



St. John College of Humanities and Sciences

ALDEL EDUCATION TRUST'S
AUTONOMOUS
(A Christian Religious Minority Institution)
Affiliated to University of Mumbai



NAAC Accredited with Grade 'B++'

Minutes of the Meeting of the Board of Studies Science

Date: 06th March 2026

Program: Bachelor of Science (B.Sc.)

Venue: Online (Google Meet)

Time: 01:30-03:00 p.m.

The following members were present:

Sr. No.	Name	Designation	Attendance
1	Dr. Harshal Poojari	Chairperson, Board of Studies – Bachelor of Science	Present Online
2	Dr. Sunil Shankhadarwar	Associate Professor, Department of Botany, Ramnarayan Ruia College, Matunga (E)	Present Online
3	Dr. Rohidas B. Kale	Professor, Department of Physics, Dr. Homi Bhabha State University, Mumbai	Present Online
4	Dr. Sunil Devendranath Singh	Associate Professor, Department of Mathematics, Dr. Homi Bhabha State University, Mumbai	Present Online
5	Ms. Tamanna Haldar	Alumni, St. John College of Humanities and Sciences, Palghar	Present Online



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6	Mr. Ameer Shaikh	Assistant Professor, Botany, SJCHS	Present Online
7	Ms. Gazal Asar	Assistant Professor, Physics, SJCHS	Present Online
8	Ms. Parnika Dagla	Assistant Professor, Mathematics, SJCHS	Present Online

Welcome Address:

Chairperson Dr. Harshal Poojari gave a brief introduction about the history of the institution, ongoing activities, and academic calendar of 2026-2027.

AGENDA NO. 1

Approval of Credit Structure Distribution as per the National Education Policy (NEP) 2020 and Institutional Autonomy Framework

Discussed That:

The proposed credit structure for the undergraduate programme was presented, highlighting the distribution of credits across **Major, Minor, Open Elective, Skill Enhancement Courses (SEC), and Ability Enhancement Courses (AEC)**.

It was informed that the programme structure follows the guidelines of the National Education Policy 2020 and is designed with **22 credits per semester**. The framework also incorporates components such as **Indian Knowledge System (IKS), Community Engagement, and Skill Enhancement Courses** to promote interdisciplinary learning and holistic development of students.

The members carefully reviewed the credit distribution and academic structure and expressed satisfaction with its alignment to NEP and institutional autonomy requirements.



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Resolved That:

The proposed credit structure for the undergraduate programme was **approved by the Board of Studies** for implementation under the NEP-based curriculum framework.

AGENDA NO. 2

To review and discuss the approval of Odd and Even Semester Syllabus

Discussed That:

Physics

The syllabus for **Semester I to IV** was presented by **Ms. Gazal Asar**, and suggestions were provided by **Dr. Rohidas B. Kale**.

- **Semester I:** Topics include Newton's laws, friction, work and energy, many-particle systems and oscillations. It was suggested that **Linear Momentum of a system of particles** be included along with angular momentum. The topic **Forced Oscillation** may be removed and **Damped Oscillatory Motion** should be rewritten clearly as a separate concept.
- **Semester II:** The **Modern Physics** syllabus was presented and members noted that previous suggestions had already been incorporated. The structure was retained without major changes.
- **Semester III:** Topics include electrostatics, vector calculus and electromagnetism. In practical experiments, it was suggested that the term **Passive Filters** be replaced with **Low-pass, High-pass and Band-pass filters** for conceptual clarity. Active filter circuits may also be introduced for comparison.
- **Semester IV:** Under electricity and electronics, the experiment **Laser Beam Profile** should be expressed more clearly as **Divergence of Laser Beam**. In rectifier experiments, students should calculate **efficiency and ripple factor** along with circuit analysis.

The Physics syllabus for **Semester I–IV** was approved with the suggested modifications



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Botany

The Botany syllabus for **Semester I and II** was presented by **Dr. Harshal V. Poojari**, while **Semester III and IV** were presented by **Mr. Ameer Shaikh**. Suggestions were provided by **Dr. Sunil Shankhadarwar**.

- **Semester I:** Introductory topics on plant diversity and plant uses were presented. It was suggested that topics such as **Microgreens, Plant-based Beverages, Plant-based Cosmetics and Soap** should be retained with practical work for better understanding. Excessive microbial and fungal content should be reduced. If **tea preparation** is included, the study of **tannins** and examples such as **green tea or Clitoria tea** may be incorporated. The topic **Next-generation plant divisions** should be removed.
- **Semester II:** Topics include **Pteridophytes and Gymnosperms**. It was suggested that the sequence follow evolutionary order and the example **Nephrolepis** be placed appropriately. The number of plant families should be reduced from **five to three** for manageable syllabus coverage.
- **Semester III:** Modules include **cell biology, cytogenetics and molecular biology**. It was suggested that plant diversity topics include **Algae and Pteridophyta**, and after introducing **Nephrolepis**, the study of **Selaginella** may continue for continuity. Some additional cell biology topics may be included while maintaining lecture limits.
- **Semester IV:** The syllabus was appropriate; members suggested emphasizing **epidermal outgrowths** under **Anatomy in relation to taxonomy** as important anatomical characters.

