

## VISION

To achieve eminence in the field of quality technological education and research.

## MISSION

To develop SMIT into an institute of excellence capable of producing competent techno managers who can contribute effectively to the advancement of society.

## OBJECTIVES

- To provide wholesome education to meet the intellectual aspirations of students.
- To equip students with techno managerial skills to enable them to take their assigned role in the industry.
- To inculcate essential ethics and values to meet the spiritual needs of the students.
- To provide a sound institutional environment nurturing emotional strength, a healthy mind, body and resilience amongst the students.





## SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY

(A Constituent College of Sikkim Manipal University)

- Bachelor of Technology (B.Tech.)
  - Civil Engineering
  - Computer Science & Engineering
  - Electrical and Electronics Engineering
  - Electronics and Communication Engineering
  - Electronics and Instrumentation Engineering
  - Information Technology
  - Mechanical Engineering
- Master of Technology (M.Tech.) in Power Electronics
- Master of Business Administration (MBA)
- Master of Computer Applications (MCA)

Majitar, Rangpo Pin -737136, East Sikkim

Website: <http://smit.smu.edu.in>

E-mail: [smit@smu.edu.in](mailto:smit@smu.edu.in)

Phone: Admission Cell: 03592 - 246466, 246020

EPABX: 246216, 217, 219, 220 extension 221, 247

Fax: 03592- 246467,246112

Mobile No: +919635527557, +918900388724

**(Above phone numbers will be fully functional from 7. AM to 11 PM everyday  
commencing from 1st January 2013 to 30th September 2013)**



The Sikkim Manipal Institute of Technology was established in 1997 as a constituent college of Sikkim Manipal University and is approved by AICTE. SMIT had the distinction of prestigious accreditation for engineering disciplines by National Board of Accreditation (NBA)/ACCR-860/06 dated 22 January 2008. SMIT also had the distinction of ISO 9001 accreditation vide NS-EN ISO 9001:2000 for all its courses. The Engineering College has its own campus at Majhitar, Rangpo East Sikkim. The institute's location on the banks of river Teesta, surrounded by green hills, adds to the vibrancy of the campus and makes it an ideal place for learning. It is safe, secure and provides excellent academic environment.

5

Ranked 5th in East & Central Region amongst Top Engineering Colleges.  
Source: CSR-GHRDC Engineering Colleges Survey 2012

6

Ranked 6th amongst Top Engineering Colleges of Excellence.  
Source: CSR-GHRDC Engineering Colleges Survey 2012

23

Ranked 23rd in Placement/Industry Interface/USP.  
Source: CSR-GHRDC Engineering Colleges Survey 2012

23

Ranked 23rd in Percentage of Faculty with PhD.  
Source: CSR-GHRDC Engineering Colleges Survey 2012

The Institute attracts students from all over the country and has over 3000 students enrolled in the various disciplines. SMIT has a well-endowed faculty with 210 full time teachers including 58 PhDs and 80 M. Techs/MCAs to deliver quality education. In addition, the Institute also enjoys the services of 20 adjunct faculty members to supplement the talent available within the campus. State-of-the-art infrastructure, a well-stocked library, sophisticated technical labs set up in collaboration with industry and closeness to nature make it one of the best engineering institutes in the country today. There are 26 research projects sponsored by various organisations like DRDO, DST, DBT, AICTE etc., being undertaken by the Institute.

The Institute has a vibrant Training and Placement Department, which ensures campus placements for the students. Almost all eligible final year B.Tech. students passed out in June 2012 have already been placed in top companies like TCS, HCL, WIPRO etc.





## Message From The Director



At Sikkim Manipal Institute of Technology, it is our endeavor to achieve eminence in the field of quality technological education and research. Our dedicated team of faculty is committed to provide wholesome education to meet the intellectual aspirations of students and equip them with techno managerial skills that will enable them to take their assigned role in the industry as thorough professionals.

Our aim plus is to imbibe all those qualities which are essential to make our students contribute effectively to the advancement of society.

The institute has state-of-the-art infrastructure and an environment conducive to meet academic, co-curricular and extracurricular aspirations of the students.

I congratulate you on choosing Sikkim Manipal Institute of Technology (SMIT). We are sure that your stay with us will enable you to become a thorough professional in the technical field chosen by you. We look forward to welcoming you to our campus for a very fruitful, enjoyable and rich learning experience.

With Best Wishes

**Major General Dr. SS Dasaka, SM, VSM (Retd.)**

Director

SMIT

## 1. ACADEMIC DEPARTMENTS

### 1.1. Electronics & Communication Engineering

The Department offers Bachelor of Technology (B.Tech.), Master of Technology (M.Tech.) and PhD programmes. Students enrolled in this stream have the opportunity to work in labs equipped with state-of-the-art equipments in the areas of Analog Circuits, Digital Systems, Communications, Microprocessors, Computer Programming, MATLAB, Microwaves, PCB, DSP and Power Electronics etc. The Department also has VLSI and Image Processing Laboratories and 4G (LTE) Lab experimental setup for lightening fast wireless internet.

One DRDO and two AICTE funded projects worth ₹ 9.1 crores and design/development of Digital Array RADAR (DAR) are being undertaken by the Department.

### 1.2. Computer Science & Engineering

The Department offers Bachelor of Technology (B.Tech.), Master of Technology (M.Tech.), Bachelor of Computer Applications (BCA), Master of Computer Applications (MCA), one year PG Diploma in Geo-Informatics and PhD programmes. The Department has well-equipped server based LAN connected labs with state-of-art facilities for conducting training in C/C++, DBMS, Compiler Design, Data Structures etc. It also has multi computing facility for Robotics, Networking, Distributed Systems and Geo - Informatics.

Six AICTE sponsored projects worth ₹ 1 crore and pilot project for Cadastral Mapping for Government of Sikkim are being undertaken by the Department. It has been organising biennial ISRO sponsored workshop on RS & GIS.

### 1.3. Information Technology

The Department offers Bachelor of Technology (B.Tech.), Master of Technology (M.Tech.) and PhD programmes. The department undertakes research and development activities in cutting edge technologies. The department conducts research in areas like Computer Networks, Distributed Systems, Data Mining, Embedded System, RFID, Smart Cards, Information Security etc. Research activities on Wireless Sensor Network, Image Processing, Voice and Internet Protocol are being undertaken by the Department.

### 1.4. Electrical & Electronics Engineering

The Department offers Bachelor of Technology (B.Tech.), Master of Technology (M.Tech.) and PhD programmes. The Department has well-equipped labs, Electrical Machines Lab, Microprocessor/Microcontroller Lab, Power Electronics Lab, Communication Lab, Electrical Circuits and Measurement Lab, Control Lab, Advanced Programming Lab, Analog and Digital Electronics Lab etc. Simulation/ Programming labs have latest softwares like MATLAB, PSPICE, C++, CASPOC and ETAP.

