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SECTION I

**A PROFILE OF THE COLLEGE | VISION | MISSION |
MOTTO | PRINCIPAL'S MESSAGE**

PROFILE OF THE COLLEGE

Mairang Presbyterian Science College is essentially a rural Science College located at Mairang in Eastern West Khasi Hills District. The College is the only Science College in Eastern West Khasi Hills District. Interestingly, it is the only College in the State which is devoted exclusively to the teaching of Science and Mathematics. The College is situated at Mairang town which is the Headquarter of Eastern West Khasi Hills District. Mairang itself has a great historical significance in that it is the traditional headquarter of Hima Nongkhlaw where, *U Tirot Sing*, the great Khasi hero and ruler and foremost freedom fighter of North East India ruled till his death in 1835 as a prisoner of the British Empire in Dhaka, Bangladesh. Mairang is also the Headquarter of Mairang Presbytery, a constituent unit of Khasi Jaintia Synod Sepngi which is under Presbyterian Church of India.

The College is a Co-educational Institution established by the Mairang Presbytery during 2006 and registered under Meghalaya Societies Registration Act, 7 of 1990 (vide No.NRS/MPC-843/2004 dated 19th March, 2004) and affiliated to North Eastern Hill University, Shillong

VISION

“To promote academic excellence in Science and Mathematics Education as well as developing high standards of conduct and integrity in a Christian environment primarily for the economically disadvantaged rural tribal students and enabling them to prepare for a life of purpose, dignity and dynamism for service to mankind”.

MISSION

The College was established with the aim to meet the long felt needs and aspirations of the youths, parents and residents of Eastern West Khasi Hills District and its adjoining Districts viz. South West Khasi Hills and West Khasi Hills District at large, particularly the vast majority of economically disadvantaged rural tribal students who could not afford to pursue higher studies in Science Streams in Shillong or other places outside their district, State, region and country in general. The College is committed to striving for achievement of high academic standards and excellence in Science and Mathematics Education and making it an Institution of excellence.

MOTTO

“Arise and Shine”

COLLEGE EMBLEM



The logo depicts the rising sun on a clear azure sky radiating its resplendent rays bathing the verdant hills and rich valleys. It symbolizes the dawn of a new era radiant with enlightenment and boundless possibilities. The motto itself is a call to the young learners to get up, forge ahead and develop their full potential. The book stands for knowledge, skills and wisdom, empowering them to convert challenges into opportunities



“He who makes two blades of grass grow where one grew before is the benefactor of mankind; but he who obscurely worked to find the laws of such growth is the intellectual superior as well as the greater benefactor of the two”.

- Henry A. Rowland

Message


Dear Student,

My warmest welcome to you for opting Science as your course of study which you can use as a launch pad for your future career. The study of Science is always a challenging task but it is replete with immense opportunities. However, success is assured if you pursue it with interest and determination.

I assure you that learning of Science, taken in its true spirit, is a joyful experience and an interesting voyage of discovery.

My very best wishes to you in all your endeavours.

God bless you,


(R Thangkhiew)
Principal

SECTION II

ADMISSION | FEE STRUCTURE

ADMISSION PROCEDURE

Prospectus and Application forms for admission shall be available in the College Office/College Website (<https://www.sciencecollegemairang.in>) immediately after the declaration of the SSLC and HSSLC Examination Results of various Boards (MBOSE, ICSE, CBSE, etc)

PROCEDURE TO APPLY

1. Duly filled in Application Form along with photo copies of attested testimonials are to be submitted to the College Office on or before the last date of submission as notified by the College
2. Students seeking admission must submit their application forms accompanied with the following :
 - Marksheet and Admit Card of the last Examination passed
 - Recent passport size photograph pasted on the application form
3. Incomplete admission forms without the necessary documents will be rejected. The College reserves the right to refuse admission to any applicant at its own discretion without assigning any reasons
4. In case any candidate is found to have furnished false information of certificates etc. he/she will be debarred from admission
5. Candidate should write clearly the subject chosen in order of preference as given in the prospectus
6. Candidate must ensure that address and contact numbers are entered correctly in the application form. The Institute will not be responsible for any loss in transit or for incorrect address given by the applicant in the Application Form
7. Selected candidates are to pay the Fees in Meghalaya Rural Bank, Mairang Branch and submit the Fee receipt from the Bank to the College Office

