



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

Minutes of the Meeting of the Board of Studies Science

Venue: Online (Google Meet)

Date: 08 November 2025

Time: 10:30 a.m. onwards

Members 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
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



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Welcome Address:

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

AGENDA No. 1:

To review and discuss on the minutes and key outcomes of the ad-hoc meetings held during Odd and Even semesters.

Discussed That:

- The minutes of the ad-hoc Board of Studies (Science) meetings for Odd Semester I in the subjects Botany, Mathematics, Physics, and Zoology, and Odd Semester III in the subjects Botany and Physics, were read out and presented to the expert members of the Board of Studies (Science).
- The minutes of the ad-hoc Board of Studies (Science) meetings for Even Semester II in the subjects Botany, Mathematics, Physics, and Zoology, and Even Semester IV in the subjects Botany and Physics, were also read out and presented to the expert members of the Board of Studies (Science).

Resolved That:

- The expert members of the Board of Studies (Science) noted the minutes of both odd and even semester meetings and expressed their concurrence without suggesting any changes. Accordingly, the minutes were accepted and approved as presented.

AGENDA No. 2:

To review and discuss the approval of Even semester Syllabus

Discussed that



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Botany

- The Board noted that the F.Y.B.Sc. Semester II Botany syllabus is extensive relative to the number of lectures allotted.
- It was observed that the number of plant families included in the syllabus is comparatively high. The Board suggested reducing the number of families from seven (7) to four (4) to enable a more focused and in-depth study.
- It was proposed to introduce an assignment on Epidermal Outgrowth to enhance conceptual clarity among students.
- The topic on Stellar Evolution was identified as requiring fewer lecture hours, as its examination weightage is limited.
- The Board observed repetitions in Anatomy-related topics across Semesters I to IV. It was recommended that such overlaps be identified and minimized to avoid redundancy.

Mathematics

- The Board reviewed the syllabus structure and concluded that no changes are required at present.
- It was emphasized that both Module I and Module II should be covered comprehensively during the semester.

Physics

1. Topic Modification

- Deletion: The topic “Applications of Uncertainty Principle” shall be removed, as it is already included in the Third-Year syllabus and considered beyond the intended scope at this level.
- Addition: The topic “Examples of Heisenberg’s Uncertainty Principle” shall be introduced to reinforce conceptual understanding through practical illustrations.

2. Topic Consolidation



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- The topics “Diffraction of X-Rays” and “Bragg’s Law” shall be combined into a single integrated topic to ensure content coherence and logical continuity.

3. Topic Deletion

- The topic “Properties of X-Rays” shall be deleted, as its core concepts are sufficiently addressed in related sections.

4. Practical Adjustments

- Deletion: The experiment “Spectrometer: To determine the angle of Prism” shall be removed due to overlap with “Spectrometer: Refractive Index of Prism.”
- Retention: The experiment “To study half-adder and full-adder using logic gates” shall be continued.
- Modification: The instruction “Verify their truth table and Ex-OR Gate” shall be omitted, as it is already covered in the logic gate experiments.
- Addition: The concept of “Line Regulation” shall be incorporated into the experiment “To study load regulation of a Bridge Rectifier.”
- Modification: In the experiment “Use of Oscilloscope: Waveforms at the output of half-wave and bridge rectifiers with and without filter,” the specific references to “Capacitor filter” and “Ripple” shall be removed, allowing flexibility in the use of various filter types.

Semester IV – Electricity and Electronics

- It was recommended to explicitly incorporate the concept of Impedance to strengthen students’ understanding of alternating current (AC) behaviour and its practical applications. The following inclusions were suggested:
 - o Impedance in an AC circuit containing pure resistance (R)
 - o Impedance in an AC circuit containing pure inductance (L)
 - o Impedance in an AC circuit containing pure capacitance (C)



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Zoology

- The Board reviewed the syllabus structure and concluded that no changes are required at present.

Resolved That:

- The Board of Studies (Science) approved the proposed modifications, deletions, and additions in the syllabi and practical components for Botany and Physics, as discussed.
- It was further resolved that the recommendations for syllabus streamlining and topic restructuring be incorporated in the upcoming revision cycle.
- The Mathematics syllabus for the concerned semester was accepted without any modifications.
- The Zoology syllabus for the concerned semester was accepted without any modifications.
- The Departments of Botany, Physics, and Mathematics shall implement the approved recommendations in coordination with the Academic Committee for the forthcoming academic session.