AICTE funded laboratory setup under MODROBS has been undertaken. Research activities on Non-Linear Dynamics of Power Converters, Secure Communication using Power Converters, Radial Power Distribution and Electrical Drives are being undertaken by the Department.

### 1.5. Mechanical Engineering

Mechanical Engineering Department offers Bachelor of Technology (B. Tech), Master of Technology (M. Tech) and Ph.D programmes. The Department has well equipped laboratories and workshop with latest equipments/ machineries as per the requirement of modern industries. Besides the conventional machine tools, the department also has CNC Lathe and Milling Machines, Electro-Discharge Machine (EDM) and Diode Laser Machine, World Class Analytical Balance, Metallurgical Microscope of Leica DM2500, Various Softwares such as Cutviewer Mill and Lathe, CADIAN, Pro-E (Creo) and ANSYS V14 in the Computer Aided Design and Manufacturing Lab. Fluid Mechanics Lab, Thermal Engineering Lab, Machine Dynamics Lab, Metrology Lab, Automobile Lab, Strength of Materials Lab have state-of-art facilities for academics and research. Apart from quality teaching, the faculty members are actively engaged in research and consultancy in the areas of Micro and Nano-Machining, Energy Management, Conventional Machining, Production Management, Operation Research and Quality Management.

### 1.6. Civil Engineering

The Department offers Bachelor of Technology (B.Tech) programme. The Department has well established state-of the- art, Structural Engineering, Geotechnology, Survey, Geology, Environment and Fluid Mechanics laboratories. Students of the Department are being exposed to the latest advancements in design and construction technologies with sufficient field exposures.

### 1.7 Electronics and Instrumentation Engineering

The Department offers Bachelor of Technology (B.Tech) programme. The Department produces highly skilled professionals competent to handle complex industry problems and provide real time solutions and develop competency in electronics & instrumentation design and testing. The Department has specialized laboratories like Linear Integrated Circuits, Digital System Design, Process Control, Industrial Instrumentation, Medical Instrumentation and Virtual Instrumentation labs.

One AICTE funded project worth ₹ 18 lakhs in the area of medical instrumentation is being undertaken by the Department.

### 1.8. Physics

The Department has a team of strong faculty members to give the required base in Physics to all budding engineers, which help them throughout, including in their specialization in various Engineering Streams. The Department also offers its services to other streams on specialized topics and arranges scientific awareness programs. It specializes in research in the field of Particle Physics, Plasma Physics, Solid State Physics and Electronics. It also undertakes interdisciplinary research in the area of Nano Science & Technology. The Department is well equipped with modern laboratory facility for research.

### 1.9. Chemistry

The Department provides students with fundamental principles of Engineering Chemistry and Environmental Sciences. It also introduced latest concepts such as Liquid Crystals, Nanomaterials, Composite Materials, Environmental Pollution and its control. It has well-equipped lab with sophisticated equipments like Polarograph, Flame Photometer, Potential Recorder, UV-Spectrophotometer. The Department is endowed with vibrant and dynamic faculty, well qualified to impart high quality teaching. The Department also has vibrant ongoing research by a number of Ph.D students.

### 1.10. Mathematics

The Department offers courses for all branches of Engineering. The Syllabi are framed in such a manner that it covers most of the engineering applications that are necessary for modern trend

and covers areas in Information Technology. Apart from B.Tech programme, it also offers courses for MBA, MCA, M.Sc and M.Phil. programmes. The Department also has qualified faculty engaged in research in areas of pure and applied mathematics.

### 1.11. Management Studies

The Department offers degree Courses in MBA with specializations in Finance, HR, Marketing and Systems. Students can opt for Marketing and an additional specialization out of the other three. The emphasis is on the development of an all round Managerial Perspective of the students. The Department also conducts regular training and development programmes for Govt. Officers, Professional Managers and Students besides research activities in Management Studies.

## 2. PROGRAMS AND ELIGIBILITY CRITERIA

### 2.1. B.Tech Programme

#### a) Streams Offered

- ▶ Civil Engineering
- ▶ Computer Science & Engineering
- ▶ Electrical and Electronics Engineering
- ▶ Electronics and Communication Engineering
- ▶ Electronics and Instrumentation Engineering
- ▶ Information Technology
- ▶ Mechanical Engineering

#### b) Eligibility

- (i) All candidates must have passed (10+2) or equivalent with Physics & Mathematics as compulsory subjects and Chemistry or Computer Sciences or Biotechnology or Biology, as one of the optional subjects. They must have secured a minimum of 50% (45% for SC/ST/OBC) marks in aggregate in these subjects to be considered for selection.
- (ii) A candidate with a diploma in the appropriate branch of engineering awarded by a State Board of Technical Education and with at least 50% (45% for SC/ST/OBC) in aggregate in diploma is also eligible for admission to the first year of B. Tech. Course.
- (iii) Appearing candidates are also eligible to apply. However, their results should be sent to SMIT by fax as soon as the result is declared. Application number must be indicated on the copy of the result.



### c) Entrance Examinations

Eligible candidates will have to appear for one of the entrance examinations depending upon the category under which they are seeking admission. The details of these examinations according to categories are given in the succeeding paragraphs.

#### (i) General Category, Defence, North East, Gorkha Territorial Administration (GTA) and Paramilitary Force Categories:

- **The candidates will have to appear for the AIEEE to be conducted by the CBSE.**
- However, candidates are also required to fill up the SMIT application form and submit the same to SMIT by prescribed date.
- Candidates should intimate their AIEEE ranking to SMIT by fax as soon as the AIEEE results are declared. They must send the downloaded rank along with a Xerox copy of the original application form already sent in order to be eligible for counseling and admission.
- Counseling will be conducted at SMIT on the dates mentioned separately in this prospectus. *Please note that SMIT does NOT participate in the counseling carried out by Central Counseling Board of AIEEE.*
- **All India cut-off rank in AIEEE applicable to all reserved categories will be displayed on our website [www.smu.edu.in](http://www.smu.edu.in).**

#### (ii) Sikkim Category:

- Candidates should apply to the Director, Technical Education, Government of Sikkim. The Government of Sikkim will conduct a Combined Entrance Test (CET), the details of which will be notified by the Director, Technical Education, HRDD, Govt. of Sikkim.
- Candidates need to fill up the SMIT application form while reporting to the college after counselling by Human Resource Development Department, Government of Sikkim.

#### (iii) MU-OET Category:

- Candidates seeking admission under this category will have to appear for Manipal University Online Entrance Test (MU-OET) conducted by the Manipal University, Manipal (Karnataka) all over India.
- Candidates need to send the filled application form of Manipal University (MU) to the Director (Admissions), Manipal University, Manipal (Karnataka), Pin 576 104

- The information regarding MU-OET is available in MU Prospectus/ separate instruction sheet enclosed alongwith the MU-OET application form in SMU Prospectus. For more details refer [www.manipal.edu](http://www.manipal.edu).