PROCEDURE OF SELECTION

- Admission shall be selected in order of merit on the basis of the result of the Board Examination
- List of Selected candidates will be displayed in the College Notice Board
- Selected candidates are to pay the Fees in Meghalaya Rural Bank, Mairang Branch and submit the Fee receipt from the Bank to the College Office
- Selected candidates should pay the Fees within the stipulated date failing of which the seat of such candidate shall be forfeited
- In case the seats are not filled after the last date of Admission for selected candidates, the remaining seats will be given to those in the waiting list

When Admission is granted, the student must submit the following documents to the College Office within 15 (fifteen) days from the date of Admission

- Self-attested copy of Marksheet issued by the Board
- Self-attested copy of SSLC Admit Card/Birth Certificate
- Self-attested copy of Scheduled Tribe/Caste Certificate
- An original Transfer Certificate from the Institution last attended
- A Testimonial of Character from the Institution last attended
- An original Migration Certificate for student coming from Boards other than MBOSE
- Disability Certificate in case of Physically challenged

Note: Seats are reserved for Sport persons representing State/National level and also for physically challenged applicants

B.Sc (Odd Semester)

| Sl. No | Particulars | Amount (₹) |
|--------|---|------------|
| 1 | Admission fee | 500 |
| 2 | Tuition fee @ 750 pm | 4500 |
| 3 | Session fee | 8160 |
| 4 | Lab fee @180 per subject per month | |
| | ➤ PCM | 2160 |
| | ➤ CBZ | 3240 |
| 5 | Lab expendables @60 per subject per month | |
| | ➤ PCM | 720 |
| | ➤ CBZ | 1080 |
| 6 | Library fee | 600 |
| 7 | Miscellaneous Fee | 1500 |
| | Total : PCM | 18,140 |
| | CBZ | 19,580 |

B.Sc (Even Semester)

| Sl. No. | Particulars | Amount (₹) |
|---------|-----------------------------------|------------|
| 1 | Admission fee | 500 |
| 2 | Tuition fee @ 750 pm | 4500 |
| 3 | Lab fee @180 pm | |
| | ➤ PCM | 2160 |
| | ➤ CBZ | 3240 |
| 4 | Lab expendables @300 per subjects | |
| | ➤ PCM | 720 |
| | ➤ CBZ | 1080 |
| 5 | Library fee | 600 |
| | Total : PCM | 8480 |
| | CBZ | 9920 |

Total Fee PCM (Odd + Even) = ₹ 26,620/-

Total Fee CBZ (Odd + Even) = ₹ 29,500/-

Detail of Fees for Degree

| Sl. No | Particular | Total |
|--------|-------------------------|-------|
| 1 | Session Fee | 3000 |
| | College Development fee | 1000 |
| | Maintenance fee | 3000 |
| | Building fee | 660 |
| | Curricular fee | 500 |
| | Sports Fee | |
| 2 | Miscellaneous Fee | 1500 |
| | Registration fee | 160 |
| 3 | Centre fee | 400 |
| 4 | Enrolment fee | 100 |
| 5 | NEHU Certificate | 400 |
| 6 | ID/Bill Book etc | 340 |

SECTION III

PROGRAMMES AND COURSE STRUCTURE

COURSES OFFERED BY THE INSTITUTION

The College is a purely Degree Science College and offer only the Under Graduate Honours Degree Programme in Science with the following Subjects:

- Physics
- Chemistry
- Mathematics
- Botany
- Zoology

Duration of the Course

- The duration of the Honours Degree Course shall be of three years, evenly spread over 6(six) Semesters Odd and Even
- The Odd Semester consists of I,III & V Semester
- The Even Semester consists of II,IV & VI Semester

Eligibility Criteria

- A student shall be eligible to seek admission to the BSc Honours Course if he/she have passed the class XII Examination in Science Stream from any recognized Board in India or any other Examination considered equivalent by the University

Distribution of Papers/Marks Semester-wise

| Semester/ Subject/ Paper | Sem. I | Sem. II | Sem. III | Sem. IV | Sem. V | Sem. VI | Total Marks |
|-----------------------------|--------|---------|----------|---------|--------|---------|----------------|
| English | - | - | - | - | 100 | - | 100 |
| Environmental Studies | - | - | - | - | - | 100 | 100 |
| Elective 1 | 100 | 100 | 100 | 100 | - | - | 400 |
| Elective 2 | 100 | 100 | 100 | 100 | - | - | 400 |
| Elective (Hons) | 100 | 100 | 100 | 100 | 200 | 200 | 800 |
| Total Marks | 300 | 300 | 300 | 300 | 300 | 300 | 1800 |

