SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING
(Deemed to be University)

Admissions Handbook
2015
The Sai educational institutions have been established not merely to enable students to earn a living but to make them acquire good traits, lead ideal lives, and give them ethical, moral and spiritual strength. I have established them with a view to inculcate love and teach good qualities to students. They will learn here humility, discipline and faith.

I have established these institutions to impart spiritual education as a main component and worldly education as a secondary one. Education should enable one to cultivate good qualities, character and devotion. The teaching of the university curricula is only the means employed for the end, namely, spiritual uplift, self-discovery and social service through love and detachment.

This will be a Gurukula - a place where teachers and taught will grow together in love and wisdom - and like the ancient system of education, it will develop in its students a broad outlook and promote virtues and morals, which serve to foster noble ideals in society.

This Institute will be a temple of learning where youth are shaped into self-reliant, contented and enterprising heroes of action and self-sacrifice, for the purpose of serving humanity.

**BHAGAWAN SRI SATHYA SAI BABA**
Revered Founder Chancellor
Welcome to Sri Sathya Sai Institute of Higher Learning (SSSIHL). This handbook is for students interested in applying for undergraduate, postgraduate and professional study at SSSIHL.

It is split into two distinct sections. The first section provides a general introduction to the university, including the unique model of values-based integral education it imbibes. It also offers applicants and parents an overview of the unique residential environment, the holistic method of evaluation and the teaching methods, and summarises the facilities, resources and activities available for students.

The second section contains a step-by-step guide to a successful application for all degree programmes open for admissions. This includes programme descriptions and course content along with eligibility requirements, guidance on how to fill in the application forms, and how to process the application through every stage of the admissions process.

While we have made every effort to ensure accuracy of content, in the case of changes made to programmes or related content, we will notify successful applicants in writing. Any changes will also be reflected on SSSIHL’s website (www.sssihl.edu.in).

Good Luck and Sai Ram!

Admissions Office
Office of the Registrar, SSSIHL

“Education must teach a person what life is, and what its goals are. It must purify the heart and clarify the vision. It must prevent pollution of the hand, heart and head by habits injurious to the individual, society and the nation. It must promote virtues and raise the moral and spiritual standards of the educated.”

Bhagawan Sri Sathya Sai Baba,
Revered Founder Chancellor
## About SSSIHL

A Modern Gurukula  
Sri Sathya Sai Values-based Integral Education  
Residential Character  
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1 May 2015 - Results declared

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1 June 2015 - Academic year commences
INTRODUCTION

Sri Sathya Sai Institute of Higher Learning (SSSIHL), with its headquarters in Prasanthi Nilayam (Andhra Pradesh) in India, is a visible manifestation of Bhagawan Sri Sathya Sai Baba’s vision of education for human transformation. The National Assessment and Accreditation Council (NAAC) currently ranks SSSIHL amongst the top ten universities in India.

The university hosts over 1300 students across four campuses:

For Women students:
- Anantapur Campus at Anantapur, Andhra Pradesh

For Men students:
- Prasanthi Nilayam Campus, at Puttaparthi, Andhra Pradesh
- Brindavan Campus, at Whitefield, Bangalore, Karnataka
- Muddenahalli Campus at Muddenahalli, near Chickaballapur, Karnataka

The university has a merit-based open admissions policy for all, irrespective of income, religion or region.

SSSIHL provides free education to all programmes of study. This includes waiver of all fees- including tuition, examination, laboratory, library, sports and medical.

Programmes offered include undergraduate, postgraduate, professional and research.

A MODERN GURUKULA

Sri Sathya Sai Institute of Higher Learning was founded on the basis that ethics and values must form the undercurrent of every subject taught to students. Here, the development of a student’s character is just as important as earning degrees.

This holistic development of students can only be possible in an environment that develops the student’s mind, body and spirit simultaneously.

To facilitate this, the university has a compulsory residential policy for all students, including those pursuing research. The environment is similar to the ancient Indian ‘gurukula’ system of education, in a modern context. Teachers and students live and grow together in an atmosphere of mutual trust and unity in the spirit of sacrifice.

Most students typically spend between two to five years pursuing an education at SSSIHL. However, what differentiates them from graduates of other universities is the transformation of their hearts, not just the training of their minds.

WHY SSSIHL?

SSSIHL is the only university in the world founded by Bhagawan Sri Sathya Sai Baba. Here, teaching & learning is based on His philosophy of values-based Integral Education. It offers courses in the sciences, management, arts and humanities.

The key distinctive features are:

ADMISSIONS
- Free education for all students
- Merit based open admissions policy for all, irrespective of income, religion or region

RESIDENTIAL CHARACTER
- Compulsory residential character enabling translation of lessons learnt into practical skills through experiential learning
- Spiritual ambience in an environment of discipline and love
- Teaching faculty, research scholars and students residing in the hostel
- Cultivation of the spirit of self-reliance, brotherhood and sacrifice through mentoring and personal example

The National Assessment and Accreditation Council (NAAC) is an organization that assesses and accredits institutions of higher education in India. It is an autonomous body funded by the University Grants Commission, Government of India.

The assessment criteria include: Curricular aspects, Teaching-learning and Evaluation, Research, Consultancy and Extension, Infrastructure and Learning Resources, Student support and Progression, Governance and Leadership and Innovative practices.

The top ranking of an ‘A’ grade institution was awarded to SSSIHL on 8 Jan 2011.
› Spiritual ambience in an environment of discipline and love
› Teaching faculty, research scholars and students residing in the hostel
› Cultivation of the spirit of self-reliance, brotherhood and sacrifice through mentoring and personal example

ACADEMICS
› Curriculum rooted in Indian culture and universal brotherhood
› Awareness Courses and Moral Classes reinforcing human values
› Integrated five-year programmes combining undergraduate and postgraduate studies for a systematic and graduated learning process
› Professional programmes in Management, Technology and Education
› Research with social relevance
› Favourable teacher-student ratio

INFRASTRUCTURE
› World-class facilities and resources offered despite a rural set-up
› Campuses set amidst peaceful surroundings
› Spacious, elegant and aesthetically designed buildings
› Well equipped, modern science laboratories and Instrumentation centres
› Libraries across campuses with over 1,60,000 volumes
› Computer centres with high speed broadband internet connectivity
› Well-equipped multimedia learning centres
› International Centre for Sports and a cricket stadium

INTEGRAL EDUCATION
› Life lessons learnt through the inspiration and message of the Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba
› Application of what is learned in daily life
› Integrating human values with secular knowledge
› Equal emphasis on curricular and co-curricular activities
› Inculcating the spirit of self-reliance and service to society
› Synthesis of science and spirituality for societal benefit

BEING A SAI STUDENT
Bhagawan Baba expressed that students graduating from this university have:

› the “Head of Shankara” that symbolizes knowledge leading to wisdom
› the “Hands of Janaka” that symbolizes knowledge translated to skills for societal benefit
› the “Heart of Buddha” that symbolizes love and compassion

As the diagram on the right depicts, a loving and compassionate heart influences the head - converting knowledge to wisdom - thereby influencing the way knowledge is applied, that is skills. Therefore, a harmonious balance of these three - the head, heart and hand - transforms mere ability to nobility.

IMPACT SURVEY
An impact survey in 2010 of over thirty years of SSSIHL alumni (women and men) highlighted the following facts:

› Impact on the Workplace: Over 50% of alumni are middle or senior managers, with over 80% of companies interviewed reporting ‘high contribution’ of SSSIHL alumni.

› Impact on Society: Alumni (both in India and abroad) spend considerable amounts of their weekly time on service activities in the community.

› Impact on Personal Transformation: Over 80% of alumni spend time on spiritual activities on a daily basis.

In this manner, the university achieves its objectives of enabling students to be professionally sound, socially responsible and spiritually aware.

See page 10 for further details on the outcomes of the Sri Sathya Sai Values-based Integral Education in relation to SSSIHL students.

“Blessed indeed are the students who have had the privilege of going through an education programme (at SSSIHL) which combines deep appreciation of the method of modern science and technology and the ancient Indian knowledge and wisdom accumulated over the centuries. This type of education can be a powerful means of self-perfection and social redemption.”

Dr. Manmohan Singh
Former Prime Minister of India
In the words of the Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba:

In this university the medium of instruction is discipline. The first, second and third languages are love, service and sadhana (spiritual discipline)...

...Do you know why you have such a tight schedule in the hostel? This schedule is not structured by the Trust. Swami has personally structured this schedule. I have ordered the syllabus to be tight. Why is it so?

