DBT STAR COLLEGE SCHEME

PROGRESS REPORT

YEAR : 2021 - 2022

SYNOD COLLEGE SHILLONG
PIN – 793002
MEGHALAYA
Acknowledgement

The College would like to acknowledge and extend a sincere thank to the Department of Biotechnology, Ministry of Science and Technology, Government of India for their financial support and the help grant by them through this scheme, to strengthen the existence Science Department and Basic Science. Through this scheme many students about 500 science students have benefitted. We are sure that if the DBT would extend their financial help to the College more students will benefit and through the implementation of this programme we can inculcate in the mind of the students the importance of Science and Technology.

Dr. W. Khamavphlang
Associate Professor
Department of Chemistry
Co-ordinator
DBT – Star College Scheme

Dr. R. M. Lyngdoh
Principal
PROGRESS REPORT
2021-22

1. Name of the College: Synod College, Shillong-793002

2. Name of Departments supported: Botany, Chemistry, Physics, Zoology

   Name of the Principal : Dr. R. M. Lyngdoh,
synodcollegeprincipalug@gmail.com
0364-2548317, faxno. : 0364 - 2547489

   Name of Coordinator, designation,
Address,phone nos.: Dr. WancydoraKhar
Associate Professor
Department of Chemistry, Synod College,
Jaiaw, Shillong- 793002
Email : wancydora@yahoo.com
+91 9436101210

3. No. of regular faculty with Ph.D. in each participating department: Botany: 02
Chemistry: 02
Physics: 01
Zoology: 03

4. List of course (B.Sc./M.Sc./PG Diploma, certificate etc.) run by different participating departments: B.Sc

5. Cut off percentage for admission in different courses in participating departments, position in university, percentage of results in 2017-18 academic session :50%

   i. Data on Pass percentage (UGC level):

<table>
<thead>
<tr>
<th>Department</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany</td>
<td>100%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>100%</td>
</tr>
<tr>
<td>Physics</td>
<td>98%</td>
</tr>
<tr>
<td>Zoology</td>
<td>100%</td>
</tr>
</tbody>
</table>

   ii. Pass Percentage of the year 2021:

<table>
<thead>
<tr>
<th>Department</th>
<th>B.Sc. I Semester</th>
<th>B.Sc. III Semester</th>
<th>B.Sc. V Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>90.9%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Physics</td>
<td>96.96%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Zoology</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

   iii. Position in university:
a) Number of Students Enrolled in Post Graduate Courses in the Year – 2021:

**Department: Botany**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Number of Students</th>
<th>Enrolled in Post Graduate Studies</th>
<th>Name of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>6</td>
<td>M.Sc Botany</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>2.</td>
<td>1</td>
<td>M.Sc. Botany</td>
<td>DonBosco University, Assam.</td>
</tr>
<tr>
<td>3.</td>
<td>3</td>
<td>M.Sc. Plant and Molecular Biology</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>4.</td>
<td>1</td>
<td>M.Sc. Botany</td>
<td>Royal Global University, Assam</td>
</tr>
</tbody>
</table>

**Department: Chemistry**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Number of Students</th>
<th>Enrolled in Post Graduate Studies</th>
<th>Name of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2</td>
<td>M.Sc Chemistry</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>2.</td>
<td>2</td>
<td>M.Sc Chemistry</td>
<td>DonBosco University, Assam.</td>
</tr>
<tr>
<td>3.</td>
<td>2</td>
<td>M.Sc AgriBusiness and Food Technology</td>
<td>North Eastern Hill University, Tura</td>
</tr>
</tbody>
</table>

**Department: Physics**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Number of Students</th>
<th>Enrolled in Post Graduate Studies</th>
<th>Name of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>4</td>
<td>M.Sc. Physics</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>2.</td>
<td>2</td>
<td>M.Sc. Physics</td>
<td>DonBosco University, Assam.</td>
</tr>
<tr>
<td>3.</td>
<td>1</td>
<td>M.Sc. Physics</td>
<td>The Maharaja Sayajirao University of Baroda.</td>
</tr>
</tbody>
</table>

**Department: Zoology**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Number of Students</th>
<th>Enrolled in Post Graduate Studies</th>
<th>Name of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10</td>
<td>M.Sc. Zoology</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>2.</td>
<td>5</td>
<td>M.Sc. Zoology</td>
<td>University of Science &amp; Technology, Meghalaya, Baridua, 9&lt;sup&gt;th&lt;/sup&gt; Mile, Ribhoi District, Meghalaya</td>
</tr>
<tr>
<td>3.</td>
<td>1</td>
<td>M.Sc. Library Science</td>
<td>North Eastern Hill University, Shillong</td>
</tr>
<tr>
<td>4.</td>
<td>1</td>
<td>M.Sc Rural Agricultural Development and Production</td>
<td>North Eastern Hill University, Tura</td>
</tr>
<tr>
<td>5.</td>
<td>1</td>
<td>M.Sc. Zoology</td>
<td>Hans Raj College, Delhi, University</td>
</tr>
</tbody>
</table>
6. List of projects undertaken by students, industrial visits by students, summer training in last one year:

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Name of the Project</th>
<th>Class involved</th>
<th>No. of students</th>
<th>Teachers involved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>DEPARTMENT OF BOTANY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Plant diversity of Synod College new campus, Mawdiangdiang, East Khasi Hills</td>
<td>B. Sc 5th Semester</td>
<td>37</td>
<td>Dr. H. Swer, &amp; Shri E. Snaitang</td>
</tr>
<tr>
<td>2.</td>
<td>Study tour to Sohra</td>
<td>B. Sc. 3rd semester</td>
<td>98</td>
<td>Shri. S. Jyrwa Ms. N.C. Marbananiang, Dr. H. Swer, Dr. Y. Saio, Dr. P. Nongkling Shri. E. Snaitang</td>
</tr>
<tr>
<td></td>
<td><strong>DEPARTMENT OF CHEMISTRY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Study of the physical and Chemical properties of water from the natural spring water site which is a project work undertaken by the Science Departments under the DBT – Star College Scheme, in Conservation, Preservation and Rejuvenation of Natural spring water resources at Sohra.</td>
<td>B.Sc V semester</td>
<td>3</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani Dr. A. Lapasam</td>
</tr>
<tr>
<td></td>
<td><strong>DEPARTMENT OF PHYSICS</strong></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>DEPARTMENT OF ZOOLOGY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Field Trip To Sericulture Farm, Nongpoh, Ri Bhoi on 3rd December, 2021</td>
<td>B.Sc V semester</td>
<td>39</td>
<td>Dr. A..J. Iangrai, Dr. D Marngar and Ms I Dkhar</td>
</tr>
</tbody>
</table>
7. Training received by faculty from participating departments:

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Title</th>
<th>Date</th>
<th>No. and name of faculty members attending the programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>“UGC- sponsored 4th Faculty Induction Programme” organised by UGC- HRDC, North Eastern Hill University, Shillong</td>
<td>11(^{th}) March 2021 to 10(^{th}) April 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>2.</td>
<td>“4-week Induction programme/orientation programme for Faculty in Universities/ Colleges/Institutes of Higher Education” organised by Teaching learning centre, Ramanujan College, University of Delhi</td>
<td>18(^{th}) May – 17(^{th}) June, 2021</td>
<td>Dr. P. Nongkling</td>
</tr>
<tr>
<td>3.</td>
<td>“New Education Policy 2020 and Management Education” organised by Department of Management, Mizoram University, Aizawl</td>
<td>20(^{th}) May 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>4.</td>
<td>“New species discoveries in Meghalaya &amp; the importance of conservation” organised by Department of Zoology, St. Anthony’s College &amp; Meghalaya Biodiversity Board, Shillong</td>
<td>22(^{nd}) May 2021</td>
<td>Dr. H. Swer &amp; Dr. Y. Saio</td>
</tr>
<tr>
<td>5.</td>
<td>“Phytodiversity of NE India: a plant hunter’s experience” organised by Department of Botany, St. Mary’s College, Shillong</td>
<td>22(^{nd}) May 2021</td>
<td>Ms. N.C. Marbanian &amp; Dr. H. Swer</td>
</tr>
<tr>
<td>6.</td>
<td>“Integrating Research and Technological innovations for effective teaching and learning” organised by Unit of Educational Studies and Research, Institute for Development and</td>
<td>24(^{th}) to 26(^{th}) May 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date/Location</td>
<td>Organisers</td>
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</tr>
<tr>
<td>7.</td>
<td>“The Science of Learning” organised by Mizoram University, Aizawl</td>
<td>25th May 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>8.</td>
<td>“Rare, endangered, threatened and economically important plants of NE India”organised by Department of Botany, St. Mary’s College, Shillong</td>
<td>25th May 2021</td>
<td>Ms. N.C. Marbaniang &amp; Dr. H. Swer</td>
</tr>
<tr>
<td>9.</td>
<td>“Plant Bioresources of Meghalaya: Potential &amp; prospects” organised by Department of Botany, St. Anthony’s College, Shillong</td>
<td>5th June 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>10.</td>
<td>“Basic Counselling skills for Teachers” organised by Counselling cell in collaboration with IQAC, Synod College, Shillong</td>
<td>16th July 2021</td>
<td>Ms. N.C. Marbaniang, Dr. H. Swer, Dr. P. Nongkling</td>
</tr>
<tr>
<td>11.</td>
<td>“UGC-sponsored webinar on Climate change: causes and consequence” organised by UGC- HRDC, Madurai Kamaraj University, Madurai</td>
<td>28th August 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>12.</td>
<td>“UGC-sponsored webinar on Development of e-content” organised by UGC- HRDC, Madurai Kamaraj University, Madurai</td>
<td>18th September 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td>13.</td>
<td>Online National Webinar on Waste Management organized Science Departments under the DBT-Star College Scheme</td>
<td>3rd November 2021</td>
<td>Ms. N.C. Marbaniang, Dr. H. Swer, Dr. P. Nongkling, Dr.Y.Saio</td>
</tr>
<tr>
<td>14.</td>
<td>Disaster psycho-social care: People’s attitude and mental health status in coping with the pandemic organised by Disaster management committee, Shillong College, Shillong</td>
<td>9th November 2021</td>
<td>Dr. P. Nongkling</td>
</tr>
<tr>
<td>15.</td>
<td>Paper presentation at the 11th IconSWM-CE &amp; IPLA Global Forum 2021, Jadavpur University, West Bengal</td>
<td>1st to 4th December 2021</td>
<td>Dr. H. Swer</td>
</tr>
<tr>
<td></td>
<td>Event Description</td>
<td>Date</td>
<td>Organizer</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>1.</td>
<td>International Webinar on “Women In Science (WinS-2) organized by the Association of chemistry teachers, Mumbaia</td>
<td>24th July 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td></td>
<td>of chemistry teachers, Mumbaia in association with SRM Institute of Science and Technology, Ramapuram campus, Chennai.</td>
<td></td>
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</tr>
<tr>
<td>2.</td>
<td>9th International Conference on Issues and Challenges in doctoral research (ICICDR-2021), on the Occasion Of “World Doctorates Day”, organized by Amity University, Haryana.</td>
<td>25th August 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>3.</td>
<td>1st Series of Lecture organized by Centre for Historical Research Synod College, Shillong (CHRSC) on “Hill State Movement in Meghalaya”, resource person : Dr. Wanwei Roy Kharlukhi, Hon’ble Member of Parliament, Rajya Sabha</td>
<td>19th January 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>4.</td>
<td>International Webinar on “Safeguarding Tribal Identity : Concept and Implications”, organized by the Department of Sociology, Synod College Shillong.</td>
<td>9th -10th September, 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>5.</td>
<td>11th International Conference on Sustainable waste Management &amp; Circular Economy 2021 (11thIconSWM-CE) &amp; IPLA Global Forum 2021 organized by International Society of Waste Management, Air and Water (ISWMAW) Centre for Sustainable Development &amp; Resource Efficiency Management, Jadavpur University, IPLA- International Partnership for Expanding</td>
<td>1st -4th December 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>Waste Management Services of Local Authorities, Co-organized by: United Nations Centre For Regional Development (UNCRD)</td>
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<tr>
<td>6. One day Online lecture on “Research Ethics &amp; Plagiarism”, organized by research Cell, Synod College, shilling, resource person: Dr. F. Sumer, Deputy Librarian, N.E.H. University, Shillong.</td>
<td><strong>30th April 2021</strong>, Dr. W. Kharwakhlang, Dr. A. Lapasam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. one Day Webinar on Perspective of Agriculture and its role and importance for sustainable development and Business management in Agriculture, on celebration of International Year of Fruits and Vegetables-2021 (IYFV-2021) : organised by the Science Departments under the DBT-Star College Scheme, Synod College, Shillong</td>
<td><strong>24th September 2021</strong>, Dr. W. Kharwakhlang, Shri N. Kharbaniand Dr. A. Lapasam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. One Day National Webinar on “Waste Management” organized by the Science Departments under the DBT-Star College Scheme, Synod College, Shillong.</td>
<td><strong>3rd November 2021</strong>, Dr. W. Kharwakhlang, Shri N. Kharbaniand Dr. A. Lapasam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. National Webinar on “Natural Products: Their Importance and Applications” (NPTIA-2021), Department of Chemistry, St. Anthony’s College, Shillong</td>
<td><strong>27th Nov, 2021</strong>, Dr. W. P. Sohtun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Webinar on Empowering</td>
<td><strong>9th February</strong>, Dr. W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date/Time</td>
<td>Organizers</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Diversity In Science (GWB-2021) organized by Department of Chemistry, under the DBT-Star College</td>
<td></td>
<td>Kharmawphlang, Shri N. Kharbani, Shri R. Rani.</td>
</tr>
<tr>
<td></td>
<td>Scheme, Synod College, Shillong.</td>
<td></td>
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</tr>
<tr>
<td>10.</td>
<td>On Covid Vaccination Awareness Campaign. Organized by Sociology Department, Synod College, Shillong</td>
<td>1st May 2021</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>11.</td>
<td>Online Special Lecture celebrating International Year of Fruits and Vegetables organized by the</td>
<td>8th September,</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. W. Kharmawphlang, Shri R. Rani.</td>
</tr>
<tr>
<td></td>
<td>department of Botany</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Online Special Lecture on Cleanliness in times of Covid-19 organized by Discipline and cleanliness</td>
<td>16th September,</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td></td>
<td>committee.</td>
<td>2021 at 6:00 PM</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Online Mentorship programme under the Aegis of the Azadi Ka Amrit Mahotsav, organized by</td>
<td>8th November</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani, L. Massar, Dr. W.P.</td>
</tr>
<tr>
<td></td>
<td>Department of Biotechnology, Ministry of Science &amp; Technology, Government of India.</td>
<td>2021</td>
<td>Sohtun.</td>
</tr>
<tr>
<td>14.</td>
<td>Invited talk International Biodiversity Day. By Shri N. Luikham IFS, Conservator of Forest (WL&amp;T)</td>
<td>22nd May 2021</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. W. Kharmawphlang, Shri R. Rani.</td>
</tr>
<tr>
<td></td>
<td>Member secretary Meghalaya state Biodiversity Board, Shillong and Shri. C.A. Rahman IFS (Retd)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty Central Academy for state forest service, Burnihat Assam.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Online awareness programme on Sexual harassment at workplace, organized by</td>
<td>on 24th September</td>
<td>Dr. W. Kharmawphlang, Dr. A. Lapasam.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2021</td>
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</tbody>
</table>
Women cell, synod College, Shillong Resource person: Smt. Rebina Subha, Advocate and formal member Meghalaya State Commission for Women.

<table>
<thead>
<tr>
<th>Department of Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On Covid Vaccination Awareness Campaign. Organized by Sociology Department, Synod College, Shillong</td>
</tr>
<tr>
<td>1st May 2021</td>
</tr>
<tr>
<td>Mrs. G A Kharsyntiew, M D Wanswett</td>
</tr>
<tr>
<td>2. World Environment Day</td>
</tr>
<tr>
<td>5th June 2021</td>
</tr>
<tr>
<td>Mrs. G A Kharsyntiew, Mr. M D Wanswett, Mr. D G L Khongwir, Mr. G S Kharkongor, Mr. W Kharbani</td>
</tr>
<tr>
<td>3. Online Special Lecture celebrating International Year of Fruits and Vegetables organized by the department of Botany</td>
</tr>
<tr>
<td>8th September 2021</td>
</tr>
<tr>
<td>Mrs. G A Kharsyntiew, Mr. M D Wanswett, Mr. D G L Khongwir, Mr. G S Kharkongor, Mr. W Kharbani</td>
</tr>
<tr>
<td>4. Online Special Lecture on Cleanliness in times of Covid – 19 organized by Discipline and cleanliness committee.</td>
</tr>
<tr>
<td>16th September 2021 at 6:00 PM</td>
</tr>
<tr>
<td>Mrs. G A Kharsyntiew, Mr. M D Wanswett</td>
</tr>
<tr>
<td>5. Perspective of Agriculture and its role and importance for sustainable development and Business management in Agriculture in Celebration of International Year of Fruits and Vegetables. Organized by the Science Departments, Synod College under DBT Star College Scheme</td>
</tr>
<tr>
<td>24th September 2021 at 1:30 PM</td>
</tr>
<tr>
<td>Mrs. G A Kharsyntiew, Mr. M D Wanswett, Mr. D G L Khongwir, Mr. G S Kharkongor, Mr. W Kharbani</td>
</tr>
<tr>
<td>24th September 2021</td>
</tr>
<tr>
<td>Shri D G L Khongwir, G S Kharkongor</td>
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<td>10.</td>
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<tr>
<td>12.</td>
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<td>13.</td>
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<td>Sl. No.</td>
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<td>3.</td>
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<td>4.</td>
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</tbody>
</table>

8. List of exhibitions/seminars/training courses conducted by the college:

(i) Departmental Activities:

DEPARTMENT OF BOTANY
<table>
<thead>
<tr>
<th>No.</th>
<th>Event Description</th>
<th>Date/Time</th>
<th>Duration</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>National Technology Day – 2021 Online Special Lecture on ‘Science &amp; Technology for a Sustainable Future’</td>
<td>10th May, 2021 (Friday)</td>
<td>43</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani.</td>
</tr>
<tr>
<td>2.</td>
<td>Celebration of International Day for Biological diversity: Online Webinar Presentation on the theme ‘We’re part of the solution’.</td>
<td>15th May, 2021</td>
<td>28</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani</td>
</tr>
<tr>
<td>3.</td>
<td>Online Student’s Seminar for Celebration of World Environment Day 2021.</td>
<td>15th &amp; 18th May, 2021</td>
<td>38</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani</td>
</tr>
<tr>
<td>4.</td>
<td>Celebration of</td>
<td>22nd May, 2021</td>
<td>37</td>
<td>Dr. W.</td>
</tr>
<tr>
<td>16</td>
<td>International Day for Biological diversity: Online Poster Presentation on the theme ‘We’re part of the solution’</td>
<td>Time: 2.00 PM</td>
<td>4th &amp; 6th semesters</td>
<td>Kharmawphlan g, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani</td>
</tr>
<tr>
<td>5</td>
<td>Celebration of World Environment Day 2021. Online Seminar Presentation by B.Sc VI Semester Chemistry Hons on the theme ‘Ecosystem Restoration’</td>
<td>1st June 2021</td>
<td>B.Sc. 2nd, 4th &amp; 6th semesters</td>
<td>33</td>
</tr>
<tr>
<td>6</td>
<td>Celebration of World Environment Day 2021. Online Poster Presentation by B.Sc II Semester Chemistry hons on the theme ‘Ecosystem Restoration’</td>
<td>5th June, 2021</td>
<td>B.Sc. 2nd &amp; 4th semesters</td>
<td>34</td>
</tr>
<tr>
<td>7</td>
<td>Celebration of</td>
<td>5th June, 2021</td>
<td>B.Sc. 2nd</td>
<td>38</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date/Time Details</td>
<td>Class/Program</td>
<td>Instructors</td>
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</tr>
<tr>
<td>8.</td>
<td>Online Student’s Seminar</td>
<td>1st October, 2021. Time: 10.00 – 4.00 PM</td>
<td>B. Sc. 5th semesters</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani</td>
</tr>
<tr>
<td>9.</td>
<td>Online Science Exhibition organised by the Department of Chemistry under the DBT-Star College Scheme</td>
<td>15th October, 2022</td>
<td>B. Sc. 3rd &amp; 5th semesters</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani</td>
</tr>
<tr>
<td>10.</td>
<td>Celebration of World Science Day 2021.</td>
<td>10th November, 2021. B. Sc. 1st, 3rd &amp; Class XI(Sc)</td>
<td>B. Sc. 1st, 3rd &amp; 5th semesters</td>
<td>Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani, Dr W.P. Sohtun.</td>
</tr>
<tr>
<td>11.</td>
<td>Celebration of the IUPAC Global</td>
<td>16th February, 2022. B. Sc 1st &amp; 3rd semesters</td>
<td>B. Sc 1st &amp; 3rd semesters</td>
<td>Dr. W. Kharmawphlang</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date</td>
<td>Department</td>
<td>Resource Person</td>
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<tr>
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</tr>
<tr>
<td>1.</td>
<td>Women’s Breakfast-2022 (IUPAC GWB2022). Special Lecture on “Empowering Diversity in Science”. Resource person, Dr. Paresh Nath Chaterjee, Department of Chemistry, NIT, Meghalaya.</td>
<td></td>
<td></td>
<td>g, Dr. A. Lapasam, Shri R. Rani, Dr W.P. Sohtun.</td>
</tr>
<tr>
<td>2.</td>
<td>Time: 10.00 AM</td>
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<tr>
<td>3.</td>
<td>12. Awareness programme on “National Pollution Control Day - 2021”, Or “National Pollution Prevention Day – 2021” on the theme: “Raising Awareness Around Pollution”.</td>
<td>2nd December 2021</td>
<td>B.Sc I, III &amp; V semester</td>
<td>91 Dr. W. Kharmaawphlan g, Shri N. Kharbani, Dr. A. Lapasam, Shri R. Rani, Dr W.P. Sohtun, smt. L. Massar.</td>
</tr>
<tr>
<td>4.</td>
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<tr>
<td>5.</td>
<td>DEPARTMENT OF PHYSICS</td>
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</tr>
<tr>
<td>6.</td>
<td>1. Student Seminar</td>
<td>1st October, 2021</td>
<td>B.Sc. V Semester</td>
<td>50 Mrs. G A Kharsyntiew 2. Mr. M D Wanswett, Mr. D G L Khongwir, Mr. G S Kharkongor Mr. W Kharbani</td>
</tr>
<tr>
<td>7.</td>
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</tr>
</tbody>
</table>
3. Online Science Exhibition organised by Science Departments under the DBT-Star College Scheme in collaboration with Synod College Science Club & Environment Club 5th November 2022 B.Sc. V Semester 4 Mrs. G A Kharsyntiew, Mr. M D Wanswett

4. DEPARTMENT OF ZOOLOGY

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Workshop/Seminar</th>
<th>Date(s)</th>
<th>Class involved</th>
<th>No. of participants</th>
<th>Faculty involved/organized</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Student Seminar</td>
<td>1st October</td>
<td>B.Sc. V Semester</td>
<td>39</td>
<td>Dr. D. Marngar, Dr. A. J. Iangrai, Ms. I. Dkhar</td>
</tr>
<tr>
<td>2.</td>
<td>Celebration of World’s Animal Day</td>
<td>4th October</td>
<td>B.Sc. V Semester</td>
<td>39</td>
<td>Dr. D. Marngar, Dr. A. J. Iangrai, Ms. I. Dkhar</td>
</tr>
<tr>
<td>3.</td>
<td>Inter Departmental students’ Seminar</td>
<td>8th Oct. 2021</td>
<td>B.Sc. III &amp; Semester</td>
<td>01</td>
<td>a Dr. D. Marngar and organized by IQAC</td>
</tr>
</tbody>
</table>

(ii) Inter-Departmental Activities:

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Workshop/Seminar</th>
<th>Date(s)</th>
<th>Class involved</th>
<th>No. of participants</th>
<th>Faculty involved/organized</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>On-line Poster Presentation celebrating International Biodiversity Day organised by the</td>
<td>22nd May 2021</td>
<td>B.Sc. 4th Semester &amp; 6th Semester</td>
<td>25</td>
<td>Dr. W. Kharmawphlang, Dr. H. Swer</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date/Time</td>
<td>Participants</td>
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<tr>
<td>3</td>
<td>International Biodiversity Day: Special Lecture on the theme ‘We’re part of the solution’ organised by Zoology Department, Synod College</td>
<td>22nd May, 2021 Time: 11.00 AM</td>
<td>All faculty members of the four Science departments under DBT-Star College Scheme, Synod College.</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Celebration of World Environment</td>
<td>5th June, 2021 Time: 10.00</td>
<td>All faculty members of the four Science departments under DBT-Star College Scheme, Synod College.</td>
<td></td>
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<tr>
<td>Day:</td>
<td>On-line Student’s Seminar on the theme ‘Ecosystem Restoration’ organised by the Science Departments under the DBT-Star College Scheme, Synod College</td>
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<td>5th June, 2021</td>
<td>B.Sc. II &amp; IV semester</td>
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<tr>
<td>16</td>
<td>Dr. W. Kharmawphlang, Dr. H. Swer &amp; Dr. A. J. Iangrai, Shri N. Kharbani &amp; Shri M.d. Wanswet.</td>
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<td>5th June, 2021</td>
<td>B.Sc 2nd &amp; 4th semester</td>
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<td>8</td>
<td>Organized Dr. A.J.Iangrai.</td>
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<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date</td>
<td>Time</td>
<td>Participants</td>
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<td>7</td>
<td><strong>Webinar via Google meet:</strong> Perspective of Agriculture and its role and importance for sustainable development and Business management in Agriculture to Celebrate the International Year of Fruits and Vegetables-2021 (IYFV-2021) organised by the Science Departments under the DBT-Star College Scheme, Synod College, Dr. Subal Maibangsa, Principal Scientist, KVK, Agricultural Research Station, Diphu, AAU, Assam. Dr. Gino a. Sangma, Associate Prof., Dept. of AgriBusiness and Food Technology, N.E.H.U., Tura</td>
<td>24&lt;sup&gt;th&lt;/sup&gt; September, 2021</td>
<td>12.00 – 4.30 PM</td>
<td>All faculty members of the four science departments under DBT-Star College Scheme, Synod College.</td>
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<tr>
<td>8</td>
<td><strong>Extension Programme: Outreach and Community development programme, on</strong></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; October, 2021</td>
<td>11.00 AM</td>
<td>Class IX</td>
<td>60</td>
</tr>
</tbody>
</table>
theme: “Perspectives and Importance Of Agricultural Farming and Sensitization Programme on Traditional and Scientific Farming”, which is part of Celebration of the International Year of Fruits and Vegetables-2021 (IYFV-2021) organised by the Extension Programme Cell & the Science Departments under the DBT-Star College Scheme, Synod College at Mairang Presbyterian English Secondary School, West Khasi Hills.