SUBJECT OFFERED

Compulsory Subjects

- English : 5th Semester
- Environmental Studies : 6th Semester

Subject Combination

- As per the direction of the North Eastern Hill University (*vide No. CDC/B.3/2011/Pt-I/2743 dated 25th April, 2014*), students can choose the following subject combination

| Honours | Elective Group-A | Elective Group-B |
|-------------|------------------------|------------------|
| Chemistry | Physics, Mathematics | Botany, Zoology |
| Physics | Mathematics, Chemistry | |
| Mathematics | Physics, Chemistry | |
| Botany | Chemistry, Zoology | |
| Zoology | Chemistry, Botany | |

COURSE STRUCTURE FOR BACHELOR OF SCIENCE (THEORY)

| Subject | Semester I | Internal | External | Total |
|------------------|---|-----------------|-----------------|--------------|
| Chemistry Hons | EH 101: Inorganic, Organic & Physical | 25 | 75 | 100 |
| Physics Hons | Paper I: Mechanics, Optics & Acoustics | 25 | 75 | 100 |
| Mathematics Hons | GHS 11: Algebra –I & Calculus I | 25 | 75 | 100 |
| Botany Hons | Paper 1: Algae, Bryophytes and Pteridophytes | 25 | 75 | 100 |
| Zoology Hons | Paper I A : Systematics, Animal Diversity & Evolution | 25 | 75 | 100 |

| Subject | Semester II | Internal | External | Total |
|------------------|---|-----------------|-----------------|--------------|
| Chemistry Hons | EH 201: Inorganic, Organic & Physical | 25 | 75 | 100 |
| Physics Hons | Paper II: Electromagnetism and Electronics I | 25 | 75 | 100 |
| Mathematics Hons | GHS 21: Geometry & Vector Calculus | 25 | 75 | 100 |
| Botany Hons | Paper 2: Gymnosperms, Paleobotany, Morphology and Anatomy | 25 | 75 | 100 |
| Zoology Hons | Paper 2 A : Cell Biology & Genetics | 25 | 75 | 100 |

| Subject | Semester III | Internal | External | Total |
|------------------|---|-----------------|-----------------|--------------|
| Chemistry Hons | EH 301: Inorganic, Organic & Physical | 25 | 75 | 100 |
| Physics Hons | Paper III: Thermal Physics & Waves | 25 | 75 | 100 |
| Mathematics Hons | GHS 31: Algebra –II & Calculus II | 25 | 75 | 100 |
| Botany Hons | Paper 3: Angiosperms, Taxonomy, Economic Botany, Ethnobotany and Phytogeography | 25 | 75 | 100 |
| Zoology Hons | Paper 3 A : Animal Physiology, Endocrinology, & Biochemistry | 25 | 75 | 100 |

| Subject | Semester IV | Internal | External | Total |
|------------------|--|-----------------|-----------------|--------------|
| Chemistry Hons | EH 401: Inorganic, Organic & Physical | 25 | 75 | 100 |
| Physics Hons | Paper IV: Atomic, Nuclear and Solid State Physics | 25 | 75 | 100 |
| Mathematics Hons | GHS 41: Statics & Dynamics | 25 | 75 | 100 |
| Botany Hons | Paper 4: Microbiology, Mycology and Plant Pathology | 25 | 75 | 100 |
| Zoology Hons | Paper 4 A : Developmental Biology, Ecology & Economics Zoology | 25 | 75 | 100 |

| Subject | Semester V | Internal | External | Total |
|------------------|---|-----------------|-----------------|--------------|
| Chemistry Hons | H 501: Inorganic, Organic H 502: Physical | 25 | 75 | 100 |
| Physics Hons | Paper V: Mathematical Physics 7, Quantum Mechanics Paper VI : Electrodynamics & Electronics - II | 25 | 75 | 100 |
| Mathematics Hons | H 51: Elementary Number Theory & Advanced Algebra H 52: Differential Equations & Advanced Dynamics | 25 | 75 | 100 |
| Botany Hons | Paper 5: Plant physiology and Biochemistry Paper 6 : Ecology and Conversation Biology | 25 | 75 | 100 |
| Zoology Hons | Paper 5 A : Functional Anatomy, Zoogeography & Adaptations Paper 6 A: Cell and Molecular Biology & Genetics Systemtics, Animal Diversity & Evolution | 25 | 75 | 100 |

| Subject | Semester VI | Internal | External | Total |
|------------------|--|-----------------|-----------------|--------------|
| Chemistry Hons | H 601: Inorganic & Organic H 602: Physical & Seminar | 25 | 75 | 100 |
| Physics Hons | Paper VII: condensed Matter Physics Paper VIII : Atomic & Molecular spectroscopyI | 25 | 75 | 100 |
| Mathematics Hons | H 61: Advanced Calculus H 62: Optional Paper | 25 | 75 | 100 |
| Botany Hons | Paper 7: Molecular Biology, Genetics, and Plant Breeding Paper 8 : Plant reproductive Biology and Biotechnology | 25 | 75 | 100 |
| Zoology Hons | Paper 7 A : Biochemistry, Animal Physiology & Endocrinology Paper 8 A: Developmental Biology, Environmental Biology & Biotechnology | 25 | 75 | 100 |