The minds of today’s children, if given time, will turn into a devil’s workshop. When the daily routine is tight, your mind cannot wander here and there.

At Sri Sathya Sai Institute of Higher Learning, the development of a student’s character is just as important as earning degrees.

Bhagawan Baba has designed the Sri Sathya Sai Values-based Integral Education in such a manner that between the time an 18-year old student joins the university and the time when she or he graduates (at the age of 21 or 23) there is an inner transformation that takes place deep in the student’s being. This concept is very unique at the university level.

its compulsory residential character with the system of Values-based Integral Education makes it a modern Gurukula - a place where teachers and students live and grow together in love and wisdom. This teacher-student interaction that occurs in the backdrop of the system of Integral Education includes five dimensions: Intellectual, Devotional, Cultural, Physical, and Service.

Adherence to discipline and appropriate behaviour are two important aspects that encompass these interactions. The five human values of Truth, Right Conduct, Peace, Love and Non-violence form the undercurrent of all the dimensions of integral education.

The objective of Sri Sathya Sai Values-based Integral Education is to bring to the fore the human values latent in both students and teachers. This is what Bhagawan Baba calls Educare.

So, what does the process of Sri Sathya Sai Values-based Integral Education entail? What do the students really do over these years at SSSIHL that brings about this transformation within them?

The diagram on the opposite page summarizes the process of Sri Sathya Sai Values-based Integral Education. An introduction to all the dimensions and the key activities in each, is given below.

The philosophy of service at SSSIHL is based on the concept that divinity pervades all of humanity, and hence when you serve others, you are serving the Divine. Students learn to serve without expecting anything in return, other than the deep inner satisfaction of giving joy to others.

The compulsory residential system, provides an excellent foundation for the service dimension.

The university provides five-year integrated programmes combining undergraduate and postgraduate studies. Students receive their bachelor’s degree after three years, and those who choose to pursue their master’s degree are awarded one at the end of five years of study. This helps teachers to orient their teaching in a manner that inspires young students to get much more out of their chosen field of study than a conventional undergraduate programme.

In line with the vision of the Revered Founder Chancellor, all research at the university leads to societal benefit. Thus, the topics for doctoral research across all departments are chosen with great diligence, leading to directed basic research or translational research.
Spiritually Aware
Socially Responsible
Professionally Sound

Intellectual Dimension

Cultural Dimension

Devotional Dimension

Physical Dimension

Non-Violence

Peace

Love

Right Conduct

Truth

Teacher

Student

EDUCARE

Modern Gurukula

SRI SATHYA SAI VALUES-BASED INTEGRAL EDUCATION
THE OUTCOMES

It is the hope of the Revered Founder Chancellor that alumni of SSSIHL lead a life of sacrifice and conduct themselves as befits a member of the Sri Sathya Sai Institute of Higher Learning.

One often asks the valid question that with so much effort and emphasis on integral education at SSSIHL, what real impact has it had on the daily lives of its alumni? The SSSIHL alumni impact survey in 2010 highlighted the following:

Professionally Sound

SSSIHL alumni are employed in a wide range of industries: Banking, Finance, Insurance, Consulting, Manufacturing, IT, Education, Research, Health care and Telecommunications. Over 50% of them are in middle management or above in various corporations and organizations across the world.

Socially Responsible

Almost 80% of all alumni are voluntarily involved in some service activity or community development programme on a regular basis, many of them in leadership positions. They are also known to take time out and support relief efforts - in times of natural disasters, for example.

Spiritually Aware

A majority of alumni say that love of and faith in God, positive thinking, contentment, forbearance, love for fellow beings, discrimination, patience and adaptability were among the main qualities they acquired while at the university. They expressed that the lessons learnt at SSSIHL permeated all aspects of their lives and in turn touched all those with whom they came in contact.

SSSIHL ALUMNI

The university and its system of integral education fully equip the students with the knowledge, skill sets and the self-confidence necessary to be self-sufficient in the outside world. Highlighting this role of SSSIHL, Bhagawan Baba has emphasized:

"The Institute will confer on its alumni the courage and confidence, the knowledge and skill to shape their career by their own efforts, standing on their own legs and relying on their own strength".

The alumni of SSSIHL are spread across the globe including North and South America, Europe, Africa, the Middle East, Australia and New Zealand and Asia. They hold prestigious positions in many organisations and have earned great appreciation from their employers.

They are employed in a range of organizations. Examples include:

Scientific organisations/institutions
› Government of India
› Tata Institute of Fundamental Research
› Raman Research Institute
› Indian Institute of Astrophysics

Universities
› Indian Institute of Sciences
› Indian Institutes of Technology
› Indian Institutes of Management
› University of Florida
› University of Missouri
› University of California
› John Hopkins
› Arizona State University
› University of South Mississippi
› University of Texas
› University of Kentucky
› Texas Tech University
› Pennsylvania State University
› Northwestern University
› Florida Institute of Technology
› University of Minnesota
› University of Tennessee
› The Scripps Research Institute
› Massachusetts Institute of Technology
› University of Kansas
› University of Edinburgh, Management School
› University of Glasgow
› University of Nottingham
› Karolinska Institute
› Macquarie University

Businesses
› HDFC Bank
› Barclays Bank
› Citigroup
› Standard Chartered Bank
› ABN Amro Bank
› HSBC Bank
› ICICI Bank
› Bank of America
› Oracle
› Microsoft
› General Electric
› HP
› Accenture
› TCS
› Infosys
› Wipro
› Dun & Bradstreet
› Siemens
› Philips
› TVS Motors
› L&T
› Tata group of companies
› Walmart
› SAP America, Inc.
› Intel Corporation
› Lucent Technologies
› Price Water House Coopers
› Microsoft
› IBM
› Ernst & Young
› McKinsey & Company
› Sun Microsystems Inc.
› Cognizant Technology Solutions
› Symantec
› Reuters
ACTIVITIES WITHIN THE INTEGRAL EDUCATION DIMENSIONS

The following activities within the five dimensions is representative of the major activities that students participate in, during their time at SSSIHL.

**Devotional Dimension**
- Bhajans (Sankeertan)
- Vedic chants
- Stotrams
- Meditation & Silent sitting
- Suprabhatam (Prayer at dawn)
- Assembly (College prayer)
- Brahmarpanam (Food prayer)
- Kshama Prarthana (Prayer before sleep)

**Cultural Dimension**
- Celebration of festivals
- Brass Band
- Nadaswaram ensemble
- Panchavadyam ensemble
- Annual Sports & Cultural Meet
- Performing Arts:
  - Music programmes
  - Drama
  - Dance
- Fine Arts:
  - Rangoli
  - Card making
  - Photography
  - Altar making
- Public Speaking
- Debates
- Elocution

**Intellectual Dimension**
- Academic studies
- Research
- Workshops & conferences
- Colloquiums
- Symposiums
- Talks and discussions during Assembly
- Awareness class
- Moral class
- Study circles
- Annual Summer Course in Indian Culture and Spirituality

**Physical Dimension**
- Sports
- Games
- Jogging
- Exercises
- Yogasanas
- Annual Sports & Cultural Meet

**Service Dimension**
- Self-Reliance departments:
  - Electricals
  - Plumbing
  - Audio-visual
  - General store
  - Dispensary
  - Dietary services
  - Hostel mess
  - Arts & Crafts
  - Costumes & props
- Community living
- Social Work
- Voluntary work
- Grama Seva (Annual village service)
- Prasadam distribution
HOSTEL LIFE

The philosophy of hostel life is based on the approach of community living wherein each one lives for the other and all live together for a common higher cause.

Students hailing from different states of India, diverse cultures and varied economic and financial backgrounds live in dormitory-styled accommodation with 10-14 students staying together in a room. The pan-Indian character of the university comes alive in the hostel. The hostel buildings are also aesthetically pleasing, thus creating a noble ambience for students to live in.

As a result, the hostel is a miniature model of the world outside with people of different habits, temperaments, lifestyles, language and outlook staying together and working. This develops the qualities of understanding, adjustment, sharing and caring amongst the students. It nurtures virtues like adaptability, tolerance and sacrifice; developing students into noble and responsible citizens.

The ambience in the hostel is suffused with both discipline and loving care.

All doctoral research scholars and one of every three teaching faculty reside with the students in the hostel. The relationship between the students and teachers is very cordial and warm, and the teachers pay personal attention to the problems of each and every student. The teachers are chosen with extreme care to play an important role in this process. Many of them are alumni of the Institute, dedicated and well versed in integral education. They serve as facilitators and are available at all times for mentoring the students on personal and academic matters.