#### (iv) SMIT OFFLINE TEST:

- Candidates seeking admission under this category will have to appear for offline test conducted at various centres by SMU.
- Candidates need to send the filled application form of Sikkim Manipal University (SMU) to Chairman (Admissions), SMIT, Majhitar, Rangpo, Sikkim (Pin 737136) enclosing DD of ₹1000/- drawn in favour of Sikkim Manipal University payable at Gangtok. For more information, refer [www.smu.edu.in](http://www.smu.edu.in).

#### d) Reserved Categories

- Sikkim: Candidates seeking admission through Sikkim category need to apply directly to the Director -Technical Education, HRDD, Government of Sikkim.
- Defence: Wards of all Defence (serving/retired) services personnel are eligible to apply but preference will be given to wards of personnel posted in Sikkim. They should apply with the following:
  - Certificate from Commanding Officer indicating the place of posting.
  - Copy of transfer order to Sikkim, where applicable.
  - Discharge Certificates/Retired Identity card/Pension Payment Order for retired personnel.
- North East: Candidates applying under this category need to send the duly filled application form alongwith domicile/residence certificate from concerned district authorities.
- Gorkha Teritorial Administration (GTA): Sponsorship letter from Principal Secretary, GTA is required to be submitted.
- Para Military Forces (PF): Wards of all Para Military Forces (serving/retired) personnel are eligible to apply but preference will be given to wards of the personnel posted in Sikkim. They should apply with the following:-
  - Certificate from the Head of the Office indicating the place of posting.
  - Copy of transfer order to Sikkim, where applicable.
  - Discharge Certificate/Pension Payment Order for retired personnel.



(vi) Persons of Indian Origin (PIOs)/ Non-Resident Indians (NRI)/ Foreign Nationals/ Indian workers in Gulf Countries.

- Admission under this category will be given after screening test conducted by SMU. Foreign candidates need to obtain Registration Certificate or No Objection Certificate from Foreigner Registration Office located at Gangtok for admission.
- If the candidate himself/herself is not an NRI, he/she may be sponsored by his/her father, mother, brother, sister, uncle or aunt, grandparent who must be an NRI. Eligibility under this category is similar as mentioned in Para 2.1.b (i) & (ii) above.
- Candidates qualifying from Foreign Universities are required to submit the equivalent grading/percentage of marks from AIU (Association of Indian Universities, New Delhi).
- Documents required to be submitted with application from (under this category) are given in Para 4.5 of Section 1.
- The format of letter of NRI sponsorship is given in Annexure III.

**Note:** Candidates from Bhutan and Nepal are also eligible to appear in MU-OET or SMIT OFFLINE TEST. If they are selected on the basis of merit, the admission will be given under General Category.

#### **IMPORTANT NOTE**

In case the number of applicants for the seats in a reserved category (except PIO/Foreign Nationals/ Children of Indian workers in Gulf Countries) is less than the seats earmarked for that particular category, the vacant seats will be filled up with the General Category candidates.

#### **e) Change of Branch**

##### **During Course of First Year B.Tech.**

Students are allotted the branch of engineering at the time of admission to the first year (I semester) B.Tech course on the basis of merit and preference. The change of branch may take place after the closure of admission process subject to vacancy in the branch and merit of the candidate. The candidate seeking for the change of branch may submit a separate application after the admission. The allotment so made shall ordinarily be final.

NRI/NRI sponsored candidates will not be allowed to change branch after their admission.

##### **At the End of II Semester**

However, before the commencement of III Semester, change of branch will be considered based on their performance in I and II semester examinations, subject to availability of seats.

#### **f) Admission of Students from Other Universities**

- Candidates may be permitted after fulfilling all the University eligibility norms and subject to availability of seats in the second year of engineering (III Semester).
- Such admission shall be made at the beginning of the academic year within a maximum period of thirty days after the commencement of the semester.
- A candidate seeking transfer from another university should have cleared all subjects of the previous year/semester prescribed by the parent university and should produce the original marks card and a certificate to that effect from that university. Candidate will also produce a No Objection Certificate (NOC) from the previous Institute.

#### **g) Lateral Entry to Second Year Engineering**

Candidates can apply for direct entry to second year of Bachelor of Technology programme after fulfilling the following criteria:-

- (i) Three years' diploma in appropriate branch of engineering with minimum 60% (55% for SC/ST/OBC candidates) marks in aggregate. Preference will be given to the candidates with the diploma in the same branch of engineering.
- (ii) Three years' B.Sc. degree with Mathematics as one of the subjects, with minimum 60% (55% for SC/ST/OBC candidates) marks in aggregate.

#### **Admission Procedure**

Eligible candidates need to appear for the screening tests conducted at SMIT by the concerned department.

20% of seats (out of approved strength) are earmarked in each engineering department for lateral entry scheme.

Candidates seeking admission under lateral entry are advised to contact the Admission Office during the last week of June or visit our website [www.smu.edu.in](http://www.smu.edu.in).

## 2.2. M.Tech. Programme

### Master of Technology in Power Electronics: (M.Tech-PE) (18 Seats)

#### Eligibility

Degree in Electrical/Electronics & Communication / Telecommunication/ Instrumentation Engineering, as applicable, with a minimum of 55% (50% for SC/ST/OBC) marks.

**Note:** Preference will be given to :

- (i) GATE qualified candidates.
- (ii) Sponsored candidates from government or private organizations with not less than one year industrial or field experience/ teaching or research experience in the relevant area.

**Admission Procedure** (one of the following entrance tests):

- (i) GATE Examination
- (ii) Screening Test conducted at SMIT by the concerned Department
- (iii) Candidates through Entrance Examination conducted by Manipal University, Manipal (Karnataka).
  - Four seats are reserved for Sikkim Government nominees. Candidates seeking admission under this category should contact Director - Technical Education, HRDD, Government of Sikkim.
  - Teaching assistantships are awarded to deserving candidates enrolled in the M. Tech. Courses.

### 2.3. Master of Computer Applications (MCA) (45 seats)

#### Eligibility

Bachelor's degree in any discipline from a recognized University with Mathematics/ Statistics as one of the subjects at 10+2 level or Bachelor's degree in B.Sc.(IT) / BCA from a recognized University, with 50% marks in aggregate (45% marks for SC/ ST/ OBC).

**Admission Procedure** (either of the following entrance tests):

- (i) Candidates will have to appear in the Entrance Examination conducted by SMU at SMIT on the prescribed date. Along with the application form, candidates need to send fee for entrance test as given in Section 8. Refer website [www.smu.edu.in](http://www.smu.edu.in)

- (ii) Candidates may also appear in Entrance Test conducted by the Manipal University, Manipal, Karnataka. Refer website [www.manipal.edu](http://www.manipal.edu)

#### Number of Seats in Different Categories:

**General:** 36 (20% seats are reserved for applicants who have passed BCA from SMU (regular course)).

**Sikkim:** 9 seats. Candidates seeking admission under this category should contact Director Technical Education, HRDD, Government of Sikkim.