Examination and Evaluation

- Examinations will be conducted by the University at the end of each Semester.
- Students shall have to clear the Degree Course within 5(five) academic years or 10(ten) Semesters.
- Evaluation in each Course shall be on the basis of performance through Continuous Assessment *viz.* Internal Examination/ Assignment/ Project/ Seminar and *etc.*
- Three Internal Test will be conducted by each Department out of which the best two will be counted for Internal Assessment

SECTION IV

GENERAL INFORMATION

GENERAL INFORMATION

SPORTS

Besides their studies, students are encouraged to take part in games and sports. The College celebrates its College week every year and every student is encouraged to take part in sports and other activities organized during the College week



Officer in-Charge: Shri. B. Nongrang

CO-CURRICULAR AND OTHER EXTENSION ACTIVITIES

With a view to assisting student in self-discovery and development, students are encouraged to take part in various co-curricular activities organized by the College as well as by the other Authorities and Organizations



Clubs

- Electoral Literacy Club : Officer in- Charge : Shri B. Nongrang
- Youth Red Ribbon Club : Officer in- Charge : Shri S. Myrthong

National Service Scheme (NSS)

The College has started the National Service Scheme (NSS) in the year 2019. Students can join NSS while they are in the College.

The main objectives of NSS are to:

- Understand the community in which they work
- Understand themselves in relation to their community
- Identify the needs and problems of the community and to involve them in problem solving
- Develop among themselves a sense of social and civic responsibility
- Utilize their knowledge in finding practical solutions to individual and community problems
- Develop competence require for group-living and sharing of responsibilities
- Gain skills in mobilizing Community Participation
- Acquire Leadership qualities and Democratic attitudes
- Develop capacity to meet emergencies and natural disasters
- Practice National Integration and Social Harmony



Officer in- Charge: Shri D. Marbaniang

LIBRARY

The College is partially computerized and has a good collection of books of different titles. Students are encouraged to develop the habit of reading and to use the College Library for reference works and group studies. Questions banks are also kept in the Library for quick reference and as modes of practice to the students



Environment Consciousness and Sustainability

The College expresses its commitment to protection, conservation and promotion as well as for its sustainability in all aspects through Green Technologies viz. Rain Water Harvesting, Waste Segregation, Waste Management, reduce the use of Plastic items in the College Campus, increase of the College Greenery through Tree Plantation Drive and other activities to increase awareness to protect the Environment

The College has constituted the *Green Campus Development Committee* to look after all matters all matters related to Protection, Conservation and Maintenance of Green Environment within the College premises as well as its surrounding areas through active participation of Teachers , Students and Community



FIELD TRIPS

As part of their studies, the College through the Life Science Departments has been organizing field trips every year to enable the student to explore the rich ecological diversities of any pre-selected area and to go into the depth of the subjects that they have studied. During such Field trips efforts are made to encourage students to participate in activities which aim at conservation of the environment



RAGGING

In compliance with the directives of the Hon'ble Supreme Court of India and the UGC Regulation on curbing the menace of Ragging in Higher Educational Institutions, 2009, the College has formed the Anti-Ragging Cell consisting of the following members:

- Shri P. Marbaniang : Chairman
- Shri L. Gashnga : Member
- Shri W. Kharsyntiew : Member
- Smt. S. Rani : Member
- Smt. M. Warjri : Member

- Anyone found guilty of ragging in any form (physical, verbal, and mental) is liable to be punished.
- Admission may be refused if the applicant is found to have indulged in ragging in the past and if it is noticed later that he/she has indulged in ragging he/she shall be expelled from the College

CODE OF CONDUCT

Attendance

- Students are required to have a minimum of 80% attendance
- Any absence from any class must be informed to the Principal/Vice Principal and the Heads of Department
- The attendance of students will be monitored and displayed in the College Notice Board every month. Students with less attendance percentage will be called for explanation by the concerned Department
- Any student who is absent continuously for 15(fifteen) days without prior intimation will have his/her name struck off from the register