Personal cleanliness, punctuality and regularity, general behaviour, personal etiquette and room cleanliness - these are the major components of the discipline that is followed at SSSIHL hostels.

SELF RELIANCE

A major portion of the functioning of the hostel is taken care of by the students and resident staff members. The guiding principles of the hostel are a simple life coupled with self reliance. Students do their work with least dependence on external agencies. To inculcate the dignity of labour and respect for work, most functions and departments of the hostel are run by students under the able guidance of resident faculty.

The self reliance departments include:

- Electricals
- Plumbing (water supply)
- Audiovisual
- General store
- Dispensary
- Dietary services
- Hostel Mess
- Arts & Crafts
- Costumes & props

These self reliance activities enable students to become self-confident and independent. They also contribute to leadership and entrepreneurial development. To maintain continuity and effective succession planning, senior students train the junior students in all aspects of each self reliance department before graduating.
DAILY ROUTINE

All students stay in the hostel located in the campus. The daily routine at the Hostel is designed to keep students engaged in constructive and productive activities—academic and extracurricular—throughout the day.

The day typically starts at 5:00 a.m. with a couple of hours spent in prayer, exercise and other vocational pursuits (such as practice sessions for music, band, traditional Indian instrumental music and the likes). Classes commence at 9:00 a.m.

After college ends at around 4:00 p.m., students move to the Mandir/Prayer hall for participation in congregational chanting (veda), devotional singing (bhajans) and other spiritual activities. These also include talks by eminent speakers on a variety of spiritual topics. Post dinner, students usually spend time on their studies.

TIME ON DIMENSIONS

There are extended periods during each semester when a significant amount of time is devoted to a particular dimension of Sri Sathya Sai Integral Education. The following pages will highlight some of these activities and their dimensions.

Examples include:
- Festivals (Cultural & Devotional)
- Cultural presentations (Cultural & Devotional)
- Summer Course in Indian Culture & Spirituality (Intellectual, Cultural & Devotional)
- Annual Sports & Cultural Meet (Physical & Cultural)
- Grama Seva & Community Service (Service)

The diagram below depicts the broad distribution of time students spend on different dimensions of Sri Sathya Sai Values-based Integral Education during the year.

STUDENT DIVERSITY

Students admitted to SSSIHL come from all parts of the country. This is a conscious effort made by university as this diversity contributes to a rich and stimulating learning environment that brings out the best in students.

RESIDENTIAL TEACHERS

Residential teachers voluntarily stay with students in the hostel. They choose this responsibility in addition to their academic and administrative workload. Like students, they also share rooms with typically three or more teachers in a single room.

They perform three fundamental tasks:
- Ensure the all-round welfare of students
- Discharge specific duties for the upkeep of the hostel daily routine and general discipline
- Facilitate the smooth functioning of the hostel Self Reliance departments (see page 20 for details)

UGC Regulations on curbing the menace of Ragging in Higher Educational Institutions, 2009.


For details, please refer to the UGC website: www.ugc.ac.in.
EXCELLENT FACILITIES

The university provides students with high quality infrastructure to maximise their learning experience and excel at their academics and research.

Buildings and Grounds
All the campuses of the university have spacious, beautiful and artistically designed buildings which stand out for their simplicity and elegance. The sprawling lawns and well-maintained grounds give each campus its own character and feel.

Auditoriums
Each campus of SSSIHL has an auditorium that can accommodate about 900 people. The auditoriums are used for daily prayers, Moral Class sessions on Thursdays, speeches and cultural events.

Labs, Multimedia facilities and Computer Centres
The university has well-equipped laboratories in the fields of Physics, Chemistry, Biosciences, Nanosciences, Artificial Intelligence and Information Technology.

The air-conditioned Multimedia Centres, with a seating capacity of over 100 participants at each campus, typically host national and international seminars, conferences and workshops. They are equipped with the latest audio / video conferencing facilities which enable active and real-time collaborations among staff and students of the three campuses of the university.

SSSIHL is also one of the few universities to have English Language Labs in all its campuses.

The student-to-computer ratio is 2.6 students per computer, with the actual usage always being one student per computer. High-speed broadband internet connectivity is provided to students and staff for academic pursuits.

Library facilities
Each of the three campuses of the Institute has got a well-established library. The Central Library, located at the Prasanthi Nilayam Campus, with an initial collection of 15,000 volumes, has now swelled to over 150,000 across all three campuses. The libraries house latest books and journals in diverse academic fields and spacious facilities for reading.

The Libraries receive about 280 periodicals, both national and international, that include a good collection of the back volumes of Journals. Audio, Video and CD-ROM collections, as well as Theses, Dissertations, Quick Reference Books, and other materials (including maps) are available to students.

Other services offered in the university libraries include Referencing, Photocopying, Inter-library Loans, etc.

Sports facilities
All campuses of the university are well equipped with sports facilities. These include cricket grounds, playing fields and basketball courts.

A multi-purpose outdoor stadium, the Sri Sathya Sai Hill View Stadium (with a viewing gallery that accommodates 25,000 spectators) is used on many occasions, especially during the Annual Sports & Cultural Meet on 11 January.

The university also has an outstanding multi-discipline indoor stadium with a spectator capacity of 4,000. Facilities include basketball, volleyball, tennis, squash, table-tennis, badminton, gymnastics, yoga and a well-equipped gymnasium for aerobics and strength training.

229:1
National Average*

2.6:1
SSSIHL 2013/14

Academics

HOLISTIC EDUCATION

At SSSIHL, academics and co-curricular activities go hand-in-hand. So much so, that each graduand’s degree certificate has two final grades - one for cumulative academic performance, and the other for cumulative performance in Integral items (activities in the sports, culture, service and devotional dimensions.)

This holistic evaluation system at the university is designed to foster unity, teamwork and a spirit of sacrifice amongst both faculty members and students. Students are consistently provided with opportunities to develop their potential for leadership, teamwork, ethical and moral behaviour. A disciplined routine (both academic and residential), which the teachers themselves follow, sets a precedent for students to emulate.

INNOVATIVE EVALUATION SYSTEM

The examination system constitutes the continuous internal evaluation (CIE) which spreads across the entire semester and End of semester Examination (ESE) which is conducted at the conclusion of a semester. CIE enables graded learning as students are evaluated on a monthly basis through tests/assignments/case studies, etc. It therefore ensures that students have a sound conceptual understanding of the subject. They also promote discipline and punctuality and helps improve academic performance.

EXPERIENTIAL LEARNING

The university is dedicated to the cause of transforming theoretical knowledge into skills. For students studying the Sciences, the afternoon classes are devoted to laboratory sessions. Those pursuing the Social Sciences, Arts, and Management disciplines dedicate 50% of their weekly class time learning to internalize the concepts studied. This is done through case-studies, self-feedback exercises, role-plays, management games, group discussions, outdoor exercises, etc.

SMALLER CLASS SIZE

With less than 9 pupils per class on average, the student-to-teacher ratio at SSSIHL is amongst the best in India. This means that teachers give more individual attention to students and have more time to work one-on-one with them.

Since teachers have fewer students to monitor, they tend to spend less time on classroom management issues, such as discipline.

A lower student-to-teacher also encourages greater student participation in class. In smaller groups, students feel more accountable and comfortable participating in class discussions- and this greater degree of accountability leads to better grades and higher levels of achievement.

MENTORING

Unlike other universities, where access to teachers is restricted to designated office hours, at SSSIHL the environment is such that students can approach teachers at various times during the day and can freely discuss both academic issues and personal matters with them—ranging from spirituality to family issues back home—in confidence.

As facilitators and mentors, teachers set an example by following the Sri Sathya Sai Values-based Integral Education as laid out by the Revered Founder Chancellor.

VISITING & GUEST FACULTY

Inspired by the unique philosophy and vision of the Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba, eminent academicians and senior corporate executives volunteer to visit the university on an on-going basis to share their knowledge and experience with students and faculty. They add a unique perspective to the courses taught and provide students exposure to wider academic and real world scenarios. Quite a few taught syllabi spanning an entire semester.

During the academic year 2013/14, 162 Visiting & Guest Faculty visited our campuses.
Gold Medal Awardee

Outgoing Batch, Gratitude Programme

Brass Band practice

Examinations

Volleyball Match on campus grounds

Mentoring, campus grounds

Outgoing Batch, Gratitude Programme
9-Step Application Process
STEP 1: CHOOSE YOUR PROGRAMME

The first step in the application process is to carefully select the programme the student wants to apply to.