### 2.4. Master of Business Administration (MBA) (120\* seats)

It is a two-year course leading to the award of MBA degree. The programme has dual specialization in Marketing along with any one of the following specializations:-

- Human Resource Development
- Finance
- Systems

**Note:** A minimum 10 students are required to be enrolled in a specialization for it to be offered.

(\* Increase in seats is applied for).

#### Eligibility

Graduate Engineers and Bachelor's degree holders in 10+2+3 scheme with at least 50% marks (45% for SC/ST/OBC) at graduation level.

**Admission Procedure** (based on one of the following entrance tests):

- (i) Admission will be based on valid score in Management Aptitude Test (MAT)/ CAT/ GMAT/ XAT/ CMAT etc., Group Discussions and Interviews will be conducted at SMIT on the dates given on the inside of the last cover page under IMPORTANT DATES.

**Note:** Candidates not having a valid MAT/CAT/GMAT/ CMAT score, have to appear in Entrance Examination conducted by SMU at SMIT on the prescribed date. Alongwith application form, candidates need to send fee for Entrance Test as given in Section 8.

- (ii) Candidates may also report to SMIT for admission through Entrance Test conducted by the Manipal University, Manipal (Karnataka).

### Number of Seats in Different Categories:

**General:** 96 (24 seats are reserved for applicants who have passed BBA from SMU (regular course). 5% of the seats may be allotted to NRI candidates\*).

**Sikkim:** 24 seats. Candidates seeking admission under this category should contact Director Technical Education, HRDD, Government of Sikkim.

(\*Admission under this category will be given after screening of candidates by SMU. If the candidate himself/herself is not an NRI, he/she may be sponsored by his/her father, mother, brother, sister, uncle or aunt, grandparent who must be an NRI. The format of letter of sponsorship is given in Annexure -III).

**PIO/ Foreign Nationals/Children of Indian Workers in Gulf Countries:** 18 seats (supernumerary). Candidates qualifying from Foreign Universities are required to submit the equivalent grading/percentage of marks from AIU (Association of Indian Universities, New Delhi).

Documents required to be submitted with application form (under this category) are given in Para 4.5 of Section 1.

**Note:** Candidates from Bhutan and Nepal are also eligible to appear in the entrance examination. If they are selected on the basis of merit, the admission will be given under General category.

## 3. INFRASTRUCTURE/FACILITIES

### 3.1. Accommodation

The institute is residential with separate Hostels for Boys and Girls, and provides excellent accommodation to over 3000 students. The hostel rooms are two-seaters, well furnished, and have attached bathrooms with hot water supply during winter. There are separate Students' Messes for boys and girls. There is also a Canteen and Food Court providing vegetarian and non-vegetarian meals. Recreation Rooms with TVs, separate gymnasiums for boys and girls and sports facilities are available. It is advisable for all students to stay in the SMIT Hostel.

### 3.2. Guest House

A well furnished Guest House is available in the campus. Accommodation in the Guest House is also provided to the parents/guardians of students and visitors depending on availability.



### 3.3. Entrepreneurship Development Cell

The Entrepreneurship Development Cell (EDC) helps students in exploring entrepreneurial opportunities and assists them in starting their own ventures. The EDC regularly conducts Entrepreneurship Awareness/Development Programs. Innovation Incubation Centre has been added to the EDC so as to help the innovators/budding engineers/ scientists/managers to translate their ideas in to marketable products and to build the innovation based enterprises.



### 3.4. Library, Reading Room & Internet Facility

The Institute has a well equipped library which caters to the needs of students and teachers. Besides course related books, the library also stocks general and technical books. The Developing Library Network (DELNET) facility provides on-line access to leading libraries in the country. The college subscribes to a large number of leading professional journals in relevant fields. The Institute is also a member of INDEST- AICTE Consortium and thus has on line access to most of the leading journals in the field of technology like IEEE, ASME, Elsevier (Science Direct), Digital Engineering, J-Gate (for Engineering and Management), ASTM Digital Library, Springelink,



ASCE, McGraw Hill, EBSCO (for Management etc.) The library also houses an audio visual section and offers Internet connectivity. The library remains open from 08.30 AM to 10.00 PM everyday and from 08.30 AM to 04.30 PM on Sundays.

The Institute has Cyber Cafe to provide internet facility. Keeping with the latest technological trend, the hostels have been provided with Wi-Fi connectivity.

### 3.5. Shopping Centre

There is a shopping centre in the campus where following facilities are available:

- Extension Counter of Union Bank of India.
- ATM of Axis & UBI Bank
- Post Office.
- Telephone Exchange.
- Stationery Shop.
- Binding, Lamination, Xerox Shop.
- Beauty Parlour/ Barber Shop/ Medical Shop
- Pharmacy

(A few more shops are likely to open this year.)

### 3.6. Competency Certification Center

A Competency Certification Center is established at SMIT in collaboration with NASSCOM. The Competency Certification Center enables students to appear for online testing for specified competencies. Certificates issued by NASSCOM are valid Nationwide.

## 4. INDUSTRY ORIENTATION/PROJECTS & PLACEMENTS

### 4.1. Students Pursue Projects and Training in Many Premier Industrial/Research Establishments such as:

TCS, Tata Technologies, HCL, Titan Industries, BARC, WEBEL, Mediatronics, Skytech Solutions,



CATS, Cognizant Technologies, Steaslit Industries, Reliance Telecom, Telco, NHPC, ISRO, Manipal Infocom, ISI, Reliance Infocom, Bharti Telecom, ECE Elevators, Carrier Air Conditioners, HCL Infinet, E- Revmax, Lakhota Enterprises, Greaves, Acer, MEMG, SNIP, VECC, Jadavpur / Calcutta University among others. Some of the above have started giving stipends during the training period.

### 4.2. The Companies which Visited Sikkim Manipal Institute of Technology for Campus Interviews include:

Infosys Technologies, Tata Consultancy Services, Cognizant Technologies, IBM, Accenture, ANZ, Wells Fargo, Skytech Solutions, Usha Communications, Stesalit Industries, HCL, COMNET, Godrej Infotech, Microland, Tech Mahindra, Mahindra Satyam, Computer Science Corporation, TIL, TVS, Tata Elxsi, SHIV-VANI, VEHERE INTERACTIVE, Central Bank of India, IDBI, SONY, etc.

## 5. STUDENT SUPPORT

### 5.1. Teacher Guardian Scheme

Yet another unique scheme of the institute is the Teacher Guardian Scheme. Under this, each student is allotted a specific teacher guardian who provides emotional support, monitors academic performance, provides necessary guidance to the ward and communicates all such details regularly to the parents of the ward. This scheme has received tremendous support from students and parents alike.