<p>| 9. | Outreach and Awareness Programme on Science &amp; | 8th October, 2021 | B. Sc 5th sem &amp; Class X | 105 | Dr. A. J. Iangrai, Dr. H. Swer, Shri D. L. Jyrwa, shri N. Kharbani, Shri |</p>
<table>
<thead>
<tr>
<th>Mathematics organised by the Science Departments under the DBT-Star College Scheme, Synod College at Mairang Presbyterian English Secondary School, West Khasi Hills.</th>
<th>8th October, 2021 Time: 1.30 – 4.00 PM</th>
<th>B. Sc 5th semester</th>
<th>M.D. Wanswett .Dr. P. Nonhkling.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Interdepartmental Student’s Seminar - offline organised by the IQAC, Synod College</td>
<td>3rd November, 2021. Time: 9.30 AM – 4.00 PM</td>
<td>B. Sc V Semester</td>
<td>Dr. D. Marngar, Dr. W.P. Sohtun , Ms I. Dkhar, Dr. Y. Saio.</td>
</tr>
<tr>
<td>11. One Day National Webinar on ‘Waste Management’ organised by the Science Departments under the DBT-Star College Scheme, Synod College</td>
<td>18th December, 2021. Time: 9.30 AM –12.30 PM</td>
<td>B. Sc 5th semester</td>
<td>All faculty members of the four science departments under DBT-Star College Scheme, Synod College.</td>
</tr>
<tr>
<td>12. Online Special Programme on Waste Management organised by the Science Departments under the DBT-Star</td>
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<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date/Details</td>
<td>Participants/Roles</td>
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<tr>
<td>13</td>
<td>Celebration of National Science Day 2022 organised by the Science Departments at</td>
<td>28&lt;sup&gt;th&lt;/sup&gt; February, 2022</td>
<td>All faculty members of the four science departments under DBT-Star College Scheme, Synod College.</td>
</tr>
<tr>
<td></td>
<td>Synod College, Shillong.</td>
<td>B. Sc 3&lt;sup&gt;rd&lt;/sup&gt;&amp; B. Sc V semesters</td>
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<tr>
<td></td>
<td><em>Theme:</em> ‘Integrated Approach in Science and Technology for a sustainable future’.</td>
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<tr>
<td></td>
<td>Resource person. Prof. A. Chatterjee, Department of Biotechnology &amp; Bioinformatics</td>
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<td>N.E.H.U., Shillong.</td>
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<tr>
<td>14</td>
<td>Online Science Exhibition organised by Science Departments under the DBT-Star</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; November 2021</td>
<td>Dr. W. Khamawphlang Dr. A.J. Iangrai, Dr. H. Swer, Shri N. Kharbani, Shri M.D. Wanswett, Dr. P. Nongkling, Ms I. Dkhar, Smt. G. Kharsyntiew</td>
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<tr>
<td></td>
<td>College Scheme in collaboration with Synod College Science Club &amp; Environment</td>
<td>B.Sc. 3&lt;sup&gt;rd&lt;/sup&gt;&amp; 5&lt;sup&gt;th&lt;/sup&gt; Semester</td>
<td></td>
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<td></td>
<td>Club</td>
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<tr>
<td>15</td>
<td>Awareness and Community Development</td>
<td>21&lt;sup&gt;st&lt;/sup&gt;February 2022</td>
<td>Dr. W. Khamawphlang Dr. A. P</td>
</tr>
<tr>
<td>Programme</td>
<td>Theme: “Livestock Farming and Mushroom Cultivation as a Source of Income- The Need for Training”, at MawkorBlang Village, organized by the Extension Programme Cell and Science Departments under the DBT Star College Scheme, Resource person, Shri R. Brahma, block Development Officer, Umsning C &amp; RD Block, Umsning, Shri Kynshew D. Kharkrang, Umroi, RiBhoi District.</td>
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Rani, Dr. A. J. Iangrai, Shri R. Lamare, Shri D. L. Jyrwa, Shri Gideon Kharkongor.
<table>
<thead>
<tr>
<th>#</th>
<th>Event Description</th>
<th>Date/Time</th>
<th>Venue</th>
<th>Attendance</th>
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<tbody>
<tr>
<td>18</td>
<td>Online Mentorship Programme under the aegis of the ‘AzadiKaAmritMa hotsav’ by DBT Star College Scheme Launched by Hon’ble Minister of State (Independent Charge) of the Ministry of Science Technology &amp; Earth Sciences Govt. of India</td>
<td>8th November, 2021. Time: 12.45 PM</td>
<td>B.Sc I, III, &amp; V Semester.</td>
<td>410 All faculty members of the four science departments under DBT-Star College Scheme, Synod College..</td>
</tr>
<tr>
<td>19</td>
<td>Online Quiz Competition to celebrate World Animal Day organised by St. Anthony’s College, Shillong</td>
<td>4th October 2021 B.Sc V semester</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Date</td>
<td>Class</td>
<td>Duration</td>
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<tr>
<td>20.</td>
<td>Online Inter College Science Exhibition &amp; 3D Model Presentation on the theme: Solution for Sustainability, Roadmap towards Green Earth”, organized by Department of Chemistry Sankardev College.</td>
<td>26th March 2022</td>
<td>B.Sc V semester</td>
<td>3</td>
</tr>
<tr>
<td>21.</td>
<td>Inter – College Science Exhibition which is part of the celebration of World Water Day -2022, on the theme: “Ground Water : Making the Invisible- Visible” organized by Office of the Chief Engineer of the PHE Department Government of Meghalaya.</td>
<td>22nd March 2022</td>
<td>B.Sc V semester</td>
<td>7</td>
</tr>
<tr>
<td>22.</td>
<td>Online Inter College Students Seminar Power point presentation, on theme: Solution for Sustainability, Roadmap towards Green Earth”,</td>
<td>26th March 2022</td>
<td>B.Sc V Semester</td>
<td>2</td>
</tr>
<tr>
<td>Project Description</td>
<td>Date/Details</td>
<td>Participants</td>
<td>Organizers</td>
<td></td>
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<tr>
<td>23. Online Special Talk on the Celebration of International Women’s Day 2022</td>
<td>8th March 2022</td>
<td>B.Sc III &amp; V semester</td>
<td>Dr. W. Kharmawphlang &amp; Dr. A. Lapasam</td>
<td></td>
</tr>
<tr>
<td>25. Project work on Conservation and Preservation of Spring water: Spring Water Rejuvenation - at WahKtieh Nongrim &amp; Wahsohmaw Maraikaphon, Sohra by the four science departments under the DBT-Star College Scheme, Synod College, Shillong</td>
<td>22nd March 2021-ongoing project</td>
<td>B.Sc. V. Semester</td>
<td>Dr. R. M. Lyngdoh, Dr. M. Rani, Dr. A. J. Iangrai, Dr. H. Swer, Dr. W. Kharmawphlang, Shri N. Kharbani, Shri M. D. Wanswett, Shri A. R. Lyngdoh</td>
<td></td>
</tr>
<tr>
<td>26. Waste Management Project at Synod College, Shillong,</td>
<td>1st December 2021 its an ongoing project</td>
<td>B.Sc. V. Semester</td>
<td>15</td>
<td>Dr. W. Kharmawphlang, Dr. A. J. Iangrai, Dr. H. Swer, Shri N.</td>
</tr>
</tbody>
</table>
Meghalaya, 
sponsored by 
International 
Society of Waste 
Management-Air 
and Water 
(ISWMAW - 
IconSWM-CE) , 
project work 
undertaken by the 
four Science 
Departments under 
the DBT star 
college scheme 
Synod College 
Shillong ,

Project Mentor: Prof. Dr. Sadhan kumar 
Ghosh, President, 
International Society 
of Waste 
Management-Air and 
Water, and Chief 
Coordinator, Centre 
for Sustainable 
Development and 
Resource Efficiency 
Management, 
Jadavpur University, 
India.

Kharbani, Shri 
M. D. 
Wanswett, Shri 
D.G.L. 
Khongwir, Dr. 
P. Nongkling, 
Ms. I. Dkhar, 
Dr. A. 
Lapasam.

8. Name, designation, host institute of guest faculty invited:
### BOTANY DEPARTMENT

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Title of the lecture</th>
<th>Resource person</th>
<th>Date(s)</th>
<th>No. of participants</th>
<th>Faculty Involved</th>
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<tbody>
<tr>
<td>1.</td>
<td>Special lecture to celebrate International Year of Fruits and Vegetables (IYFV) organized by Department of Botany, Synod College</td>
<td>Shri Victor Khonglah Assistant Director of Agriculture (Training), Office of the District Training Officer, Department of Agriculture, Shillong</td>
<td>8th Septembe r 2021</td>
<td>117</td>
<td>Shri. S. Jyrwa, Ms. N.C. Marbaniang, Dr. H. Swer, Dr. P. Nongkling, Dr. Y. Saio &amp; Shri E. Snaitang</td>
</tr>
</tbody>
</table>

### CHEMISTRY DEPARTMENT

| 1. | Special Lecture to Celebrate the IUPAC Global Women’s Breakfast-2022 (IUPAC GWB2022). On the Theme: “Empowering Diversity in Science”.Resource person, Dr. Paresh Nath Chatterjee, Department of Chemistry, NIT, Meghalaya. | Dr. Paresh Nath Chatterjee, Associate Prof., National institute of Technology, Meghalaya, Shillong. | 16th February, 2022. | 121 | Dr. W. Kharmawphlang, Shri N. Kharbani, Dr. a. Lapasam, Dr. W.P. Sohtun, Shri R. Rani & Smt. L. Massar |

### PHYSICS DEPARTMENT

|  |  |  |  |  |  |

### ZOOLOGY DEPARTMENT

| 1. | Invited talk International Biodiversity Day. By Shri N. Luikham IFS, Conservator of Forest (WL&T) Member secretary Meghalaya state Biodiversity Board, Shillong | Shri. C.A. Rahman IFS (Retd) Faculty Central Academy for state forest service, Burnihat Assam. | 22nd May 2021 | 86 | Dr. D. Marngar, Dr. A.J. Iangrai, Ms. I. Dkhar & Ms. H. Warjri |
10. Date of Advisory committee meeting: - Nil

11. List of New Practical’s/demonstrations introduced in different departments in last one year:

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Name of New Practical</th>
<th>Class involved</th>
<th>No.of students</th>
<th>Teachers Involved</th>
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**DEPARTMENT OF BOTANY**

**DEPARTMENT OF CHEMISTRY**

**DEPARTMENT OF PHYSICS**

**DEPARTMENT OF ZOOLOGY**

12. Details of equipment purchased in each department from DBT grant. (item, no., cost, date of order placed, purchase/installation): Nil

13. Detail of books & journals subscribed from DBT grant: Nil

14. Qualitative improvements due to DBT support Please highlight (5 salient lines)

The various departments expresses their gratitude to the Department Of Biotechnology, Ministry of Science & Technology, DBT Star College Scheme, Government of India, for the Grant-in- aid and their support to the four Science Departments which has help them in many ways such as improvement in the teaching and learning process as mentioned below:

1. It has effectively impact in imparting knowledge, learning process, instill in the students confidence and teaching skills to students and teachers in different areas of their field of studies.