There are separate programmes available for **WOMEN** and **MEN** applicants, as the university hosts separate campuses for Women and Men students. The university also offers **M.Phil.** and **Ph.D.** programmes for Women and Men students, as well as the Master in Financial Management and Master of Computer Applications Programmes for Men students. These are integrated programmes, unavailable for direct admissions.

The following are the **PROGRAMMES OPEN FOR ADMISSIONS**.

### PROGRAMMES FOR WOMEN

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<tr>
<th>UNDERGRADUATE Programmes (Duration: 3 years)</th>
<th>Page Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B.A.</strong></td>
<td>22</td>
</tr>
<tr>
<td>› In the first two years, a student can choose to study any three subjects amongst:</td>
<td></td>
</tr>
<tr>
<td>Economics, Political Science, Philosophy, History &amp; Indian Culture, Optional English and Optional Telugu</td>
<td></td>
</tr>
<tr>
<td>› In the third year, students study one major subject (along with the other two basic subjects)</td>
<td></td>
</tr>
<tr>
<td><strong>B.Com. (Hons.)</strong></td>
<td>22</td>
</tr>
<tr>
<td><strong>Bachelor of Business Administration (B.B.A.)</strong></td>
<td>23</td>
</tr>
<tr>
<td><strong>B.Sc. in Food Science and Nutrition</strong></td>
<td>25</td>
</tr>
<tr>
<td><strong>B.Sc. in Food Technology</strong></td>
<td>25</td>
</tr>
<tr>
<td><strong>B.Sc. (Hons.) in Mathematics / Physics / Chemistry</strong></td>
<td>26</td>
</tr>
<tr>
<td>› In the first two years of study, all three subjects (Mathematics, Physics and Chemistry) are taught</td>
<td></td>
</tr>
<tr>
<td>› In the third year, the subject of specialization will determine the final degree awarded:</td>
<td></td>
</tr>
<tr>
<td>B.Sc. (Hons.) in Mathematics, B.Sc. (Hons.) in Physics, or B.Sc. (Hons.) in Chemistry</td>
<td></td>
</tr>
<tr>
<td><em><em>B.Sc. (Hons.) in Biosciences</em> / Chemistry</em>*</td>
<td>28</td>
</tr>
<tr>
<td>› In the first two years of study, both subjects (Biosciences and Chemistry) are taught.</td>
<td></td>
</tr>
<tr>
<td>› In the third year, the subject of specialization will determine the final degree awarded:</td>
<td></td>
</tr>
<tr>
<td>B.Sc. (Hons.) in Biosciences, or B.Sc. (Hons.) in Chemistry</td>
<td></td>
</tr>
<tr>
<td><em>If awarded a B.Sc. in Biosciences, it can lead directly to an M.Sc. in Biosciences (subject to meeting the eligibility criteria)</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POSTGRADUATE Programmes (Duration: 2 years)</th>
<th>Page Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M.A. in English Language and Literature</strong></td>
<td>30</td>
</tr>
<tr>
<td><strong>M.Sc. in Biosciences</strong></td>
<td>35</td>
</tr>
<tr>
<td><strong>M.Sc. in Food Science and Nutrition</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>M.Sc. in Food Technology</strong></td>
<td>37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFESSIONAL Programmes (Duration: 1 year)</th>
<th>Page Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bachelor of Education (B.Ed.)</strong></td>
<td>38</td>
</tr>
<tr>
<td><strong>Master of Education (M.Ed.)</strong></td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFESSIONAL Programmes (Duration: 2 years)</th>
<th>Page Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M.B.A.</strong></td>
<td>40</td>
</tr>
</tbody>
</table>
# PROGRAMMES FOR MEN

## UNDERGRADUATE Programmes (Duration: 3 years)

### B.A.
- In the first two years, a student can choose to study any three subjects amongst: Economics, Political Science, History & Indian Culture and Optional English
- In the third year, students study one major subject (along with the other two basic subjects)

**Note:** Students who meet the eligibility criteria at the end of the first two years of study will have the option to pursue the Honours Programme in Economics and will be awarded a **B.A. (Hons.) in Economics** as a result

### B.Com. (Hons.)

### Bachelor of Business Administration (B.B.A.)

### Bachelor of Computer Applications (B.C.A.)
- Can lead to Master of Computer Applications (subject to meeting the eligibility criteria)

### B.Sc. (Hons.) in Mathematics* / Physics* / Chemistry*
- In the first two years of study, all three subjects (Mathematics, Physics and Chemistry) are taught
- In the third year, the subject of specialization will determine the final degree awarded:
  - B.Sc. (Hons.) in Mathematics
  - B.Sc. (Hons.) in Physics, or
  - B.Sc. (Hons.) in Chemistry

### B.Sc. (Hons.) in Biosciences* / Chemistry*
- In the first two years of study, both subjects (Biosciences and Chemistry) are taught
- In the third year, the subject of specialization will determine the final degree awarded:
  - B.Sc. (Hons.) in Biosciences, or
  - B.Sc. (Hons.) in Chemistry

### B.Sc. (Hons.) in Mathematics* / Economics* / Statistics
- In the first two years of study, all three subjects (Mathematics, Economics and Statistics) are taught
- In the third year, the subject of specialization (Mathematics or Economics only) will determine the final degree awarded:
  - B.Sc. (Hons.) in Mathematics, or
  - B.Sc. (Hons.) in Economics

*Can lead directly to a Postgraduate programme in their respective subjects (subject to meeting the eligibility criteria)

## POSTGRADUATE Programmes (Duration: 2 years)

### M.A. in Economics (With an option to specialize in Financial Economics)

### M.Sc. in Mathematics (With an option to specialize in either Pure Mathematics, Applied Mathematics or Computer Science)

### M.Sc. in Physics (With an option to specialize in either Photonics, Nuclear Physics or Electronics)

### M.Sc. in Nanoscience and Nanotechnology

### M.Sc. in Chemistry

### M.Sc. in Biosciences

## PROFESSIONAL Programmes (Duration: 2 years)

### M.B.A.

### M.B.A. in Finance

### M.Tech. in Computer Science

### M.Tech. in Optoelectronics and Communications

### M.Tech. in Analytical Methods and Chemical Instrumentation
STEP 2: ELIGIBILITY REQUIREMENTS & PROGRAMME DESCRIPTIONS

Now that you have decided the specific programme to apply for, you can go straight to the information for that particular program (refer to the page number next to the programme in Step 1). The information (for each individual programme) will highlight the length of the programme, whether it is applicable for women candidates or men or both, the eligibility criteria and a programme description, which includes the courses of study for each year (and semesters).

The minimum entrance requirements vary from programme to programme. Candidates who do not meet all the admissions criteria listed for the programme they want to apply to will not be eligible for admissions and their applications will not be processed by the Admissions Office. They will be sent a letter of rejection by the Admissions Office.

Candidates belonging to Scheduled Castes/Scheduled Tribes are entitled to a relaxation of 5% marks for ALL programmes.

UNDERGRADUATE Programmes (Duration: 3 years / 6 Semesters)

The following Courses are common to all Undergraduate Programmes:

1. LANGUAGES
   For the first four semesters of all Programmes, each student must study English as a first language and one of Sanskrit, Hindi, Telugu or Additional English* as a second language.
   *Additional English can be opted in exceptional cases, where the student does not have an adequate background in Hindi or Telugu or Sanskrit.

2. AWARENESS COURSES
   A series of courses entitled 'Awareness' are taught for all six semesters of study.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
</table>
| Semester 1  
Philosophy of Education (Based on Bhagavan Baba’s Life and Teachings)  
Semester 2  
Unity of Religions  
Semester 3  
Eternal Values for the changing world  
Semester 4  
Study of Classics: Bhagawat Vahini-Bhagawatam as narrated by Bhagawan Sri Sathya Sai Baba  |
| Semester 5  
Study of Classics: Ramakatha Rasavahini-Ramayana as narrated by Bhagawan Sri Sathya Sai Baba  
Semester 6  
Life and its Quest |

3. ENVIRONMENT COURSES
   A course in Environment is also taught for the first two semesters.
**B.A.**

**Duration:** 3 Years

**For Women & Men Candidates**

**Admissions Test Syllabus:** Page 57

---

**Eligibility Requirements**

- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)
  
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- Age: preferably below 19 years as of 31st May in the year of admission

---

**Programme Description**

- In the first two years, women students can choose to study **any three subjects amongst**:
  
  **Women Students:** Economics, Political Science, Philosophy, History & Indian Culture, Optional English and Optional Telugu
  
  **Men Students:** Economics, Political Science and History & Indian Culture

- In the third year, students study one major subject (along with the other two basic subjects)

**B.A. (Hons) in Economics** (Men Students only): Men Students who meet the eligibility criteria at the end of the first two years of study will have the option to pursue the Honours Programme in Economics. They must study two additional courses of Economics in place of the basic subjects of the three-subject combination in Year 3 (Semesters 5 and 6).