AGENDA No. 3:

To review, discuss, finalise and approve the proposed credit structure distribution as per NEP 2020 guidelines and institutional autonomy framework

Discussed That:

- The credit structure for the First Year (F.Y.B.Sc.) and Second Year (S.Y.B.Sc.) programs for the academic years 2025–2026 and 2026–2027 was presented and explained in detail to the Board members.
- The structure included a comprehensive outline of subject-wise credit distribution, along with the options available for Open Elective subjects, in accordance with the guidelines of the National Education Policy (NEP) 2020 and institutional autonomy framework



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Resolved That:

- The Board of Studies (Science) took note of and approved the proposed credit structure for the First and Second Year B.Sc. programs for the academic years 2025–2026 and 2026–2027, as presented.
- It was further resolved that the Open Elective subject options be implemented as per the recommended structure to ensure academic flexibility and interdisciplinary learning opportunities for students.
- The approved credit framework shall be forwarded to the Academic Council for endorsement and inclusion in the official curriculum document.

AGENDA No. 4:

To discuss and review the Evaluation and Assessment methods and finalization for panel of Examiners for theory and lab courses for Academic Year 2025 - 26.

Discussed That:

- The Board deliberated on the need to make evaluation methods more experiential and participatory, in alignment with the objectives of the National Education Policy (NEP) 2020.
- Suggestions were put forth to incorporate field visit–based assessments, creative writing, presentations, and group discussions as part of the internal evaluation process to promote active learning and applied understanding.
- It was agreed that a minimum of two internal assessment components (of 5 marks each) shall be conducted in addition to the compulsory class test to ensure comprehensive and continuous evaluation.

Resolved That:

The evaluation scheme for all courses under the Board of Studies (Science) shall include the following component



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- A compulsory Class Test of 10 marks, preferably designed in the form of a Case Study to assess analytical and application-based learning outcomes.
- Two additional internal assessment components (each carrying 5 marks) to be selected from among the following:
 - o Quiz
 - o Presentation and Viva
 - o Group Discussion
 - o Field Visit (1 day or 2–3 days duration)
 - o Industrial Visit
 - o Creative Writing
 - o Assignment
 - o Community Engagement Activity
 - o Class Participation
- It was further resolved that field visits of short duration (1 day) and extended duration (2–3 days) shall be incorporated into the Academic Calendar. A mandatory report submission shall form part of the internal assessment linked to these visits.
- Departments shall ensure that the chosen internal components align with the course outcomes and experiential learning objectives specified in the syllabus.
- Field visits of short duration 1 day and 2-3 days duration will be included in the academic calendar with a mandatory report submission as a part of internal assessment.

AGENDA No. 5:

To discuss and review the Academic productivity in classroom and laboratory to meet the requirement of Outcome based Education

Discussed That:

- The Board discussed the **pedagogical approaches** adopted for effective teaching and learning across various science discipline



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- It was emphasized that **active and student-centered learning methods** enhance conceptual understanding, problem-solving ability, and engagement.
- The Board noted that the following **innovative pedagogical strategies** are being implemented:
 - Case Study Method
 - Presentations
- Problem-Based Learning (PBL)
- Flipped Classroom Approach
- Group Discussion
- Use of **NPTEL/SWAYAM** online learning platforms for self-paced learning and skill enhancement.
- It was also proposed to conduct a **30-hour certificate course on ChemDraw** through **NPTEL/SWAYAM**, scheduled during the **Even Semester (last week of November)**, to strengthen students' digital and analytical competencies in chemical drawing and molecular visualization.

Resolved That:

- The Board of Studies (Science) **approved the continued use and promotion** of diverse and student-centric **pedagogical methods**, including Case Studies, Presentations, Problem-Based Learning, Flipped Classroom, Group Discussion, and integration of NPTEL/SWAYAM resources, to enhance the teaching–learning process.
- It was further **resolved** that a **30-hour NPTEL/SWAYAM Certificate Course on ChemDraw** shall be organized during the **Even Semester (last week of November)** as part of the academic enrichment activities.
- Departments shall ensure that such **pedagogical innovations** are reflected in course delivery plans and are **documented in teaching–learning records** for quality assurance and audit purposes.

AGENDA No. 6:

Any Other Matter with Permission of Chair



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- Greater focus should be placed on hands-on experience to enhance conceptual understanding and skill development.
- Dr. Rohidas Kale proposed that, in addition to industrial visits, students should also be encouraged to undertake **institutional visits** to reputed research organizations such as the Institute of Science, Mumbai and the Tata Institute of Fundamental Research (TIFR).
- Such visits would provide students with valuable exposure to advanced scientific instruments and research facilities, thereby fostering practical insight and encouraging a research-oriented mindset.

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 & Approved by:

Dr. Harshal Poojari

Chairperson, Board of Studies Science

Principal