2. Despite the Pandemic due to Covid – 19, the four Science departments have been able to conduct workshops, seminars, invited lecture and awareness and extension and community development programmes both Online and Offline, under the DBT Star College scheme and this has enhanced their understanding ability and also brought awareness to the students about their topics, the importance and relevance of the subject matter. It has also kept them abreast with the recent developments in their
field of study and has also help the students to perform better in their university examination, as seen in their result and number of students enrolled in PG courses as well in Ph. D research programme.

3. The scheme has enabled the department to conduct various seminars, workshop, and science exhibitions, outreach programme for the students in the rural areas so as to help create an interest in their subject as well as help them to show case their creativity.

4. The increased number of instruments, apparatus and books availed through the scheme has provides an opportunity to students to carry out experiments individually and improve their skills in using and understanding of the experiments.

5. The students seminar organized by the different departments under this scheme has helped in instilling confidence as well enabled the students to work independently.

6. Thus we can see that the implementation of this scheme has greatly helped the students in achieving their goal.

15. Problem faced, if any, in implantation of the programme and utilization of DBT grant (in two – three lines)

The implementation of the scheme has been greatly acknowledged and appreciated by the faculty as well as the students. The scheme has helped the participating Departments to organize and conducted various student oriented programmes and we hope for further assistance in this project.

**List of Students Seminars : Online Students Seminar on 1st October 2021**

**DEPARTMENT OF BOTANY**

<table>
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<tr>
<th>Sl. No.</th>
<th>Students Names</th>
<th>Title of the presentation</th>
<th>Class</th>
<th>Supervisor</th>
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<td>1.</td>
<td>DawanribiangSyiemlieh Dianghunshisha S. Langte TeiskhemlangKharwar ShanborLyngkhoi MebadashishaKurbah</td>
<td>Mycotoxins</td>
<td>B.Sc. V Semester</td>
<td>Dr. (Ms) H. Swer</td>
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<td>2.</td>
<td>Calinda Jyrwa</td>
<td>Photosynthesis</td>
<td>B.Sc. V Semester</td>
<td>Dr. (Ms) H. Swer</td>
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<td>4.</td>
<td>Saindur Wanmi Langstang</td>
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<td>Dr. P. Nongkling</td>
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<td>Steffinnie Carrie Nongrum</td>
<td>Plant diversity and conservation</td>
<td>B.Sc. V Semester</td>
<td>Ms. N.C. Marbaniang</td>
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<td>Riiaka Marbaniang</td>
<td>Soil pollution, sources and Abatement</td>
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<td>Rishan Roy Marbaniang</td>
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Department of Chemistry:
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<td>Phidarisa Lamare</td>
<td>Hybridization</td>
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<td>Dr(Mrs) W.Kharmawphlang</td>
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<td>Ebandary Lyngdoh</td>
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<td>Refractory Materials, Metal alloys and their uses</td>
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<td>Careenthia Nongbsap</td>
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<td>Ms. BASONGLANG SOHLANG</td>
<td>Logic Gates</td>
<td>B. Sc. V</td>
<td>Smt. G. Kharsyntiew</td>
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<td>Mr. BANSHANSKHEM SANGRIANG</td>
<td>Electric Potential on an Axial Line</td>
<td>B. Sc. V</td>
<td>Smt. G. Kharsyntiew</td>
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<td>Mr. BANKYNTIEWLANG RANI</td>
<td>Moment of Inertia</td>
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<td>Mr. DONKUPARSON N SOHLANG</td>
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<td>6.</td>
<td>Mr. R. REASSURESON L NONGLAIT</td>
<td>Electric Charge, Coulomb’s Law</td>
<td>B. Sc. V</td>
<td>Shri D.G.I. Khongwir</td>
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<td>Mr. BAKHRAWKUPAR L. LYNGKHOI</td>
<td>Einstein’s Special Theory of Relativity</td>
<td>B. Sc. V</td>
<td>Shri M. D. Wanswett</td>
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<td>8.</td>
<td>Mr. BABITBANSHAN SYIEM</td>
<td>Bernoulli’s Theorem</td>
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<td>9.</td>
<td>Mr. RYNGKATBORLANG DIENGDOH</td>
<td>Electromagnetism</td>
<td>B. Sc. V</td>
<td>Shri M. D. Wanswett</td>
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<td>Ms. WANRISHISHA MARBANIANG</td>
<td>Black Body Radiation</td>
<td>B. Sc. V</td>
<td>Shri M. D. Wanswett</td>
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<td>Ms. DARISUK NONGSIEJ</td>
<td>Oscillator</td>
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<td>Shri G. Kharkongor</td>
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<td>Mr. ELJOHN NATHAN NONGSIEJ</td>
<td>Electromagnetic Induction</td>
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<td>14.</td>
<td>Ms. PANUWA KHONGSDAM</td>
<td>Nuclear Reactor</td>
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<td>15.</td>
<td>Ms. JOYCEFUL KARSOHNOH</td>
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<td>16.</td>
<td>Ms. NERISA MUKHIM</td>
<td>Hubble’s Law</td>
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<td>Gauss’s Law</td>
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<td>Mark Donald K. Ryja</td>
<td>Vision in insects</td>
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<td>Food chain</td>
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<td>Dr. D. Marngar</td>
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**Department of Zoology**

**Inter-Departmental Student’s Seminar held on the 8th October 2021 :**

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<tr>
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Celebration of International Day for Biological Diversity Poster Presentation on the theme “We are the solution”, Department of Chemistry, Synod College, Shillong, 22nd May, 2021.
Celebration of World Environment Day – 2021, Poster Presentation on the theme “Ecosystem Restoration”, The Department of Chemistry, Synod College, Shillong, Date: 5th June, 2021.
Online Science Exhibition on “Science & Technology for Sustainable Future: Department Of Chemistry :
OUTREACH AND AWARENESS PROGRAMME: 8th OCTOBER, 2021 at Mairang Presbyterian English secondary School, Mairang;
AWARENESS AND COMMUNITY DEVELOPMENT PROGRAMME: 5th OCTOBER, 2021, AT MAIRANG PRESBYTERIAN ENGLISH SCHOOL, MAIRANG.
IUPAC GLOBAL WOMEN'S BREAKFAST 2022, (IUPAC GWB -2022) on Theme: “Empowering Diversity in Science”, ON 16th FEBRUARY, 2022
Awareness Programme on “Harmful Effects of Tobacco”, at Synod College, Shillong, on 25th March 2022.
Awareness and Community Development Programme, on Theme: “Livestock Farming and Mushroom Cultivation as a Source of Income - The Need for Training”, on 21st February 2022, at MawkorBlang Village
Celebration of “World Water Day -2022, on the Theme : “Ground Water: Making The Invisible Visible”, on the 22nd March 2022
Inter-College Science Exhibition cum Presentation Competition on the Theme: “Solution for Sustainability, Roadmap towards Green Earth”, held at Sankardev College on 26th March 2022.
Ms Phidarisa Lamare, Ms Mishordaris Pariong and Ms Samanlangki Phawa of the Department participated in the above competition and **won the 2nd Runner’s up Trophy**.

Ms. Idadonbok Thabah & Ms Merryful Pariong participated in the Power point presentation and Ms **Idadonbok Thabah won the Runner’s Up Trophy**.

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Ms Proolda Khyllait, Mr. Damemanbha Biam and Mr. Vincent Nongbet participated in the Science Exhibition on celebration of World water Day-2022, on the Theme : “Act now Before the Earth Runs Dry”, organized by The Office of the Chief Engineer PHE, Govt, of Meghalaya on the 22nd March 2022.

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Students of B.Sc V Semester Botany Dept. participated in the Science Exhibition on celebration of World water Day-2022, on the Theme : “Act now Before the Earth Runs Dry”, organized by The Office of the Chief Engineer PHE, Govt, of Meghalaya on the 22nd March 2022 and won the third prize.
11th IconSWM-CE 2021 & IPLA Global Forum 2021:
Inauguration of Waste Management Project at Synod College, Shillong, on 1st December 2021:
Awareness Programme at Mairang Presbyterian English school, Mairang: 5th Oct 2021:

Wahsohmaw, Maraikaphon, Sohra

Wahktieh Nongrim Sohra.
REPORT ON ONLINE STUDENTS’ SEMINAR
TO CELEBRATE WORLD ENVIRONMENT
DAY 2021

THEME: ECOSYSTEM RESTORATION

Organized by Science Departments, Synod College

(UNDER DBT-STAR COLLEGE SCHEME)

Google meet link: https://meet.google.com/vyb-gocj-tpm

The Science Departments under the DBT-Star College Scheme in collaboration with the Science Club & Environment Club, Synod College organised an Online Students’ Seminar Presentation on 5 June 2021 at 10:00 am to celebrate the World Environment Day. The theme for this programme is “ECOSYSTEM RESTORATION”. B.Sc. 6 & 4th Semester students from the Department of Botany, Chemistry, Physics and Zoology took part in this programme and gave a power point presentation on the various topics related to the theme.