---

**Courses taught per Semester**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 5</strong></td>
</tr>
<tr>
<td><strong>Economics:</strong> Economic Analysis-I</td>
<td><strong>Economics:</strong> Mathematics for Economics</td>
<td><strong>Economics:</strong> Indian Economy: Structure and Development, Intermediate Micro Economic Theory and a practical course of Introduction to Computer Application-I</td>
</tr>
<tr>
<td><strong>Political Science:</strong> Elements of Political Science</td>
<td><strong>Political Science:</strong> Modern Governments-I</td>
<td><strong>Political Science:</strong> Principles of Public Administration and a major course to be chosen from Indian Political Thought and Western Political Thought</td>
</tr>
<tr>
<td><strong>Philosophy:</strong> Introduction to Indian Philosophy</td>
<td><strong>Philosophy:</strong> Twentieth Century Philosophers-Indian and Western</td>
<td><strong>Philosophy:</strong> The Philosophy of Upanishads and major course entitled Ethics- Normative and Applied</td>
</tr>
<tr>
<td><strong>History &amp; Indian Culture:</strong> Ancient India-I</td>
<td><strong>History &amp; Indian Culture:</strong> Modern India - (1760 - 1950 A.D.)</td>
<td><strong>History &amp; Indian Culture:</strong> Ancient Greek and Roman Civilizations, Tourism and Travel Management and a major chosen from a set of four electives</td>
</tr>
<tr>
<td><strong>Optional English:</strong> Prose</td>
<td><strong>Optional English:</strong> Drama</td>
<td><strong>Optional English:</strong> Study of Literary Forms- Short Story and one-act play and a major course entitled History of English Language</td>
</tr>
<tr>
<td><strong>Optional Telugu:</strong> Poetry, Prosody and Grammar</td>
<td><strong>Optional Telugu:</strong> Poetry and Grammar</td>
<td><strong>Optional Telugu:</strong> History of Literature-I and the major course of Sanskrit- Poetry, Grammar and Translation</td>
</tr>
</tbody>
</table>
### Eligibility requirements & Programme descriptions

#### Step 2

**Year 1**

| Semester 2 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

| Semester 3 | Economics: Statistics for Economics  
Political Science: Modern Governments- II  
Philosophy: Western Logic (Formal and Symbolic)  
History & Indian Culture: History of Medieval India- II (1526 AD to 1761 AD)  
Optional English: Novel  
Optional Telugu: Folk Literature and Alankaras |
|---|---|

| Semester 4 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

| Semester 5 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

| Semester 6 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

#### Year 2

| Semester 4 | Economics: Statistics for Economics  
Political Science: Modern Governments- II  
Philosophy: Western Logic (Formal and Symbolic)  
History & Indian Culture: History of Medieval India- II (1526 AD to 1761 AD)  
Optional English: Novel  
Optional Telugu: Folk Literature and Alankaras |
|---|---|

| Semester 5 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

| Semester 6 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

#### Year 3

| Semester 4 | Economics: Statistics for Economics  
Political Science: Modern Governments- II  
Philosophy: Western Logic (Formal and Symbolic)  
History & Indian Culture: History of Medieval India- II (1526 AD to 1761 AD)  
Optional English: Novel  
Optional Telugu: Folk Literature and Alankaras |
|---|---|

| Semester 5 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|

| Semester 6 | Economics: Economic Analysis- II  
Political Science: Elements of Government  
Philosophy: Introduction to Western Philosophy  
History & Indian Culture: Ancient India- II: North India (600 AD to 1206 AD), South India (600 AD to 1336 AD)  
Optional English: Poetry  
Optional Telugu: Novel |
|---|---|


**Economics (Hons.) - Semester 6**: Public Finance and Fiscal Policy, Intermediate Macroeconomic Theory and a practical course entitled Introduction to Computer Application-II, Development Economics and Basic Econometrics

#### B.Com. (Hons.)

| Duration: 3 Years | For Women & Men Candidates | Admissions Test Syllabus: Page 57 |

**Eligibility Requirements**

- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- Age: preferably below 19 years as of 31st May in the year of admission

**Programme Description**

The B.Com. (Hons.) Programme will impart basic knowledge and skills in all the important subjects in the field of commerce. It will equip students thoroughly in the field of accounting, finance and taxation. The programme will help students prepare for advanced studies in finance and management and also professional courses in accounting, costing, financial analysis, insurance and corporate secretary-ship. Significant amount of time will also be spent on fostering ethical and moral attitudes to help students become better professionals in the financial services sector and in conducting business and serving industry after graduation.
Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 5</strong></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
<td><strong>Semester 6</strong></td>
</tr>
<tr>
<td>Principles of Management, Financial Accounting-II, Economic Environment of Business and Quantitative Techniques-I</td>
<td>Business Statistics, Accounting for Financial Services, Elements of Costing and a practical course in Computer Theory and Accounting Package</td>
<td>Principles of Marketing, Commercial Law, Auditing, two courses from a list of four electives, a practical course in Presentation and Database applications (Optional) and a comprehensive Viva voce.</td>
</tr>
</tbody>
</table>

Bachelor of Business Administration (B.B.A.)

Duration: 3 Years
For Women & Men Candidates
Admissions Test Syllabus: Page 58

Eligibility Requirements

- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- Age: preferably below 19 years as of 31st May in the year of admission

Programme Description

A comprehensive introduction to Business Administration at the Undergraduate level, the B.B.A. programme will equip the student with a thorough understanding of the theory and practice of Business Management via twenty core courses, taught over three years. What makes this programme unique from others is the focus on Values-based Management, Rural Development and Corporate Initiatives, Sales Management, National Perspectives and Entrepreneurial Development and Schemes – all of which are seamlessly integrated with the undercurrent of ethics and values.
Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 5</strong></td>
</tr>
<tr>
<td>Values Oriented Management, Financial</td>
<td>Human Resources Management, Financial</td>
<td>Taxation, Rural Development and Corporate</td>
</tr>
<tr>
<td>Accounting for Management, Business</td>
<td>Management, Office Management and</td>
<td>Initiatives, Banking-Theory and Practice,</td>
</tr>
<tr>
<td>Communications and a practical course in</td>
<td>Information Systems and a practical course</td>
<td>Management of Operations, two elective</td>
</tr>
<tr>
<td>Computer Theory and MS Office-Word</td>
<td>in Computers (Office Management and</td>
<td>courses from the streams of Marketing,</td>
</tr>
<tr>
<td></td>
<td>Information Systems)</td>
<td>Finance and Human Resources Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>without necessarily confining to any single</td>
</tr>
<tr>
<td></td>
<td></td>
<td>group, a practical course in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e-Commerce and a Viva voce</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
<td><strong>Semester 6</strong></td>
</tr>
<tr>
<td>Organizational Behaviour, Analytical</td>
<td>Selected Commercial Laws, Costing for</td>
<td>National Perspectives, Management</td>
</tr>
<tr>
<td>Techniques for Management, Business</td>
<td>Management, Principles of Marketing and a</td>
<td>Accounting, Sales Management,</td>
</tr>
<tr>
<td>Economics and a practical course in</td>
<td>practical course in MS Office-Access</td>
<td>Entrepreneurial Development and Schemes,</td>
</tr>
<tr>
<td>Computers (Accounting Package, MS Office)</td>
<td></td>
<td>two elective courses from the streams of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marketing, Finance and Human Resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management without necessarily confining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to any single group and a practical course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in ERP and CRM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Computer Applications (B.C.A.)

| Duration: 3 Years | For Men Candidates only | Admissions Test Syllabus: Page 59 |

Eligibility Requirements

- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- In XI / XII Standard, Mathematics (inc. Algebra, Geometry, Calculus and basic Statistics) must be studied
- Age: preferably below 19 years as of 31st May in the year of admission