Discipline

- All students are to bring the College Identity Card every day and should produce whenever asked for by the College authority
- All students are expected to dress decently and appropriately to the College
- Students must read the College Notice Board regularly. Ignorance of any notification will not be accepted as an excuse for not performing the required activity
- Practice of any unfair means during examinations will lead to immediate expulsion from the College
- Students shall maintain discipline inside the College Campus. Misconduct or misbehavior of any kind towards the teaching and non-teaching staff and fellow students will be dealt severely
- Students must respect Institutional property. All students should maintain cleanliness inside the classrooms and within the campus
- Communal harmony is to be preserved. Every student should behave in a disciplined manner both in words and actions.
- Students cannot take part in any outside activities under the name of the College, without prior permission from Principal.
- Use of intoxicants including drugs, chewing of betel nuts and tobacco is prohibited within the College Campus
- Using of Mobile Phone inside the class room and in the campus is strictly prohibited
- Using of Social media/other media to speak or write against the College, Teachers or the Department is strictly prohibited

SECTION V
DEPARTMENT PROFILE

CHEMISTRY DEPARTMENT

The department offers undergraduate course in Chemistry. It focuses in focuses Inorganic, Organic and Physical Chemistry with introduction to theoretical and laboratory techniques in Green Chemistry/Environmental Chemistry and Nano Chemistry.



Career Options

Junior or Senior Chemists in Industries and R&D Labs, Forensic Scientist, Geochemist, Analytical Chemist, Chemistry teacher...

Further Studies

Post-Graduation in Chemistry and other related subjects. Research in Chemistry and related fields like Nano Chemistry, Green Chemistry and other related fields.

PHYSICS DEPARTMENT

The department offers under graduate course with Physics honours. During the course, the students are introduced to the varied branches of Physics like Atomic and Nuclear Physics, Solid State Physics, High Energy Physics, Quantum Mechanics, etc. orienting them for their higher studies in Physics and allied branches. The department conducts various activities for the students, with an eye on the ultimate goal of the Department which is, to imbibe in the students, a genuine interest in Physics.



Career Options

Teacher, Scientist, Astronomer, Physicist, Data Science, Geo-Physicist, Optical Engineering, Medical Physicist, Nanotechnology, Astrophysicist, Nuclear Engineer, etc.

Further Studies

Post-Graduation in Physics and Research in Physics, MCA or M. Tech, Studies in DRDO, ISRO, Atomic research studies, Aeronautic related studies, Higher studies in Geo Physics, Astro Physics and Defence areas

BOTANY DEPARTMENT

The department offers under graduate course in Botany (Honours). The course includes learning of Basic Botany, Ecology, Lower plant groups, Angiosperms, Taxonomy, Microbiology, Genetics, Cell and Molecular biology, Gymnosperms, Plants physiology, Anatomy, Paleobotany, etc. along with related practical knowledge.



Career Options

Ecologist, Taxonomist, Conservationist, Forester, Plant Explorer

Further Studies

Post-Graduation in Botany, Bio-Physics, Developmental Botany, Genetics, Ecology, etc.
Research in Ecology, Plant Physiology, Molecular Biology, Plant Biochemistry, etc.

MATHEMATICS DEPARTMENT

B.Sc. in Mathematics is a program of study in Mathematics and its related disciplines like Statistics, Physics, Economics...

**Career Options**

Banking, Insurance and Finance Sectors,
Teaching, Research, Financial Analyst...

Further Studies

Post-Graduate in Mathematics, MCA, M.Tech, etc. Preparation for CAT/MAT examinations.

ZOOLOGY DEPARTMENT

The department offers under graduate courses with Zoology as honours. The course is meant to provide students with an in depth knowledge of animal diversity and animal structure and function. During the course, students will have the opportunity to learn both from theory and practical hands-on experience. They will also have the chance to carry out field trips for their study.

Career Options

Wildlife Curator, Forest Service, Conservation Wildlife Education, Lab Technicians, Forensics Civil Services, Para-Medicals...etc.

**Further Studies**

Post Graduate and Research studies in Zoology, Biotechnology and related fields.

IMPORTANT INFORMATION

| | |
|-----------------------|---|
| Sponsoring Body | : Mairang Presbytery |
| Year of establishment | : 2006 |
| Principal | : Shri R. Thangkhiew |
| Mobile No. | : 9856008867/ 8787514809 |
| College Email ID | : mpssccollege@gmail.com |
| College Website | : https://www.sciencecollegemairang.in |