The programme was chaired by Dr. W. Kharmawphlang, Co-ordinator of DBT-Star college scheme. The Principal of the college, Dr. R.M. Lyngdoh delivered the welcome address and he stressed on the importance of ecosystem restoration and the need to create awareness amongst the students. A total of 98 participants (50 females, 48 males) which include 17 student presenters, students from 4th & 6th semesters and faculties from the four science departments took in the programme. The list of the presenters along with the topic is listed below:

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Presenter</th>
<th>Department</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ms. Meda-aihunshisha Wanniang</td>
<td>Botany</td>
<td>Ecosystem restoration</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Dimiyio K. Lamin</td>
<td>Chemistry</td>
<td>Importance of ecosystem: factors affecting ecosystem restoration</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Wellborn Kharsyntiew</td>
<td>Physics</td>
<td>Geothermal energy</td>
</tr>
<tr>
<td>4</td>
<td>Ms. Marbiangkynti Jyrwa</td>
<td>Zoology</td>
<td>Deforestation</td>
</tr>
<tr>
<td>5</td>
<td>Ms. Pertis Marten</td>
<td>Zoology</td>
<td>Land degradation</td>
</tr>
<tr>
<td>6</td>
<td>Mr. Samborlang Ryntathiang</td>
<td>Physics</td>
<td>Few things ordinary people can do to protect the environment</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Subject</td>
<td>Topic</td>
</tr>
<tr>
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<td>---------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Ms. Indarikynti Pathaw</td>
<td>Chemistry</td>
<td>Ecosystem: degradation &amp; restoration</td>
</tr>
<tr>
<td>8</td>
<td>Ms. Fary Kordor Lyngdoh</td>
<td>Botany</td>
<td>Restoration of forest</td>
</tr>
<tr>
<td>9</td>
<td>Mr. Promvil Mawlieh</td>
<td>Physics</td>
<td>Biomass energy: waste to useful energy</td>
</tr>
<tr>
<td>10</td>
<td>Mr. Benbeaious Wann</td>
<td>Chemistry</td>
<td>Ecosystem: importance, degradation &amp; restoration</td>
</tr>
<tr>
<td>11</td>
<td>Ms. Ripynshai Nongbri</td>
<td>Botany</td>
<td>Restoration of terrestrial ecosystem</td>
</tr>
<tr>
<td>12</td>
<td>Ms. Pynkmenshisha War</td>
<td>Botany</td>
<td>Restoration of underground water</td>
</tr>
<tr>
<td>13</td>
<td>Ms. Iohmatti Masharing</td>
<td>Chemistry</td>
<td>Factors that affect the ecosystem, restoration and the effect of the pandemic on the ecosystem</td>
</tr>
<tr>
<td>14</td>
<td>Mr. Reassureson L. Nonglait (B.Sc. 4th Semester)</td>
<td>Physics</td>
<td>Hydrogen fuel energy</td>
</tr>
<tr>
<td>15</td>
<td>Ms. Shimtilun Mawtyllup</td>
<td>Chemistry</td>
<td>Ecosystem - Human impact on the ecosystem, process &amp; importance of restoration of the ecosystem</td>
</tr>
<tr>
<td>16</td>
<td>Ms. Phibanbet Kurkalang (B. Sc. 4th Semester)</td>
<td>Physics</td>
<td>Biogas</td>
</tr>
</tbody>
</table>

The online students’ seminar has given the opportunity for students to use the online platform for their presentation. It has also enabled the participants to learn from the presenters on how much our ecosystem has been degraded by our actions, what are the opportunities we can take up as a solution and also the challenges we may face in dealing with ecosystem restoration. Overall, it was an interesting and informative session and we hope to have many such programmes in the future.
WORLD ENVIRONMENT DAY 2021

Theme: Ecosystem Restoration.

Sub-Theme: Renewable Sources of Energy

Topic: Hydrogen Fuel Energy (Fuel Cell)

By: R. Reassureson Lyngdoh Nongbri

3. sc. 4th semester
Department of Physics
Syed College, Shillong.
A REPORT ON

THE CELEBRATION OF INTERNATIONAL YEAR OF FRUITS AND VEGETABLES – 2021 (IYFV-2021)

Online Lecture
Wednesday, 8 September · 2:00 – 5:00pm
Google Meet joining info
Video call link: https://meet.google.com/neu-qju-ced

The Department of Botany, Synod College, Shillong organised an online special lecture on the 8th September, 2021 via Google meet as part of the celebration of the International Year of Fruits and Vegetables-2021 under the DBT-Star college scheme.

The programme was chaired by Miss N.C. Marbaniang, Head of Department of Botany and Dr. R.M. Lyngdoh, Principal delivered the welcome address. A total of 117 participants attended the programme.

On this event, a special lecture was delivered by an eminent speaker Shri. L. Victor Khonglah, Assistant Director of Agriculture (Training), Department of Agriculture, Meghalaya. In his speech he discussed on general perspective of fruits and vegetables with a focus on Meghalaya, Government intervention, fruits and vegetables processing, farm management and farming systems. He spoke on the nutritional and health benefits of fruits and vegetables and their contribution to a balance and healthy diet and lifestyle. He also laid emphasis on the need to reduce losses and waste in the fruits and vegetables sector.

Towards the end of the programme, students were offered to contact the speaker and posed their queries via chat box. The speaker answered many queries raised by the participants.

The programme was concluded with vote of thanks delivered by Dr. H. Swer.
FIELD TRIP TO SOHRA RIM
ORGANISED BY: DEPARTMENT OF BOTANY
UNDER DBT STAR COLLEGE SCHEME

The field trip for the students of the third semester was conducted at the Sohra rim, East Khasi Hills District, Meghalaya. During the field trip, three locations situated at the above-mentioned site were selected for the study tour, namely, Lyngksiar falls, Mawkma falls and Dainthlen falls.

Brief description of the site

Sohra, also known as Cherrapunjee, was established as a Sub-Division in the East Khasi Hills District of Meghalaya in 1982 and is 54km away from Shillong, the capital city of Meghalaya. The geographical location of the site is at 25°30’ N and 91°70’ E. The valleys around Sohra are covered with lush and very diverse vegetation, containing numerous endemic species of plants, including Meghalaya subtropical forests. The climate of this region is mild subtropical highland climate. Sohra has very wet, warm summers but dry, mild winters. The city's annual rainfall average stands at 11,777 millimetres (463.7 in). Sohra has often been named as the wettest place on earth, but at present, Mawsynram holds that distinction.

Lyngksiar falls – Lyngksiar falls is situated at PungJanailar village and is one of the most beautiful waterfalls in Sohra. The waterfall derived its name from the rare orchid known as TiewLyngksiar (Cymbidium eburneum). This orchid blooms with golden petals for three months in a year and is available in the forest around this particular place. In the past, this spot was used by the village community as a Community fishing ground. This location is feasible for water sports, boating and fishing with proper infrastructure and good road service.
Mawkma falls – This waterfall is situated at the Mawkma village in Sohra.

Dainthlen falls – The waterfall derives its name from U Thlen or a snake of gigantic size which dwelt in a cave. The splendour of this fall is enhanced by the presence of large natural potholes.
List of flora observed at the study sites

<table>
<thead>
<tr>
<th></th>
<th>Spilanthes</th>
<th></th>
<th>Selaginella</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spilanthes</td>
<td></td>
<td>Selaginella</td>
</tr>
<tr>
<td>2</td>
<td>Pteris</td>
<td>2</td>
<td>Lycopodium</td>
</tr>
</tbody>
</table>

62
<table>
<thead>
<tr>
<th></th>
<th>Species</th>
<th></th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Rhododendron arboretum</td>
<td>3</td>
<td>Marchantia</td>
</tr>
<tr>
<td>4</td>
<td>Myrica esculenta</td>
<td>4</td>
<td>Sphagnum</td>
</tr>
<tr>
<td>5</td>
<td>Castanopsis sp.</td>
<td>5</td>
<td>Green algae</td>
</tr>
<tr>
<td>6</td>
<td>Gnaphalium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hypocharis radiata</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Bidens</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>Melastoma</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Osbeckia</td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>Taracum officinalis</td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>Galinsoga parviflora</td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>Ageratum conyzoides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cyathea (tree fern)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Cortaderia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Polystichum sp.</td>
<td></td>
<td></td>
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<tr>
<td>17</td>
<td>Thelypteris sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Microlepias</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Poa annua</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Cynodondactylum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Paspalum sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Arundenarias sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Panicum sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Phragmatissant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Andropogon sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Elusine indica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Plantago major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Eleocharis obtusa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Carex sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Aleuritopteris sp.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Study of plant composition and distribution in Synod College extended campus,
Mawpdang, East Khasi Hills

Synod college extended campus is located at Mawpdang village, East Khasi Hills District which is located about 14.0 kms from the present Synod college campus in Shillong. The extended campus covers an area of approximately 9 acres. Presently the campus is still forested and undisturbed except for the areas where the Post Graduate building construction has started.

The main objective of the project is to study the plant diversity and composition of the extended campus while it is still undisturbed. This will enable us to identify the primary dominant flora, their mode of growth which will later serve a reference species when the campus construction is completed. It will also enable us to collect primary data on species composition and whether there is disappearance or replacement in any of the primary species.

Quadrat method was followed for the study.