Programme Description

The programme covers a wide spectrum of computer courses, including Computer Architecture, Algorithms, Operating Systems, Computer Network, Database Systems, Internet Programming, Linux environment and .NET. In the final year, students have a choice of eight electives. In order to supplement theoretical learning, related lab courses are conducted each semester. This enhances the application of the core principles of the course. Lastly, courses from mathematics and business will promote logical thinking and expose students to the nuances of the current world business environment.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 5</strong></td>
</tr>
<tr>
<td>Linear Programming, Geometry, Calculus</td>
<td>Numerical Methods (Mathematics-III),</td>
<td>Database Management System, Network</td>
</tr>
<tr>
<td>and Diff. Equations (Mathematics-I),</td>
<td>Operating System, Software Lab in C++,</td>
<td>Essentials, System Software, Microprocessor,</td>
</tr>
<tr>
<td>Introduction to Computer Systems,</td>
<td>Software Lab in Office Automation, Values</td>
<td>Software Lab in Java (Part-1, Software Lab</td>
</tr>
<tr>
<td>Introduction to Computer Systems and first</td>
<td>Oriented Management and seminar</td>
<td>in Office SQL, Fundamentals of Financial</td>
</tr>
<tr>
<td>part of software Lab in C</td>
<td></td>
<td>Accounting and seminar</td>
</tr>
</tbody>
</table>
### B.Sc. in Food Science and Nutrition

**Duration:** 3 Years  
**For Women Candidates only**  
**Admissions Test Syllabus: Page 56**

**Eligibility Requirements**
- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)  
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- Age: preferably below 19 years as of 31st May in the year of admission

**Courses taught per Semester**
- In the first two years, students of both B.Sc. in Food Science and Nutrition and B.Sc. in Food Technology study the same courses.
- (Unless otherwise stated, each of the courses below include both theoretical and practical assessment)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
</table>
| Semester 1  
Introductory Food Science, Applied Chemistry, Fundamentals of Nutrition | Semester 3  
Biochemistry, Basic Food Chemistry, Food Preservation Technologies | Semester 5  
| Semester 2  
Human Physiology, Microbiology, Principles of Culinary Science and Art | Semester 4  
Human Nutrition, Normal and Therapeutic Nutrition, Food Quality Assurance and Evaluation, Computer Basics and Applications (Practicals only) | Semester 6  
Pediatric and Geriatric Nutrition, Nutrition in Emergency and Disasters (Theory only), Dietetics, Community Nutrition, Nutrition and Metabolism |

### B.Sc. in Food Technology

**Duration:** 3 Years  
**For Women Candidates only**  
**Admissions Test Syllabus: Page 56**

**Eligibility Requirements**
- 10+2 years of schooling from a recognized board (CBSE or equivalent)
- Either passed or appeared for Final exams at XII level before Admissions Test
- XII Standard: 55% or more (English) and 60% (Aggregate including English)  
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
- Age: preferably below 19 years as of 31st May in the year of admission
Courses taught per Semester

› In the first two years, students of both B.Sc. in Food Science and Nutrition and B.Sc. in Food Technology study the same courses.
› (Unless otherwise stated, each of the courses below include both theoretical and practical assessment)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 5</strong></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
<td><strong>Semester 6</strong></td>
</tr>
<tr>
<td>Human Physiology, Microbiology, Principles of Culinary Science and Art</td>
<td>Human Nutrition, Normal and Therapeutic Nutrition, Food Quality Assurance and Evaluation</td>
<td>Food Fermentation and Biotechnology, Food Product Development, Milk and Milk Products Technology, Food Processing Operations (Theory only), Nutrition and Metabolism</td>
</tr>
</tbody>
</table>

B.Sc. (Hons.) in Mathematics / Physics / Chemistry

Duration: 3 Years
For Women & Men Candidates
Admissions Test Syllabus: Page 56

Eligibility Requirements

✓ 10+2 years of schooling from a recognized board (CBSE or equivalent)
✓ Either passed or appeared for Final exams at XII level before Admissions Test
✓ XII Standard: 55% or more (English) and 60% (Aggregate including English)
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
✓ Age: preferably below 19 years as of 31st May in the year of admission

Courses taught per Semester

› In the first two years of study, all three subjects (Mathematics, Physics and Chemistry) are taught.

› In the third year, the subject (students will take courses in only that subject) of specialization will determine the final degree awarded:
› B.Sc. (Hons.) in Mathematics, B.Sc. (Hons.) in Physics, or B.Sc. (Hons.) in Chemistry
<table>
<thead>
<tr>
<th>Year</th>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
<th>Semester 4</th>
<th>Semester 5</th>
<th>Semester 6</th>
</tr>
</thead>
</table>
| Year 1 | Mathematics: Multivariate Calculus and Linear Programming  
Physics: Electronics I: Analog and Digital and Practical Course in Electronics I  
Chemistry: Theoretical Chemistry and Analytical Chemistry and Laboratory course in Qualitative Inorganic Analysis | Mathematics: Ordinary Differential Equations and Vector Analysis  
Physics: Optics and Practical course in Optics  
Chemistry: Inorganic, Organic and Physical Chemistry-I and Laboratory Course in Inorganic, Organic and Physical Chemistry-I | Mathematics: Real Analysis I and Boundary Value Problems  
Physics: Classical Mechanics and Practical course in Classical Mechanics  
Chemistry: Inorganic, Organic and Physical Chemistry-II and Laboratory Course in Inorganic, Organic and Physical Chemistry-II | Mathematics: Real Analysis II and Linear Algebra  
Physics: Electromagnetism and Practical course in Electromagnetism  
Physics: Two courses of Mathematical Physics(Mathematical Physics-I and Mathematical Physics-II), Quantum Mechanics, Electronics comprising Operational Amplifiers, Computational Techniques in Physics and three practical courses out of which one will be general, one in Operational Amplifiers and one in software  
Chemistry: Analytical Chemistry and Nuclear Chemistry, Physical Chemistry, Dynamic Aspects of Organic Chemistry; one of the elective chosen from Chemistry of Biological Molecules, Theoretical Aspects of Spectroscopy and Microbial Physiology and Genetics; Practical courses in Computer applications in Chemistry, Physical Chemistry and in any of the elective chosen | Mathematics: Complex Analysis, Numerical Analysis, Topology; Two electives chosen from the streams of Pure Mathematics, Applied Mathematics and Computer Science; and Software Lab  
Physics: Solid State Physics, Nuclear Physics, Thermal Physics and Statistical Physics, Elements of Atomic and Molecular Spectroscopy and Lasers, Microprocessors; practical course in Microprocessors and software Lab and a Project work  
Chemistry: Spectroscopy, Advanced Inorganic Chemistry; one elective chosen from Synthetic Inorganic Chemistry or Pharmaceutical Chemistry and second elective chosen from Industrial Chemistry and Environmental Chemistry or Medicinal Chemistry; Practical courses in Computer Applications in Chemistry, Inorganic Chemistry and the electives chosen |
Step 2
Eligibility requirements &
Programme descriptions

B.Sc. (Hons.) in Biosciences / Chemistry

Duration: 3 Years
For Women & Men Candidates
Admissions Test Syllabus: Page 56

Eligibility Requirements
✓ 10+2 years of schooling from a recognized board (CBSE or equivalent)
✓ Either passed or appeared for Final exams at XII level before Admissions Test
✓ XII Standard: 55% or more (English) and 60% (Aggregate including English)
 ¡ (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
✓ Age: preferably below 19 years as of 31st May in the year of admission

Courses taught per Semester
› In the first two years of study, both subjects (Biosciences and Chemistry) are taught
› In the third year, the subject (students will take courses in only that subject) of specialization will determine the final degree awarded: B.Sc. (Hons.) in Biosciences or B.Sc. (Hons.) in Chemistry

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
</table>
| **Semester 1**
Biosciences: Algae and Fungi, Invertebrata
Chemistry: Theoretical Chemistry and Analytical Chemistry (Theory), Laboratory course in Qualitative Inorganic Analysis (Practicals) |
| **Semester 2**
Biosciences: Bryophytes and Pteridophytes, Chordata
Chemistry: Inorganic, Organic and Physical Chemistry-I |
| **Semester 3**
Biosciences: Taxonomy and Economic Importance of Angiosperms, Embryology of Animals
Chemistry: Inorganic, Organic and Physical Chemistry-II |
| **Semester 4**
Biosciences: Biostatistics and Information Technology, Bacteriology and Virology
Chemistry: Inorganic, Organic and Physical Chemistry-III |
| **Semester 5**
Biosciences: Plant Physiology, Animal Physiology, Cell Biology, Anatomy and Embryology of seed Plants and one course to be chosen from Microbial Physiology and Genetics and an Inter-Departmental Elective- Chemistry of Biological Molecules
Chemistry: Analytical Chemistry and Nuclear Chemistry, Physical Chemistry, Laboratory course in Computer Applications in Chemistry (Practical only), Dynamic aspects of Organic Chemistry and one course chosen from three electives one of which will be an Inter-Departmental Elective. |
| **Semester 6**
Biosciences: Genetics and Evolution, Environmental Biology, Introductory Molecular Biology, Biological Chemistry, Biotechnology
Chemistry: Spectroscopy (Theory only), Advanced Inorganic Chemistry, one course each to be chosen from two sets of two electives and a Laboratory course in Computer Applications in Chemistry (Practical only)
Environmental Chemistry or Medicinal Chemistry; Practical courses in Computer Applications in Chemistry, Inorganic Chemistry and the electives chosen |
B.Sc. (Hons.) in Mathematics/ Economics/ Statistics

