 7th BOS.
The minutes of 7th BoS have been accepted by all members.

8.4.3 Discussion on course structures and detailed syllabus of 5th and 6th semesters of B.Sc. programs of the department of Physics:

Course structures and syllabus content of 5th and 7th semesters were presented in front of the external members Prof.(Dr.) Anurup Gohain Baruah and Prof.(Dr.) Joyanti Chutia. A few minor modifications were proposed in the course structure. Important discussions were carried out on Core and DSE subjects of each semester. During the deliberation, all members expressed their views on each course structures.

Resolutions:

After detailed discussion and deliberation, the following resolution has been adopted:
(a) One DSE paper named Biophysics can be shifted from 5th to 6th Semester course content.
All members of the Board of Studies appreciated and accepted the correction in the course structure.
The correction/modification sheet is attached as Annexure-I

8.5 Meeting of Departmental Board, Department of Chemistry (Chairperson: Dr. Pubalee Sarmah, Associate Professor & HOD, Department of Chemistry) as per agenda of 8th BoS, Chemistry.

Dr. Pubalee Sarmah, Associate Professor & HoD. chaired the meeting.

8.5.1 Agenda: Welcome and objective by Dean, RSAPS.

Deliberations/Suggestions: Dr. Anuradha Devi, Dean, RSAPS welcomes and emphasized the objective of conduct of 8th BoS. She emphasized on the main agenda points, structure, and modification of the syllabus in the context of NEP and contains all components such as VAC, SEC, AECC as mentioned in NEP 2020. The course outcome (CO) and programme outcome (PO) have been included in the syllabus. The course outcome has been incorporated using Bloom's Taxonomy.
Dr. Pubalee Sarmah discussed the agenda of 8th BoS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

8.5.2Ratifying the minutes of 7th BoS meeting and Action taken report.

Deliberations: Dr. Debojeet Sahu read out the Action Taken Report and highlighted all implementations which were suggested by expert members during 7th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 7th BoS and approved the minutes of 7th BoS.

8.5.4 a) Discussion of the revised syllabus by Dr. Pubalee Sarmah

b) Any other modifications in the revised syllabus.

Deliberations: Dr. Pubalee Sarmah discussed the complete course structure and revised syllabus of B.Sc. Chemistry (H) upto 6th semester and M.Sc upto 2nd semester. During discussions, expert members expressed their views on each course structures.

Resolutions:

After the detailed discussion and deliberation, the following resolutions are adopted:

Undergraduate level (B.Sc. Chemistryt (H))

- One module of the paper **Chemistry of the Environment (CHY012V201)** in B.Sc 2nd sem is replaced.
- Existing Skill Enhancement Course (SEC) theory papers have been replaced by practical papers which are as follows: **Industrial Chemistry (CHY012S101)** of B.Sc 1st Sem by **Preparation and Estimation Techniques (CHY012S111)**, **Material Chemistry** (CHY012S201) of B.Sc 2nd Sem by **Basic Preparation Techniques in Chemistry and Food Analysis** (CHY012S211) and **Instrumental Method of Analysis (CHY012S401)** of B.Sc 4th Sem by **Analytical Laboratory Methods (CHY012S411)**
- It was proposed that practical Generic papers of B.Sc 1st Sem **Chemistry Lab I (CHY012G112)** and **B.Sc 3rd Sem Chemistry Lab II (CHY012G312)** are to be discarded. However, External expert suggested that practical should be kept as chemistry is practical based subject . He suggested that we should merge theory and lab in a single paper for both 1st and 3rd semester and evaluation for both the components could be done in a convenient way.
- Course structure and revised syllabus of B.Sc. Chemistry (H) (5th and 6th semester) and M.Sc. chemistry (1st &2nd semester) have been approved by the external experts.

8.6 Meeting of Departmental Board, Department of Mathematics (Chairperson: Dr. Kamal Debnath, Associate Professor & HOD, Department of Mathematics) as per agenda of 8th BoS, Mathematics.

Dr. Kamal Debnath, Associate Professor & HOD . chaired the meeting.