### 5.2. Students' Benevolent Fund

This is a contributory benevolent fund which seeks to provide financial assistance to needy students. The Executive Committee comprising of faculty members and students participates in the selection of beneficiaries. Twenty eight students mainly those who lost their earning parent, benefited from this fund until date.

### 5.3. Medicare

The Institute has a well equipped dispensary with resident doctors and supporting staff. Those needing specialized treatment are sent to Central Referral Hospital (of the Sikkim Manipal University) in an ambulance available round the clock.

#### 5.4. Alumni Association

The Alumni Association was established in November 2006. It has a registered strength of about 2600 plus as on date. Our alumni make us proud. Many have brought laurels to their parents and to SMIT by doing excellently well in their assigned jobs in India and abroad. The details of SMIT Alumni Association by-laws and registration etc. are also available on our website.

### 6. STUDENT ACTIVITIES

#### 6.1. Students' Council

Each year, students form a Students' Council. The Council oversees various students' activities, including students' clubs and is supported by staff advisors.

#### 6.2. Student Clubs

- a) **Extra & Co-curricular Activities:** Students participate in the activities of Students' Chapter of ISTE, Society of Sikkim Science Club, Entrepreneurship Development Programs, Debate Club, Music, Fine Arts and Photography Clubs, Young Scientists & Engineers Club, "Medha Magics" Club, Personality Development Club, etc.
- b) **Sports Club:** The Sports Club regularly organizes games and sports. Facilities for Volleyball, Tennis, Basketball and many indoor games are available. Besides organizing routine activities in the above mentioned sports, the club also encourages talented students to participate in State/National level competitions.
- c) Students have represented the Institute at the State and National level in various sports, literary and cultural events and won laurels for Institute from outside.

#### 6.3. College Magazine

- a) The Editorial Board of the Institute proudly presents its unique creation in the form of the Annual Magazine 'SMITSONIAN' every year which serves as a platform to highlight the literary and artistic segment of the SMIT family. Besides, the Editorial Board also brings out a Wall Magazine - the 'CLARION', forming a bridge between flowing thoughts and artistic magnification. The magazine also highlights the educational, cultural and sports activities of the Institute.
- b) The students also publish a quality technical newsletter - "SMITZINE". It provides information about coming competitive examinations and

provides platform to the students to exploit their artistic and innovative talents.

#### 6.4. Various Societies

Every degree-awarding department of the institute has society to cater to all round development of the students in technical co-curricular and extra-curricular activities.

### 7. SOME RECENT ACHIEVEMENTS

- The National Board of Accreditation (NBA) has accredited SMIT for five B.Tech courses offered by SMIT vide their letter No. NBA/ACCR-860/06 dated: 22 Jan, 2008.
- Institute has also been awarded the prestigious ISO 9001:2000 certification and the same has been certified under Norsk Akkreditering, Norway.
- SMU has signed MOU with Adhesion Institute, Faculty of Aerospace Engineering, Delft University of Technology (TU Delft), The Netherlands and has established an International Centre for Nanotechnology & Applied Adhesion (ICNTAA) at SMIT. It has 11 internationally acclaimed experts around the world as advisors.
- A Centre for Excellence in Remote Sensing & GIS has been established in Institute with the support of ISRO.
- The Institute has taken large number of research projects from DRDO, ISRO, DST, DBT & AICTE.
- As per CSR-GHRDC Engineering Survey 2012, SMIT is ranked 6th in Top Engineering Colleges of Excellence, 5th in East and Central region, 23rd in Colleges in Placement/ Industry Interface/ USP and 23rd in Colleges in Percentage of Faculty with PhD.
- As per Competition Success Review Awards (April 2012), the Director of the Institute has been selected for Eminent Directors of Leading Institutes of India Award and the Institute has been selected for Top Institutes of India Award.

### 8. TRAINING AND PLACEMENT DEPARTMENT

Training and Placement Department is the hub of all interaction between the Corporate, Industries, and Academic/Research Institutions, with Sikkim Manipal Institute of Technology (SMIT).

The Department functions with the following objectives:-

- To provide in-house training to students to supplement their curriculum.
- To arrange the final semester industrial projects to work on live problems (Practice Schools).
- To bring Industrial establishments to the campus for recruitment of students.

To achieve these objectives, the Department organizes courses and training programmes to enhance the aptitude and skill of the students to

increase employability. Regular feedbacks are also obtained from the industries on the advances in technology vis-à-vis the facilities in the Institute and appropriate actions are taken.

Training and Placement Department also organizes events like seminars, workshops, guest lectures and corporate interactions.

The Institute has a dedicated Training and Placement Department for Students Training and Placement. The Department is headed by a Professor who is assisted by the Institute and Departmental Training and Placement Officers.

#### Campus Placement for B.Tech. in Last Three Years

Year	Name of the Company/ Industry	Number of Students Placed	Year	Name of the Company/ Industry	Number of Students Placed	Year	Name of the Company/ Industry	Number of Students Placed
2009-10	TCS	161	2010-11	TCS	328	2011-12*	TCS	329
	Infosys	116		Tech Mahindra	18		HCL	91
	Wells Fargo	21		Capegemini	20		Wipro	57
	Microland	08		Wells Fargo	28		Sony	06
	Bharati Realty	02		Microland	09		IXIA	11
	Mahindra	02		ACC Cement	02		L&T	02
	Vehere	02		TVS Motors	04		TVS Motors	01
	Source N	07		Astha Tech	05		Wells Fargo	16
	Oasis	15		Source N	04		Source N	04
	Consultancy Engg.	03		Vehere	02		Huawei	03
	Torrent	02		Dataflex	02		Central Bank of India	13
	Denso	04		Schneider Electric	01		IDBI Bank	07
	Trulogix	01					Genesis	01
	TVS	01					Apollo Tyres	02
							HDFC	06
							BMA	02
							IKYA	03
							Reliance Retails	01
							Tech Asia	01
							Wirpo BPO	06

\*2012-13 campus recruitment is in progress.



## 9. FEE CONCESSION AND FEE WAIVER SCHEMES

### 9.1 Freeship:

It is awarded to meritorious candidates admitted to B.Tech. course. The awarded students need not pay course fee until the completion of the course. However, students will be required to pay the caution deposit and other one time fees. It will not cover the expenses such as hostel accommodation, messing, etc. It will be discontinued if student fails to get promotion to next year or promoted with back papers.

A total 30 freeships will be awarded as under:

- First 10 candidates admitted under AIEEE category having all India rank within 50,000.
- First 10 candidates admitted under MU-OET category having rank within 1000.
- First 10 candidates scored more than 90% marks in PCM at 10+2 level.