Duration: 3 Years  
For Men Candidates only  
Admissions Test Syllabus: Page 56

Eligibility Requirements

✓ 10+2 years of schooling from a recognized board (CBSE or equivalent)
✓ Either passed or appeared for Final exams at XII level before Admissions Test
✓ XII Standard: 55% or more (English) and 60% (Aggregate including English)
  (If not appeared for XII Standard exams, X and XI Standard marks will be considered)
✓ Age: preferably below 19 years as of 31st May in the year of admission

Courses taught per Semester

› In the first two years of study, all three subjects (Mathematics, Economics and Statistics) are taught

› In the third year, the subject (students will take courses in only that subject) of specialization (Mathematics or Economics only) will determine the final degree awarded: B.Sc. (Hons.) in Mathematics, or B.Sc. (Hons.) in Economics

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td><strong>Semester 4</strong></td>
<td><strong>Semester 5</strong></td>
<td><strong>Semester 6</strong></td>
</tr>
</tbody>
</table>
**Step 2**

Eligibility requirements & Programme descriptions

## POSTGRADUATE Programmes (Duration: 2 years / 4 Semesters)

The following course is common to all Postgraduate Programmes:

### 1. AWARENESS COURSES

A series of courses entitled ‘Awareness’ are taught for all four semesters of study.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Education for Life- Individual Transformation</td>
<td>Guidelines for Life</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>God, Society and Man</td>
<td>My Life is My Message- Bhagawan Sri Sathya Sai Baba</td>
</tr>
</tbody>
</table>

### M.A. in English Language and Literature

**Duration:** 2 Years  
**For Women Candidates only**  
**Admissions Test Syllabus:** Page 60

#### Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before the date of Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) /3.5 or more (5-point scale) with 50% or more in English  
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Age: preferably below 23 years as of 31st May in the year of admission

#### Programme Description

The M.A. in English Language and Literature is designed to inspire students to appreciate first-hand, the varieties and shades of language and style and various kinds and trends of imaginative writing in Modern English Literature (1500 to the present day). Over the course of the programme, students will learn how to train their critical taste and judgment in such a way that they are able to respond sympathetically and imaginatively to diverse literary trends and movements. Concurrently, their ability to arrive at an impersonal and dispassionate evaluation of a given work of art and/or a given writer will be honed. They will gain the skills necessary to be aware of problems, limitations and strengths implicit in the appreciation of English language and literature, and learn how to write effectively and cogently while expressing themselves either in critical or in creative writing.

#### Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>English Literature: Chaucer and 1550-1660, Shakespeare, English Literature: 1660-1789, English Literature: 1789-1830</td>
<td>American Literature, Literary Criticism, Structure of Modern English – I (Elements of Linguistics and Phonetics), Structure of Modern English – II (Grammar)</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>English Literature: 1830 – 1900, English Literature: 20th Century, Indian Writing in English, Commonwealth Literature</td>
<td>English for the Media, two courses (chosen from two sets of electives) and a Dissertation / Open Course in World Drama</td>
</tr>
</tbody>
</table>
M.A. in Economics

Duration: 2 Years
For Men Candidates only
Admissions Test Syllabus: Page 60

Eligibility Requirements
- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor's degree level before Admissions Test
- Bachelor's degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor's degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Only candidates with a B.A./B.A. (Hons.) in Economics, B.Sc. (Hons.) in Economics or Mathematics, B.B.M. or B.Com./B.Com. (Hons.) are eligible to apply
- Age: preferably below 23 years as of 31st May in the year of admission

Programme Description
The M.A. Programme is designed to equip students with potential to serve in positions of responsibility with the government, the corporate sector, universities and research institutions. The set of courses offered fall into core courses and electives. The core courses are intended to provide well-balanced training in economic theory, contemporary economic problems and quantitative methodology so as to build the essential tools for economic analysis of problems arising in a variety of contexts. The elective courses from the economics stream deal with application of economic theory and econometrics to address practical issues in a range of fields like demography, labour, industry, agriculture, development, education and health economics. The elective courses from financial economics deal with the allocation and deployment of economic resources, both spatially and across time, in an uncertain environment. In both streams, the electives enable the students to acquire more advanced training in branches of their choice.

Courses taught per Semester

- Students have an option to specialize in Financial Economics

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Microeconomic Theory, Macroeconomic Theory, Quantitative Methods for Economics, Public Economics, Financial Markets and Institutions and a practical course on Computer Applications In Economic Analysis-I</td>
<td>Monetary Theory and Policy, Time Series Modelling, Industrial Economics, two courses chosen from a list of electives taken from the streams of Economics and Financial Economics, a practical course entitled Computer Applications in Economic Analysis- III and a Dissertation review</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
</tbody>
</table>
M.Sc. in Mathematics

Duration: 2 Years

For Men Candidates only

Admissions Test Syllabus: Page 60

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Only candidates with a B.Sc. in Mathematics or other B.Sc. programmes (M/P/C or M/E/S or M/P/CS) with a major/specialization in Mathematics are eligible to apply
- Familiarity with the following is mandatory for admissions:
  - Mathematics: Calculus, Differential Equations, Probability Theory, Real Analysis, Group Theory, Ring Theory, Linear Algebra, Complex Analysis, Discrete Mathematics, and Numerical Analysis
  - Computer Science: C Language Programming
- Age: preferably below 23 years as of 31st May in the year of admission

Programme Description

The M.Sc. Mathematics Programme provides a broad-based knowledge of mathematics to students through core courses that cover the areas of Analysis, Algebra, Geometry, Differential Equations, Mechanics, Statistics, Operations Research etc. The syllabus also provides one software laboratory course in each of the four semesters, which will enable hands-on experience with various programming languages, software packages and in working in different platforms. To develop a deep understanding in the fundamentals of one area, students can specialize in Pure Mathematics, Applied Mathematics or Computer Science.

Courses taught per Semester

- Students have an option to specialize in either Pure Mathematics, Applied Mathematics or Computer Science*
  *Subject to passing a test on Computer Science and Programming skills after admission to the Programme.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Advanced Real Analysis, Advanced Algebra, Differential Geometry, two courses chosen from a list of electives taken from the streams of Pure Mathematics, Applied Mathematics and Computer Science and a practical course in software Lab.</td>
<td>Theory of Partial Differential Equations, Theory of Probability, Numerical Linear Algebra, two courses chosen from a list of electives taken from the streams of Pure Mathematics, Applied Mathematics and Computer Science, a practical course in software Lab, a seminar and a Dissertation Interim Review in lieu of one elective course or software Lab</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>Measure Theory, Functional Analysis, Theory of Ordinary Differential Equations, two courses chosen from a list of electives taken from the streams of Pure Mathematics, Applied Mathematics and Computer Science, a practical course in software Lab and year-end Viva voce</td>
<td>Mathematical Modeling, Optimization Techniques, Theory of Statistics, two courses chosen from a list of electives taken from the streams of Pure Mathematics, Applied Mathematics and Computer Science, a practical course in software Lab, Comprehensive Viva voce and a Dissertation Work in lieu of one elective course or software Lab</td>
</tr>
</tbody>
</table>
M.Sc. in Physics

Duration: 2 Years  
For Men Candidates only  
Admissions Test Syllabus: Page 60

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Candidates with a B.Sc. (Hons.): Physics as a main subject along with Mathematics and either Chemistry, Statistics, Electronics or Computer Science as additional subjects are eligible to apply
- Candidates with a B.Sc. without Honours: 3-subject combination with Physics, Mathematics and either Chemistry, Statistics, Electronics or Computer Science are eligible to apply
- Age: preferably below 23 years as of 31st May in the year of admission

Programme Description

The Masters Programme in Physics is designed to equip the students with strong fundamentals of physics. Specialization in Photonics, Nuclear Physics or Electronics is offered in the second year of study. Students get adequate exposure to theory and experimental methodology of Modern Physics along with requisite computational techniques. A project work is designed to cater to the research potential of the students wherein they are exposed to gain experience in handling sophisticated equipment and are exposed to advanced concepts in Physics.