The Botany syllabus for **Semester I–IV** was approved with the suggested modifications.

Mathematics

The syllabus for Mathematics was presented by **Ms. Parnika Dagla**. The syllabus structure includes modules on **Discrete Mathematics and Calculus** along with practical problem-solving sessions.

The Board members reviewed the syllabus and expressed satisfaction with the content and structure.



Zoology

The syllabus for Zoology was presented by **Mr. Ameer Shaikh**. The syllabus structure includes modules on **Nutrition, Control Coordination, Reproduction, Evolution and fossils** along with practical based on theory.

The Board members reviewed the syllabus and expressed satisfaction with the content and structure.

Open Elective

The **Open Elective subjects** offered across **Semester I–IV** were presented along with their credit distribution. The Board members reviewed and approved the proposed subjects.

Co-curricular Subjects

The subjects offered under the **Co-curricular category** were presented along with their credit allocation. The Board members suggested continuing with the available options such as **Sports, DLLE, Cultural Activities, and NSS**.

Resolved That:

The syllabi for **Physics, Botany, Mathematics, Zoology, Open Elective subjects, and Co-curricular courses** for the **Odd and Even Semesters** were **approved with the suggested modifications**.

AGENDA NO. 3

To discuss and review the Evaluation Pattern, Question Paper Pattern, Assessment Methods, and finalization of the Panel of Examiners for Theory and Laboratory Courses for the Academic Year 2026–2027

Discussed That:

The evaluation scheme for theory and practical examinations was presented. It was informed that the evaluation follows a **60:40 structure**, where:

- **Internal Assessment (40%)** includes tests, assignments, presentations, and quizzes.
- **End-Semester Examination (60%)** includes written examinations and practical performance.



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The revised **question paper format** to be implemented from **Semester II and Semester IV of the Academic Year 2025–2026 onwards** was also discussed. The members agreed that the revised format provides more options for students and supports fair assessment.

The **panel of examiners** for **Botany, Mathematics, Physics, and Zoology** was also presented for approval.

Resolved That:

The evaluation pattern, revised question paper format, and the **panel of examiners for theory and laboratory courses** were **approved by the Board** for implementation.

AGENDA NO. 4

To discuss and review academic productivity in classroom and laboratory to meet the requirements of Outcome-Based Education

Discussed That:

The Board discussed the pedagogical approaches adopted for effective teaching and learning across science disciplines. It was emphasized that **active and student-centered learning methods** enhance conceptual understanding, engagement, and analytical ability.

The following innovative teaching methods are currently being implemented:

- Case Study Method
- Presentations
- Problem-Based Learning (PBL)
- Flipped Classroom Approach
- Group Discussions
- Use of online learning platforms such as NPTEL and SWAYAM for self-paced learning and skill development.

It was also presented that a **30-hour Certificate Course titled “AI, Data Analytics & Career Skills”** will be conducted for **FYB.Sc., SYB.Sc., and TYB.Sc. students** during the **Odd Semester**. The modules and course structure were presented to the Board members.



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Resolved That:

The Board appreciated the innovative teaching practices and **approved the 30-hour Certificate Course on "AI, Data Analytics & Career Skills."**

AGENDA NO. 5

Any Other Matter

Discussed That:

Board member **Dr. Sunil Shankhadarwar** suggested that more **Botany field visits** should be organized to enhance experiential learning. Possible locations suggested included **Kaas Plateau, Ooty, and Coorg**.

It was also suggested to include **plant-based product practicals** in the syllabus to encourage entrepreneurship skills and it will generate student interest, and support admission growth.

Dr. Rohidas Kale further proposed that students should be encouraged to undertake **institutional visits to reputed research institutes** such as the **Institute of Science Mumbai** and the **Tata Institute of Fundamental Research**.

Such visits would expose students to advanced research facilities and scientific instrumentation and help develop a **research-oriented mindset**.

Resolved That:

The Board appreciated the suggestions and recommended that **field visits and institutional visits be incorporated in future academic planning** to enhance practical exposure and research orientation among students.

Conclusion

The meeting concluded with a vote of thanks by the Chairperson, **Dr. Harshal Poojari**, appreciating the constructive inputs of all Board of Studies members.

Prepared by
Dr. Harshal V. Poojari
Jacob Board of Studies Science
Chairperson

Principal
Dr. Muktha Manoj