The list of species identified is given below along with the density, abundance and frequency of occurrence of the identified species.
Table 1: List of species

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Species</th>
<th>Sl. no.</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ageratina riparia</td>
<td>21</td>
<td>Lantana camara</td>
</tr>
<tr>
<td>2</td>
<td>Agrimonia sp.</td>
<td>22</td>
<td>Lygodium sp.</td>
</tr>
<tr>
<td>3</td>
<td>Artemisia vulgaris</td>
<td>23</td>
<td>Macroptilium sp.</td>
</tr>
<tr>
<td>4</td>
<td>Axonopus sp.</td>
<td>24</td>
<td>Medicago sp.</td>
</tr>
<tr>
<td>5</td>
<td>Bidens pilosa</td>
<td>25</td>
<td>Melastoma sp.</td>
</tr>
<tr>
<td>6</td>
<td>Blumea sp.</td>
<td>26</td>
<td>Mimosa sp.</td>
</tr>
<tr>
<td>7</td>
<td>Boehmeria sp.</td>
<td>27</td>
<td>Oplismenus hertelus</td>
</tr>
<tr>
<td>8</td>
<td>Centella asiatica</td>
<td>28</td>
<td>Osbeka sp</td>
</tr>
<tr>
<td>9</td>
<td>Circaea alpina</td>
<td>29</td>
<td>Packera sp.</td>
</tr>
<tr>
<td>10</td>
<td>Crassocephalum crepidioides</td>
<td>30</td>
<td>Parnassia sp.</td>
</tr>
<tr>
<td>11</td>
<td>Cyanotis sp.</td>
<td>31</td>
<td>Phyllanthus sp.</td>
</tr>
<tr>
<td>12</td>
<td>Cyclea sp.</td>
<td>32</td>
<td>Pinus kesiya</td>
</tr>
<tr>
<td>13</td>
<td>Dryopteris sp.</td>
<td>33</td>
<td>Plantago major</td>
</tr>
<tr>
<td>14</td>
<td>Erigeron sp.</td>
<td>34</td>
<td>Potentilla sp.</td>
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<tr>
<td>15</td>
<td>Fragaria vesca</td>
<td>35</td>
<td>Pratia sp.</td>
</tr>
<tr>
<td>16</td>
<td>Grass sp A</td>
<td>36</td>
<td>Pteridium sp.</td>
</tr>
<tr>
<td>17</td>
<td>Grass sp B</td>
<td>37</td>
<td>Rubus sp.</td>
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<tr>
<td>18</td>
<td>Grass sp C</td>
<td>38</td>
<td>Smilax sp.</td>
</tr>
<tr>
<td>19</td>
<td>Grass sp D</td>
<td>39</td>
<td>Urena sp.</td>
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<tr>
<td>20</td>
<td>Isodon sp.</td>
<td>40</td>
<td>Veronica sp.</td>
</tr>
</tbody>
</table>

Species Density

![Bar graph showing species density](chart.png)
Fig. 1: Density of plant species in the selected site

Fig. 2: Abundance of plant species in the selected site

Fig. 3: Frequency class of plant species in the selected site

Abundance

Frequency class

Species
From the ecological study using quadrat method, it can be concluded that the area is dominated by pine trees and herbaceous species. Some of the species are confined to isolated pockets whereas many are widely distributed all over the area. Based on the frequency data it was observes that the vegetation exhibits homogeneity and there is a uniform dispersion of species.

ACKNOWLEDGEMENT

We are grateful to the DBT-Star College Scheme under the Ministry of Science and Technology, Government of India for providing us financial assistance to complete this student’s project.
A Report on
Celebration of International Year of fruits and vegetables
Organized by the Science Department Synod College under DBT- Star College Scheme
Date: 24th September 2021
Time: 1:30pm

Google meet link: https://meet.google.com/ynn-svnw-tqo

The Science departments of Synod College, Shillong under the DBT-Star College Scheme organized a one-day Webinar on the 24th September 2021 as a part of the celebration of International year of fruits and vegetables under the perspective of Agriculture and its role and importance for sustainable Development and Business management in Agriculture. This Webinar was held via google meet platform where a total of 237 numbers of participants registered online through google form and participated in this programme. It was then chaired by the Vice Principal of the college Sir S. Jyrwa, thereafter Dr M. Rani Vice Principal of the college delivered a welcome address for the distinguished speakers, faculties, and students. This programme was enlightened by the two resource persons. Dr. Subal Maibangsa, Principal Scientist and Head of Krishi Vigyan Kendra, Assam Agricultural University, Karbi Anglong, Diphu, Assam and Dr. Gino A. Sangma, Department of Agri Business Management and Food Technology, Tura Campus, NEHU, Tura.

The first speaker was Dr. Subal Maibangsa where he elucidated on the role of horticulture and its importance for sustainable development. Horticulture has an enormous significance in enriching the diets in which fruits and vegetables acts as an integral part of a healthy balanced nutritious diet which contains essential elements, vitamins, antioxidants, minerals etc that help in building a healthy body and mind. On the other hand, insufficient intake of fruits and vegetables is estimated to cause around 14% of deaths from gastro-intestinal cancer worldwide. Furthermore, horticulture can generate income and is a source of livelihood to the people. To meet the needs of the present without compromising the ability of future generations to meet their own needs, he emphasized on how fruits and vegetables production should tend to be labour and skill intensively by practicing good agricultural methods like improved seed and planting materials, integrated pest management, organic farming, soil amendments etc., and by harnessing other techniques of horticulture like multi cropping system, hydroponics, and robotic farming. Following the first speaker, the second speaker Dr. Gino Sangma discussed about Agripreneurship: A way forward. He successfully deliberated about the concepts of Agripreneurship on how agriculture can pave a way in designing, launching, and running new business which is often initially a small business. In action, agripreneur ensures self-sufficient production, food security, income security to farmers, employment generation and national economic growth. In addition, agripreneurship has many potential areas especially in the field of horticulture such as production of agro-inputs, organic farming, floriculture, beverages, processed products and many more.

Thereafter, the thought-provoking and enlightened speech from the two resource persons the webinar was closed with a gratified vote of thanks proposed by Dr. W. kharmawphlang, gratifying everyone associated in the programme, the two resource persons, Principal and Vice Principals of the College, faculties, and students and especially the Department of Biotechnology, Ministry of Science and Technology, Government of India for being the backbone of this celebration.
What is Agripreneurship?

- Agripreneurship refers to entrepreneurship in Agriculture.
- Entrepreneurship in agriculture involves designing, launching, and managing new business which is often small business.

Other prospective areas of ventures:
- Landscaping & Nursery operations
- Plant Clinics
- Micro Irrigation System
- Agri Tourism

Gino is presenting

Rikyntishisha

You

Dawanri: 95 others

Subal: Gino

You

Dawanri: 74 others
A Brief Report On  
Outreach And Awareness Programme on Science and Mathematics  
Organised By  
The Science Department Under The DBT- Star College Scheme, Synod College Shillong  
In Collaboration with The Science Club and Institutional Biotech Hub,  
Sponsored By The Department Of Biotechnology, Ministry Of Science & Technology,  
Government Of India  
Held  
on the 8th of October,2021  
at Mairang Presbyterian Secondary School, Mairang

The Science Department Under The DBT- Star College Scheme, in collaboration with the Science Club and Institutional Biotech Hub Synod College Shillong organised a one day outreach and awareness programme on Science and Mathematics on 8th October 2021 at Mairang Presbyterian English Secondary School. The day began with the registration of all the attendees and the programme was attended by 7 teachers and 97 students from Mairang Presbyterian Secondary School along with 12 teachers and 8 students from the four science department under the DBT- Star College Scheme, Synod College Shillong.

The awareness programme started at 10:30 am and was chaired by Dr. A.J.Iangrai Asst. Professor Department of Zoology, Synod College which was followed by the welcome address from The Principal of Mairang Presbyterian English Secondary School. In her welcome address, she welcomed all the faculty members and students from all the Science Department Under the DBT-Star college Scheme, Synod College, Shillong and also to all the Class IX and X students of Mairang Presbyterian school who were present in the programme. She also expressed her gratitude to the College for choosing Mairang Presbyterian Sec. School as the venue to conduct such programmeas it will help the students in understanding the importance of Science and Mathematics and also to cultivate their interest in the field of science.

The programme was followed by a presentation from Shri D.L. Jyrwa Asst. Professor Department of Mathematics Synod College on the Awareness of Mathematics. Shri DL Jyrwa highlighted the importance of Mathematics as a subject and enlightened the students that Mathematics is a very beautiful subject with fascinating applications different from what they learn in school level. The topic of his presentation was “Shapes, Objects and Numbers” Through his presentation Shri D.L.Jyrwa, beautifully introduced the school students to a higher level of Mathematics in a very simple and innovative way. His enthralling way in explaining and demonstrating the subject has changed the old thinking that maths is a complicated and difficult subject.

Following this presentation, an open quiz was conducted by Shri D.L. Jyrwa to the Class IX and X students based on his presentation topic. All the students were seen to be participating the quiz with full enthusiasm and excitement and prizes were handout to the students for answering the correct answer.

The short awareness programme was ended with votes of thanks by Dr. H. Swer Asst. Professor Department of Botany.
After the awareness programme the students and faculty members were served with a light refreshment which was then followed by demonstration and exhibition of different experiments and exhibits by the faculty members and students of the Science department, under the DBT- Star College Scheme Synod College, Shillong. The students and faculty members displayed their exhibits showcasing the scientific skills and creative thinking through self-designed working models and projects. The experiments and exhibits were beautifully explained and demonstrated to the school students in a simple manner and the students along with the teachers from Mairang Presbyterian School were seen to be interacting well and questioning the scientific concepts and theories behind the different projects and experiments. The demonstration and exhibition programme ended at around 1 pm.

In conclusion, science outreach and awareness programme are wonderful in many ways. They can generate much-needed excitement and interest in science for the younger generations. Such programme helps the students gained a deeper understanding of science and its applications. Effective science outreach is fun and rewarding, but it is also greatly needed at this time in our society. Education is of great importance due to its effect on the development of future citizens. With the advancement of technology, scientific literacy is essential for adequate participation in our society.
A BRIEF REPORT ON
ONE DAY NATIONAL WEBINAR ON WASTE MANAGEMENT
Organized by
Science Departments, Synod College Shillong under the DBT- Star College Scheme
Date: 10:00 am to 3:00 pm

The Science Departments, Synod College Shillong under the DBT- Star College Scheme organised a one day national webinar on Waste Management on the 3rd November, 2021. The webinar was hosted on google meet platform where a total of participants including faculties from different Colleges, universities, research scholar, students as well as officials from government and non-government organizations attended the webinar. The programme started with an inaugural function at 10:00 a.m., chaired by Dr. M. Rani, Vice Principal, Synod College, Shillong and Dr. R.M. Lyngdoh, Principal, Synod College delivered the inaugural address.