**Note: One laptop to each student of B.Tech. first year course is provided free of cost.**

### LIST OF FREESHIPS AWARDED TO THE STUDENTS DURING THE YEAR 2012-13

Category	Name	Rank/PCM%	Sex
AIEEE	Keshav Krishna	34201	M
	Aprajita Kapoor	43976	F
PCM (>90%)	Ajitesh Das	94.66%	M
	Chiranjeeb Baruah Thakuria	93.67%	M
	Hemant Kumar Neopaney	93.33%	M
	Sushant Kumar Jha	93.00%	M
	Pragya Agarwal	92.67%	F
	Priyanka Das	92.67%	F
	Victor Bordoloi	92.33%	M
	Anshu Choudhury	92.00%	F
	Saurav Choudhury	91.00%	M
	Arko Jyoti Bhattacharjee	90.67%	M

9.2 75% concession in tuition fees is given to students sponsored by Govt. of Sikkim.

9.3 Tuition Fee Waiver Scheme: As per AICTE guidelines, under this scheme, upto 5% of the sanctioned intake is eligible for tuition fee waiver. This is supernumerary in nature.

## 10. SEAT MATRIX FOR B.TECH COURSES

For students appearing in different tests (AIEEE/MU-OET/SMIT Offline Test/CET).

S. No.	Branch	Based on All India AIEEE Ranking					CET	MU-OET#/SMIT OFFLINE TEST*
		General	North East	GTA'	Defence	PF*	Sikkim	General
1	Computer Sci. & Engineering	12	8	2	1	1	24	72
2	Electronics & Communications	18	12	3	2	2	36	107
3	Electrical & Electronics	8	6	2	1	1	18	54
4	Information Technology	8	6	2	1	1	18	54
5	Mechanical Engineering	12	8	2	1	1	24	72
6	Civil Engineering	6	4	1	1	1	12	35
7	Electronics & Instrumentation Engineering	6	4	1	1	1	12	35

# Entrance Test conducted by Manipal University, Manipal (Karnataka), ! Gorkha Territorial Administration, +Paramilitary Force and \* SMIT Offline Test conducted by SMU.

15% seats (supernumerary) of the sanctioned intake in each branch are for PIO/Foreign Nationals/ Children of Indian Workers in Gulf Countries. 5% seats (within the sanctioned intake) in each engineering branch may be allotted to NRI/NRI sponsored candidates.







# SECTION

# 5

SCHOOL OF  
BASIC AND  
APPLIED SCIENCES  
(SBAS)





## SCHOOL OF BASIC AND APPLIED SCIENCES

(A Constituent College of Sikkim Manipal University)

- 5-year Integrated M.Sc.
- Master of Science (M.Sc.)
- Master of Technology (M.Tech.)
- BS Engineering
- Bachelor of Computer Applications (BCA)

### **Sikkim Manipal University**

Majitar, Rangpo Pin - 737136, East Sikkim

Website: [www.smit.smu.edu.in](http://www.smit.smu.edu.in)

E-mail: [smit@smu.edu.in](mailto:smit@smu.edu.in)

Phone: Admission Cell: 03592 - 246466, 246020

EPABX: 246216, 217, 219, 220 extension 221, 247

Fax: 03592- 246467, 246112

Mobile No: +919476363483, +917872976898

## SCHOOL OF BASIC AND APPLIED SCIENCES (SBAS)

The school is located on the bank of River Teesta surrounded by green hills, which add to the vibrancy of the campus, and makes it an ideal place for learning.

It offers postgraduate courses in Basic Sciences and undergraduate courses in Computer Applications. It also offers M.Tech. in five specializations.

All courses offered in the School are approved by SMU and UGC and are accredited by NS-EN ISO 9001:2000.

The School has its campus at Majhitar, Rangpo, East Sikkim.

At SBAS, the focus is on high quality education and research with special emphasis on faculty-student interaction. Course and teaching methodologies are up-to-date with present emerging trends. Students are well groomed and nurtured for career in industries/higher education/research. Curriculum includes extensive interaction with industries through well-designed projects.

The School organizes events like seminars, workshops, conferences as well as guest lecturers for the benefit of the students.

## ACADEMIC DEPARTMENT

### 1. DEPARTMENT OF PHYSICS

Full time 2 year M.Sc. (Physics) course approved by UGC was started by Department of Physics from 1999. The Department also offers 5 year integrated M.Sc. Physics course. The Department is proud to have a team of very experienced and dedicated faculty members with varied specialization in Particle, Plasma, Condensed Matter Physics and Electronics. Specializations in above areas are offered to the students as a choice in the second year. The University has adequate laboratory facilities. The Department has upgraded its laboratory and Research facilities with funds from Department of Science and Technology, Govt. of India under FIST program. It has a dedicated Computer Center with internet facility where students learn programming languages like C/C++ /Graphics /Simulation Techniques and get hands-on practice of various software packages like Mathematica, PSPICE, GEANT4 used for research level programming. Students carry out a research Project in second year as a part of the curriculum. Through the research projects, they learn advance research problems, which make them suitable for research subsequently.

The Department offers PhD program in all above specializations and gives the appropriate research environment for young physicists. The Department also offers Teaching Assistantships to deserving candidates based on vacancies to pursue research in the Department.

The Department regularly has to its credit various research papers as publications in journals and

Workshop/Conference proceedings. It also organizes conferences in different fields. The students are thus exposed to pan India environment, in serene land of Sikkim. Students with deep sense of scientific inquiry are welcome to avail the facilities.

#### 1.1. Courses Offered

- M.Sc. Physics
- Five year Integrated M.Sc. Physics.

#### 1.2. Collaborative Research

a) Calcutta University, Jammu University, Rajasthan University, Punjab University, BHU, AMU and Guwahati University.

b) Research Institutes & Centres

- GSI, Germany
- BNL, USA
- India based Neutrino Observatory, Ooty
- High Altitude Observatory, Darjeeling
- Bose Institute, Kolkata
- Saha Institute of Nuclear Physics, Calcutta
- Variable Energy Cyclotron Centre, Calcutta
- Indian Institute of Technology, Bombay
- Tata Institute of Fundamental Research, Mumbai
- Bhabha Atomic Research Centre, Mumbai
- Institute of Physics, Bhubaneshwar
- Institute for Plasma Research, Gandhinagar

### 1.3. Alumni Achievements/Placements of the Department

The Department receives regular feedbacks and suggestions from its ex-students regarding syllabus, laboratory training etc. Students of this Department have also joined many industrial and research organizations.

Over hundred students have successfully completed their M.Sc. from the Department so far and the statistics of their present placements are as under:

- Research for PhD/ Post Doc. - India: 22%, Abroad 10% (USA, UK, and Germany)
- M.Tech - 09%
- Teaching in Colleges - 22%
- Teaching in Schools - 34 %
- Industry placement - 03%

### 1.4. Society “Science Space”

The Department has a society “Science Space” for promoting activities of Culture and Education, which is working to disseminate the importance of Science Education to masses through meetings, seminars and workshops.