8.6.1 Agenda: Welcome and objective by Dean, RSAPS.

Deliberations/Suggestions: Dr. Anuradha Devi, Dean, RSAPS. welcomes and emphasized the objective of conduct of 8th BoS. She emphasized on the main agenda points, structure, modification of the syllabus of UG 5th and 6th semester. The course outcome has been incorporated using Bloom's Taxonomy.

Dr. Bimalendu Kalita discussed the agenda of 8th BoS in front of Board members for confirmation. The agenda was confirmed and accepted by the Board.

8.6.2 Ratifying the minutes of 7th BoS meeting and action taken report

Deliberations: Dr. Bimalendu Kalita read out the Action Taken Report and highlighted all implementations which was suggested by expert members during 7th BoS.

Resolutions:

All members of Board of Studies appreciated the action taken after 7th BOS and approved the minutes of 7th BOS.

8.6.3 To apprise about the major development of Department of Mathematics after 7th BOS.

Deliberations: Dr. Sankar Barman presented a brief report of all events organized by Department of Mathematics, research activity by faculty, achievements of faculty and students after 7th BoS.

Resolutions :

The members appreciated the development of the Department in both academic and non-academic fields.

8.6.4 a) Presentation of UG 5th and 6th semester syllabus by Dr. Kamal Debnath.

b) **Any other modifications in the revised syllabus**.

Deliberations: Dr. Kamal Debnath delivered a presentation on the complete course structure and syllabus of 5th semester and 6th semester B.Sc Mathematics (H). During the deliberation, expert members expressed their views on each course curriculum.

Resolutions:

After the detailed discussion and deliberation, the following resolutions are adopted:

Undergraduate level (B.Sc. Mathematics (H))

UG 5th semester:

- In Numerical Analysis (MAT012C501) module IV, finite difference to be added and lab component to be added which will be part of continuous evaluation.
- In Advanced Linear Algebra (MAT 012D501) Gauss-Seidel algorithm to be added.
- In Transformed Calculus (MAT012D503) module II and module III to be interchanged.
- In Hydrodynamics and Tensor Calculus (MAT012D504) module II, circulation, Kelvin's circulation theorems, motion in two-dimension, Source and Sink to be excluded.

UG 6th semester:

- In spherical Trigonometry and Astronomy (MAT012D603), reference book of Astronomy by K.K. Dey should be added.
- In Data Analysis and Lab (Python) (MAT012D604) Python basics should be reflect by python modules.
- In Linear programming problem (MAT012D605), book of S. S. Rao and operation research by Schaum series to be added as reference books.
- Discrete Mathematics (MAT012D606) to be replaced by Random process.

8.7 Resolution for Department of Physics, Department of Chemistry. and Department of Mathematics.

Resolutions are same as mentioned in the points 8.4, 8.5 and 8.6.

8.8 Comments and suggestions from Expert member.

- Prof. (Dr.) Dipak Sarma suggested to replace Discrete Mathematics (MAT012D606) by Random process. He also suggested to include the module number after text book or reference book if that particular book clearly highlight the module of the syllabus.
- Prof. (Dr.) Debabrata Datta suggested to conduct Mathematical quiz competition and also suggested necessary correction on the course curriculum.
- Dr. Pranjal Saikia suggested that internship program for the UG students may be done as in-house internship.
- Interesting topic of project can be given to students such that both faculty and student can be benefitted.
- Different quiz program on Physics, Mathematics, Chemistry can be conducted as activity program.

8.9 Any other matter with permission of the Chair.

Members have a short discussion on the planning of NEP courses for UG and PG for next semester classes and other academic activities to be taken by the School. Members have also suggested to

conduct subject based quiz competition to enhance students' knowledge and interest in their specialized subjects. Dr. Anuradha Devi appreciated the valuable suggestions made during the deliberations of the meeting.

8. 10 Vote of Thanks:

The meeting concluded with a vote of thanks by Dr. Devika Phukan, Dy Dean, RSAPS.
In the BoS of Royal School of Applied & Pure Sciences, the resolution is accepted and approved to place before the competent authority and Academic Council for final approval.

Minutes compiled by: Dr. Bimalendu Kalita.

Prof. (Dr.) Anuradha Devi
Dean, RSAPS