The entire programme was divided into two sessions in which each session was allotted with two esteemed speakers.

**Session 1:** The first session was chaired by Dr. M. Rani, Vice Principal, Synod College.

**Lecture-1:** Presented by Prof. Sadhan Kumar Ghosh, Chief Co-Ordinator Centre for Sustainable Development & Resource Efficiency Management Jadavpur University, Kolkata.

Prof. Sadhan Kumar Ghosh specifically talks about Waste management- problems, Solutions and Research. He stated that waste generation is by default, but management or segregation of waste is very important to conserve, preserve and protect our environment and apart from it, waste can be considered also as one of the natural resources where huge income can be generated from it. He suggested some solutions pertaining to the pollutions of microplastics which are very harmful to health viz., legal support, technology support, Bio-medical waste management and e-waste management. Through his findings it was interesting to hear that in India waste management has improve due to implementation of various schemes such as Swatch Bharat mission and many more. He even inspires our College to take up this responsibility to manage the waste by having at least three bins for proper segregation of different types of waste.
Lecture-2: Presented by Prof. Ajay Kalamdhad, Department of Civil Engineering Indian Institute of Technology Guwahati

Prof. A. Kalamdhad delivered a talk on Decentralized treatment of Biodegradable Solid Waste. He highlighted the evolution, generation and dumping of municipal solid waste in India. He added the importance of the management actions of improper garbage dumping sites. He further explained about centralized and decentralized waste management practice and the drawback in the current waste management system in India. Finally he pointed out the necessity of composting of biodegradable waste as a quality standard and the sustainable way for addressing waste issue.
Session II: The second session was chaired by Dr. D. Marngar, HOD (in-charge), Department of zoology, Synod College

Lecture-3: Presented by Prof. Madho Bisht, Department of Environmental Studies, North Eastern Hill University, Shillong.

Prof. Madho Bisht delivered a lecture on the topic “Waste Management in our environment”. He said that waste can be potential resources and a multibillion business to many sectors of the society; it just needs proper management and novel ways of use. As such there is nothing like garbage or waste in nature. Everything is energy and a source of sustenance for one and all. To many others waste is an opportunity not a problem. However, improper and unscientific handling of wastes can caused many problems to the environment and affects all forms of life in the biosphere. He also highlighted the amount of waste produced by India particularly the inhabitants of Meghalaya and also waste generated worldwide. He pointed out that huge amount of money have been utilised for waste management worldwide. Different types of municipal waste have been converted to usable forms. He concluded his lecture by quoting “Nothing is waste, everything is a resource or a form to pass energy to another form”.

Lecture-4: Presented by Shri. B.S. Sohliya, Chief Executive Officer, Shillong Municipal Board, Shillong.
Shri. B.S. Sohliya delivered a lecture on the topic “Waste Management in Shillong”. He briefed on the history of Shillong municipality and waste management carried by the different authorities like the Shillong Municipal Board (SMB) in municipality areas, Shillong cantonment board in cantonment areas and the local traditional institutions in other census towns of the state. The speaker highlighted the main activities of SMB like giving awareness and sensitise the public about managing municipal solid waste in a hygienic and scientific manner, segregation of solid waste at source, distribution of colour-coded bins to every household under the ADB & MoHUA funded NERCCDIP. He also discussed on the collection, transportation and treatment of biodegradable, non-biodegradable and hazardous waste produce by residential, institutional, hospitals and commercial areas of Shillong. The speaker also mentioned other waste management activities like installation of TPD compost plant near the landfill site, setting up of waste recovery centre inside and outside of Shillong municipal board and acquisition of new landfill site in the state. He urged and encouraged the inhabitants of Meghalaya to take active participation in waste management starting from the individual level. He also added that members of the community should be stakeholders and contributors to a clean, healthy and green environment.
The webinar features insights on various waste management strategies and offered the participants an opportunity to engage with leading and prominent speakers who are experts in the field of waste management. At the end of each lecture, participants were offered to pose their queries via chat box and several interesting questions such as issues relating to waste management, monitoring of air emissions from landfills, hazardous waste processing were asked by the participants.

The webinar concluded with a vote of thanks by Dr. A.J. Iangrai, Co-ordinator, DBT Star College Scheme.
A REPORT ON
THE CELEBRATION OF NATIONAL SCIENCE DAY, 2022
Organised by the Science Department under the DBT-Star College Scheme, Synod College Shillong
Venue: College Auditorium
Date: 28th February 2022
Time: 10:00 am

The Science Departments under the DBT- Star College Scheme, in collaboration with the Students Science Club and Environment Club, Synod College Shillong celebrated the National Science Day on the theme “Integrated Approach in Science and Technology for a Sustainable Future” on the 28th February, 2022 at Synod College Auditorium.

The programme started with registration of students and teachers in which a total of 85 participants attended, thereafter the celebration was started at 10 A.M and was chaired by Dr. M. Rani, Vice Principal which was followed by the welcome address from Dr. R.M. Lyngdoh, Principal, Synod College, Shillong.

On this event, a special lecture was delivered by an eminent speaker Prof. A. Chatterjee, Department of Biotechnology & Bioinformatics, NEHU, Shillong. The speaker highlighted the significant role of science in society and the need to engage the wider public in debates on emerging scientific issues. It also underlines the importance and relevance of science in our daily lives. The speaker also shed lights through his research findings that taking tobacco and tobacco products like raw beetle nuts liberate a chemical compounds such as alkaloids which are responsible for the cause of many cancers. At the end of the presentation, the participants were allowed to interact with the speaker.

Following this presentation, certificates and mementos were distributed to all the winners of the online science exhibition organised by the Science club, Synod College, Shillong. Certificate of Participation was also given to all the participants.

The celebration was ended with vote of thanks delivered by Dr. G. Lyngdoh, Co-ordinator IQAC, gratifying everyone associated in the celebration, especially the department of Biotechnology, Ministry of Science and Technology, Government of India for being the backbone of this celebration.
A Report on
World Water Day Celebration
At Cherra Presbyterian Secondary School Sohra

Theme: Ground water making the invisible visible

Organized by the Science department Synod College Shillong
under the DBT-Star college Scheme

Date: 22\textsuperscript{nd} March 2022
Time: 10.00 AM - 4.00 PM

World water Day 2022 was celebrate at Cherra Presbyterian Secondary School Sohra on the 22\textsuperscript{nd} March 2022, the science department of Synod College, Shillong under the DBT-Star College Scheme have organized some special activities to commemorate this day. This celebration was held at the School campus. The total number of participants registered and participated in this programme was 303. The celebration was started by the inauguration programme followed by activities such as science exhibition, Model exhibition, painting and extempore speech in which the students of six different schools were participated.

**Inaguration programme:** The inauguration programme was chaired by the Head of the Department Zoology, Synod College Dr. D. Marnagar, thereafter Smt. V.M.D Wanbah Principal of Cherra Presbyterian Secondary School delivered a welcome address for the faculties of Synod College, teachers and students from different school and everyone who joined the celebration. On her speech she expressed her pleasure to have the celebration at Cherra Presbyterian Secondary School which happens to be the year that the school itself celebrated the 175 years of journey. This programmed was elucidated by the speech from Dr. W. Kharmawphlang Coordinator of DBT-Star College Scheme Synod College. On her speech she highlighted the importance of water in our life and history behind commencement of World water Day celebration. She presented some thought-provoking on water crisis in our State as well as in the world, practical tips to save water in routine life, the important of ground water as the primary sources of freshwater catering to the domestic and agro needs of our country and ground water depletion. She also emphasized that it is extremely important to preserve and conserve the ground water and that is by preserving our environment and ecosystem. She gave a call that each one of us must do our bit to sustain the environment and ecosystem in order to preserve the water resources and reach the goal by 2030.
Furthermore, she elucidated the project of Synod College on preservation and rejuvenation of spring water in Wahktieh Nongrim and Maraikaphon Sohra. She wishes all the participants who are taking part in various competitions and there after she inaugurated the programme. The inauguration programme was closed with a vote of thanks from Shri. M.D. Wanswett, gratifying the Principal and Vice-Principal of Synod College, Principal of Cherra Presbyterian Secondary School, the chairman of the programme, the Organizing Committee, Dr W. Kharmawphlang for delivering her address and for sharing her brief insight on the theme, teachers and students of various schools, the DBT-Star College Scheme Department of Biotechnology, Ministry of Science and Technology, Government of India for sponsoring the event and for everyone who associated in the celebration.

On this occasion, several activities were organized including model exhibition competition, Painting Competition, and extempore speech related to this special day. Students of class 5th to 11th from different schools have actively participated in the competition. The number of student who is participating in different activities is as follows: 11 in model exhibition competition, 11 in painting competition, and 7 in extempore speech competition. In addition, 21 students from the Botany, Chemistry, Physics, and Zoology Department, Synod College performed the Science Exhibition.

The celebration was closed with a valedictory programme. The programme was chaired by Head of the Department Physics, Synod College, Mrs. G. Kharsyntiew. Vice Principal of Synod College Dr. M. Rani delivered a valedictory address and explained in brief that water is a precious source imperative for our survivals and he also mentioned the techniques how to preserve and conserve water in order to ensure availability of water for our future generation. The Vice Principal of Synod college and Principal of Cherra Presbyterian Secondary School have awarded a trophy and distributed the certificate to the winners and to all the participants in different competitions. Finally, Shri. N. Kharbani proposed the vote of thanks, he thanked the Principal and Vice-Principal of synod College, Principal of Cherra Presbyterian Secondary School, the chairperson of the programme, teachers and students of various schools, the DBT-Star College Scheme Department of Biotechnology, Ministry of Science and Technology, Government of India for making the programme a grand success.