### 1.5. Research Scholars

Fellows of UGC/CSIR with NET/GATE qualification can apply as research scholars in the department. There are seven research scholars already working under different faculty members of the department. The Department also offers teaching assistantships to deserving candidates based on vacancies. A project entitled “Pre operative Programme for Indian Participation in the FAIR Project at GSI, Darmstadt, Germany – Accelerator and Detector - Related R&D and Prototyping”, sponsored by DST, Govt. of India is being undertaken by the Department. Another project entitled “Investigation of Propagation of Ion Acoustic Wave in Plasma Sheath and Presheath” is supported by DST, Govt. of India is also being undertaken by the Department.

## 2. DEPARTMENT OF CHEMISTRY

The Department of Chemistry has been offering M.Sc. in Chemistry for the last nine years. Within nine years, the Department has evolved as a mature contributor to Indian academia. It covers all major areas of Chemistry, viz. Inorganic, Organic and Physical Chemistry. The M. Sc.

syllabus, which is comparable with all leading Universities / Institutes, caters to the intellectual aspirations of the students and they are exposed to the latest in the field. The students have opportunity to take specialized courses of their choice (Medicinal Chemistry, Biophysical Chemistry, Chemistry of Nanomaterials, Polymer Chemistry, Bio-inorganic Chemistry, and Supramolecular Chemistry.) Furthermore, some of the project works are carried out in collaboration with other reputed Institutes / Universities. In addition, to enrich their academic performances, faculty from other reputed Universities/Institutes is invited regularly for guest lectures. Individual attention and encouragement to the students is the hallmark of the department. Students get motivated to achieve higher and higher goals including those related to research.

To fulfill the requirement of skilled manpower in the field of environment in India, Department of Chemistry will be introducing M.Sc. in Environmental Science from the year 2013.

Special attention is given to the students who are keen to appear in competitive exams like NET and GATE. Students are sent for their M.Sc. projects to the reputed Universities & Institutions as per the M.Sc. curriculum.

Students with postgraduate qualifications are encouraged to take up research works leading to the award of a Ph.D degree in emerging technologically important fields of Chemistry. The department is endowed with young, vibrant and dynamic faculty well qualified having postdoctoral research experience at national and international level to impart high quality teaching and research in conventional and frontier areas of Chemistry. Majority of faculty members have Ph.D. degree.

### 2.1. Courses offered

- M.Sc. Chemistry
- Five year Integrated M.Sc. Chemistry
- M. Sc. in Environmental Science

### 2.2. Collaborative Research

- Jadavpur University, Kolkata
- Pt. Ravishankar Shukla University, Raipur
- North Bengal University, Siliguri
- North East Institute of Science & Technology (NEIST-CSIR), Jorhat



- Birla Institute of Technology, Mesra
- SINP – Kolkata
- Bose Institute, Kolkata
- IACS, Kolkata
- Indian Institute of Technology, Guwahati
- Tezpur Central University, Tezpur
- Birla Institute of Technology & Science, Pilani
- Indian Institute of Technology, Kharagpur
- University of Hyderabad
- NEHU, Shillong
- Manipur University, Imphal
- Assam University, Silchar

### 2.3. Alumni Achievement/Placements of the Department

Our alumni have been well placed in industries as well as in academic institutes. Some of them are pursuing Ph. D. in reputed institutes in India.

Following is the placement data for the department:

- Research for Ph.D in India - 17%
- Teaching in Colleges - 08%
- Industry Placement - 25%
- Teaching in Schools - 50%

Some of the students from current M.Sc. batch have job offers, from various industries like CIPLA, CADILLA and ALKEM. One of the students has got the prestigious summer fellowship awarded by Indian Academy of Sciences, Bangalore. Some of the students have cleared National competitive exams like NET/ GATE.

A leading industry from Sikkim, SICPA Ltd. India awards scholarship to meritorious students of M.Sc. The scholarship is given to one student from Sikkim and one student from General category once a year.

### 2.4. Society of Chemical Sciences (SCS)

The department has a Society of Chemical Sciences (SCS) comprising of students and teachers. It organizes regular seminars, workshops, lectures in science in general and Chemistry in particular. The students are also provided inputs on career planning, personality development and soft skills.

In addition, SCS also provides -

- Consultancy Services
- Project Work
- Research Work in Various Challenging Areas.

### 2.5. Research Scholars

The Department welcomes students for Ph.D. programme (part time/full time) and number of PhD scholars are working in the department. Chemistry department has completed three research projects supported by DST, DRDO and AICTE, Govt. of India.

## 3. DEPARTMENT OF MATHEMATICS

The Department offers Master of Science (M.Sc) and Master of Philosophy (M.Phil.) in Mathematics. Pure and Applied Mathematics courses are offered. Keeping in mind the job scenario, courses related to IT are also offered. The department has a dedicated computer laboratory with a high-end network, MS Visual C++ Mathematical Software, Internet facilities and a well-equipped library. The department also has qualified faculty engaged in research in areas of pure and applied mathematics.

In addition to the M.Sc course, the department is also undertaking research work leading to Ph.D degree. Presently, research is being carried out in the areas of Boundary Layer Theory, Non-Newtonian Fluid, Numerical Methods of Differential Equation and Magneto-Hydro Dynamics, Thin Film, Industrial Fluid Mechanics and Non Linear Waves.

### 3.1. Courses Offered

- M.Sc. Mathematics
- Five year Integrated M.Sc. Mathematics
- Two year M.Phil in Mathematics

### 3.2. Alumni Achievements/Placements of the Department

One of our M.Sc students was admitted directly for research in the University of Paris, France in 2009.

Following is the placement data of the department:

- Research for PhD/Post Doc. - India: 1%,  
Abroad: 1%.
- Teaching in Colleges - 02%
- Teaching in Schools - 25%
- Others - 71%

### 3.3. Research Scholars

Fellows of UGC/CSIR with NET/GATE qualification can apply as research scholars in the department. There are two research scholars already working under different faculty members of the department. A research project titled “Numerical Solutions of Integral Equations using Wavelets and Other Methods Together with Applications” is currently being undertaken by the Department.

## 4. PROGRAMS AND ELIGIBILITY CRITERIA

### 4.1. 5- year Integrated M.Sc. Program

Physics, Chemistry, Mathematics (20 seats each)

About the programme: A student with 50% in 10+2 with Science is eligible to apply for these courses. He/she will be able to exit the course after three years with a degree in B.Sc. (Hons) in Physics, Chemistry and Maths or may continue with M.Sc programme. As per AICTE, students with B.Sc. degree are eligible for lateral entry to B.Tech. 2nd year, subject to availability of seats. During the first year, every student is required to take courses in all the four areas of basic sciences, viz. Mathematics, Physics, Chemistry and Computer Science/ Information Technology. Those who may not have taken courses in the secondary schools in any of the above subjects will be given a bridge course. The next two years will be devoted to studies of undergraduate level Physics, Chemistry and Maths (Honours).

In addition to core postgraduate subjects, interdisciplinary courses will be introduced in emerging areas in 4th and 5th year to provide students with good career opportunities. The coursework will be supplemented by innovative laboratory work in well-equipped laboratories and hands on experience in Workshops. During the second and third years, students will choose a major subject in Physics, Chemistry and Maths and may take optional interdisciplinary courses in consultation with their Academic Advisors. During the 4th year, special focus in specialized areas of Physics, Chemistry and Maths will be given and in the 5th year, students will devote a major part of their time in a research and/or training project supplemented by suitable coursework.

Students will be given research orientation throughout their course along with laboratory work. For their research projects, students will be

required to spend part of their summer vacation either in SMU or in other national research institutes/R&D labs in industry. A key aspect of the charter and vision of SMU is to foster close collaboration with various Research Institutes, Universities and Industry to take advantage of the available talent and facilities therein and to provide multiple career options to students. The syllabus of SMU evolves dynamically to be flexible; credit based, and offers students a broad platform. It will take note of new developments in the field of science and its applications. SMU provides well rounded as well as specialized training to students.

### 4.2. M.Sc. Programs (2 years)

**Physics, Chemistry and Mathematics (20 seats each)**

#### Eligibility

Candidates should have completed B.Sc. (Hons) or B.Sc. (Gen) in 10+2+3 scheme with Physics / Chemistry / Mathematics as one of the subjects depending upon the course in which they are seeking admission from a recognized university.

### 4.3. M.Phil in Mathematics (2 years)

#### Eligibility

Pass in M.Sc.(Mathematics) from any recognized University or equivalent with atleast 55% marks for general category & 50% marks for SC/ST/OBC.

### 4.4. M.Sc in Environmental Science (2years)

#### Eligibility

Graduation in Science (Environmental Science / Botany / Zoology / Chemistry / Geology / Physiology / Microbiology / Agriculture) with at least 50% (45% for SC / ST / OBC) marks in aggregate.

### 4.5. M. Tech Programs (2 years)

Computer Science & Engineering, Digital Electronics & Advanced Communications, Information Technology, Material Science & Nano Technology and Mechanical Engineering (18 seats each).

#### Eligibility

- a) M. Tech (Computer Science & Engineering) - Bachelor Degree in any branch of Engineering/ M.Sc. in Electronics / Computer Science / IT / Physics / Mathematics / Statistics or MCA, with a minimum of 55% (50% marks for SC / ST / OBC) marks or equivalent CGPA.

- b) M.Tech. (Digital Electronics & Advanced Communications) - Bachelor Degree in Electrical / Electronics & Communication / Telecommunication / Instrumentation Engineering, as applicable, with a minimum of 55% (50% marks for SC / ST / OBC) marks or equivalent CGPA.
- c) M.Tech (Information Technology) - Bachelor Degree in any branch of Engineering / M.Sc. in Electronics / Computer Science / IT / Physics / Mathematics / Statistics or MCA, with a minimum of 55% (50% marks for SC / ST / OBC) marks or equivalent CGPA.
- d) M.Tech (Material Science & Nano Technology) - Bachelor Degree in Electronics & Communication, Electrical & Electronics, Metallurgical, Aerospace and Chemical Engineering or M.Sc. in Physics, Chemistry, Material Science & Electronic Science with a minimum of 55% (50% marks for SC/ST/OBC) marks or equivalent CGPA.
- e) M.Tech. (Mechanical Engineering, specialization in Production Engineering or Thermal & Fluid Engineering) - Bachelor Degree in Mechanical/ Production/Automobile Engineering with minimum of 55% (50% marks for SC/ST/OBC) marks or equivalent CGPA.

#### Note

- Preference will be given to GATE qualified candidates. Unsubscribed Seat/Seats after admission of GATE qualified candidates will be filled up based on an entrance test to be conducted by the Institute in its campus.
- Teaching assistantships are awarded to deserving candidates enrolled in the M.Tech Courses.
- Candidates through Manipal University Entrance Examination conducted by Manipal University, Manipal (Karnataka) will also be eligible to apply.

#### 4.5. BS Engineering (Twinning) Programme

SMU has a collaboration with Andrews University, Michigan, USA, Lancaster University, UK and Leicester University, UK to offer a BS (Engg) Twinning Programme (equivalent to a B Tech in India). Students study for two years at SMU and thereafter study for two years at Andrews University/Lancaster/Leicester University. Students are allowed to carry the credits earned at SMU to their college in USA/UK. The BS (Engineering) degree will be awarded by the University in USA/UK.

This programme offers the following disciplines:

##### a) Lancaster University

- Computer Engineering
- Electronics Engineering
- Electrical Engineering
- Mechanical Engineering
- Information Technology

##### b) Andrews University

- Computer Engineering
- Electrical & Computer Emphasis
- Mechanical Emphasis
- Aviation Technology
- Digital Multimedia Technology

##### c) Leicester University

- Aerospace Engineering
- Communications and Electronics Engineering
- Electrical and Electronics Engineering
- Mechanical Engineering
- Software and Electronics Engineering

The students who cannot go abroad to complete their BS Engineering degree will continue their Integrated M.Sc./B.Sc. The options available will be:

- a) For Electronics / Electrical / Mechanical Engineering:
  - i) Integrated M.Sc. in Physics/Mathematics
  - ii) B.Sc. in Physics (Hons) / Applied Physics/Mathematics (Hons) / Electronics / Applied Electronics.

- b) For Computer Engineering / Information Technology:

B.Sc. in Computer Science / Mathematics (Hons) / Mathematical Computations

The students with the B.Sc. degree may further get the following choices to enhance their career:

- i) Lateral Entry into the Second year of their respective branches of B.Tech
- ii) MCA
- iii) M.Sc. in Physics/Mathematics.

**Eligibility:**

All candidates must have passed (10+2) or equivalent with Physics (P) & Mathematics (M) as compulsory subjects and Chemistry or Computer Sciences or Biology or Biotechnology, as one of the optional subjects. They must have secured a minimum of 50% marks in aggregate in these subjects to be considered for selection (45% for SC/ST/OBC).

**Note:**

AIEEE / MU-OET / SMIT Offline Test appeared and qualified candidates may also apply for these courses. SMIT Offline Test will be conducted by

SMU and MU-OET will be conducted by Manipal University, Manipal (Karnataka).

In all UG (except BS Engineering) and PG courses, 20% seats are reserved for candidates from Sikkim state. These candidates should contact Director, Technical Education, HRDD, Government of Sikkim.

**4.6 BCA Program (3 years) (60 seats)**

**Eligibility:**

- (a) Candidates for admission into BCA programme should have passed Higher Secondary (10+2) Examination with 50% (45% for SC/ST/OBC) marks in Science, Arts & Commerce streams.
- (b) The candidates will be screened through an Entrance Examination conducted by SMU at SMIT where they will be tested and will be examined for:
  - High School Level Mathematics & Science Knowledge.
  - Quantitative and Numerical Ability.
  - Logical Reasoning Ability.
  - General Knowledge & General English.