Courses taught per Semester

- Students have an option to specialize in either Photonics, Nuclear Physics or Electronics

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 2</strong></td>
</tr>
<tr>
<td>Classical Mechanics, Mathematical Physics, Classical Electrodynamics, Quantum Mechanics-I, Laboratory course in General Physics and Software and a Comprehensive Viva voce</td>
<td>Statistical Physics, Nuclear and Particle Physics, Condensed Matter Physics, Applied Optics, Laboratory course in General Physics and Software and a Comprehensive Viva voce</td>
</tr>
<tr>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>Molecular Spectroscopy, Quantum Mechanics-II, one course to be chosen from the streams of Photonics, Nuclear Physics and Electronics, one course from a set of twelve electives, a Specialization Laboratory, a Project Work Review and a Comprehensive Viva voce</td>
<td>Semiconductor Device Physics, Advanced Computational Techniques in Physics, one course to be chosen from the streams of Photonics, Nuclear Physics and Electronics, one course from a set of twelve electives, a Specialization Laboratory, Project Work and a Comprehensive Viva voce</td>
</tr>
</tbody>
</table>
Step 2
Eligibility requirements & Programme descriptions

M.Sc. in Nanoscience and Nanotechnology

| Duration: 2 Years | For Men Candidates only | Admissions Test Syllabus: Page 62 |

Eligibility Requirements

✓ 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
✓ Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
✓ Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
✓ Only candidates with a B.Sc. or B.Sc. (Hons) in Physics, Biosciences or Chemistry are eligible to apply
✓ Age: preferably below 23 years as of 31st May in the year of admission

Programme Description

This multi-disciplinary programme has been designed for students with an academic background in fundamentals of physics, chemistry or biology at the undergraduate level. The students should have minimum background in mathematics as well. The programme includes topics related to the theory and application of nanoscience and nanotechnology and focuses on emerging areas in the fields. Laboratory courses deal with the synthesis and applications of nanomaterials.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
</table>
| **Semester 1**
Introduction to Nanoscience, Mathematical Methods for Nanoscience, Quantum Mechanics, one course to be chosen from various topics of Nanoscience and Nanotechnology, one course to be chosen depending on the Honours subject at the Undergraduate level (Physics, Chemistry or Bioscience), Laboratory in Nanoscience and Software, a Term Seminar and a Viva voce |
| **Semester 2**
Nanomaterials: synthesis and characterization, Biochemistry of Macro Molecules, Biophysics, one course to be chosen from varied topics of Nanoscience and Nanotechnology, one course to be chosen depending on the Honours subject in at the Undergraduate level (Physics, Chemistry or Bioscience), two courses of Nanoscience Laboratory, a Term Seminar and a Viva voce |
| **Semester 3**
Nanomaterials: Applications and Devices, Advanced Instrumentational Techniques, two elective courses to be chosen from various topics Nanoscience and Nanotechnology, one course to be chosen depending on the Honours subject in under graduation (Physics, Chemistry or Bioscience), a Term Seminar, a Viva voce and Project Work (Review) |

M.Sc. in Chemistry

| Duration: 2 Years | For Men Candidates only | Admissions Test Syllabus: Page 62 |

Eligibility Requirements

✓ 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
✓ Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
✓ Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
✓ Only candidates with a B.Sc. or B.Sc. (Hons) in Chemistry are eligible to apply
✓ Age: preferably below 23 years as of 31st May in the year of admission
Programme Description
The Masters Programme in Chemistry covers all aspects of the different branches of chemistry and lays emphasis on detailed understanding of the fundamental principles and on training in appropriate computational and experimental methods. This rigorous training in all the major branches of chemistry - theoretical, applied, instrumental, computational and experimental – sets the stage for electives in interdisciplinary areas as well as for an introduction to advanced emerging fields of research in the final semester.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
</tr>
<tr>
<td>Quantum Chemistry and Group Theory (Theory only), Mathematics for Chemistry (Theory only), Analytical Chemistry (Theory and Practicals), Coordination Chemistry (Theory and Practicals), Advanced aspects of Organic structure and Stereochemistry (Theory only), Organic Qualitative Analysis (Practicals only)</td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 3</strong></td>
<td></td>
</tr>
<tr>
<td>Organometallic Chemistry, Polymer Chemistry and Special Topics from Physical Chemistry, one elective course to be chosen from Chemistry and one inter-departmental elective, a practical course in Computational and Statistical tools for Chemistry and Project Work (Review)</td>
<td></td>
</tr>
<tr>
<td><strong>Semester 4</strong></td>
<td></td>
</tr>
<tr>
<td>Solid State Chemistry and Nano Materials, Special Topics from Bio-organic Chemistry, Medicinal Chemistry, two inter-departmental electives, a practical course in Computational and Statistical tools for Chemistry and Project Work</td>
<td></td>
</tr>
</tbody>
</table>

M.Sc. in Biosciences

- Duration: 2 Years
- For Women and Men Candidates
- Admissions Test Syllabus: Page 63

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Only candidates with a B.Sc. or B.Sc.(Hons) in Biosciences, Botany or Zoology are eligible to apply
- Age: preferably below 23 years as of 31st May in the year of admission
Programme Description
The curriculum of M.Sc. in Biosciences is designed to provide an in-depth understanding of the major sub-disciplines of life sciences such as Molecular biology, Microbiology, Biochemistry, Developmental biology, Immunology and Genetics. Strengthening the foundations in these aspects sets the stage for elective courses offered in advanced topics in the domains of Biotechnology and Systems Biology. Laboratories with state-of-the-art equipment provide students with hands-on training in Animal and Plant Cell Culture, Microbiology, Molecular biology, Biochemistry and Bioinformatics. A dissertation project spanning the final two semesters of the programme equips students with essential laboratory techniques and trains them to design and conduct in vitro and in silico studies in topics aligned to the thrust areas of the Department of Biosciences. Weekly colloquia and lab meetings require students to make presentations on their progress to the faculty members and research scholars of the department thereby honing their communication skills and building confidence.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 2</strong></td>
</tr>
<tr>
<td>Molecular Cell Biology, Molecular Biology, Plant Systematics and Conservation, Instrumentation and two practical courses</td>
<td>Biostatistics and Bioinformatics, Molecular Developmental Biology, Genetic Engineering, Biochemistry of Macro molecules and two practical courses</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td></td>
<td>Intermediary metabolism, Cytogenetics and Plant Breeding, two electives from the streams of Biotechnology / Mycology &amp; Plant Pathology, two practical courses and Project Work (Review)</td>
</tr>
<tr>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td></td>
<td>Immunology/ Biocatalysis for Industry and Development, Environmental Biotechnology/ Biomolecular Structure and Function, two electives from the streams of Biotechnology / Mycology &amp; Plant Pathology, two practical courses and Project Work in lieu of the two practical courses</td>
</tr>
</tbody>
</table>

M.Sc. in Food Science and Nutrition

Duration: 2 Years

For Women Candidates only

Admissions Test Syllabus: Page 64

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
✓ Only candidates with a B.Sc. in Home Science or Biosciences, or Mathematics/Physics/Chemistry are eligible to apply
✓ Age: preferably below 23 years as of 31st May in the year of admission

Courses taught per Semester
› The syllabus for both, the M.Sc. in Food Science and Nutrition and M.Sc. in Food Technology programmes is common for the first year of study. At the end of the first year, the Head of Department (along with the student) will decide the specialization (Food Science and Nutrition or Food Technology) to be pursued by the student in the second (final) year.

› (Unless otherwise stated, each of the courses below include both theoretical and practical assessment)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Concepts in Food Science and Technology</td>
<td>Macro Nutrients, Maternal and Child Nutrition, Diet Engineering, Clinical Biochemistry (Practicals only), Experimental Methods (Practicals only)</td>
</tr>
<tr>
<td>Advanced Nutritional Biochemistry, Research Methodology and Applied Statistics and Food Microbiology</td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
</tbody>
</table>

M.Sc. in Food Technology
Duration: 2 Years For Women Candidates only Admissions Test Syllabus: Page 64

Eligibility Requirements
✓ 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
✓ Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
✓ Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
✓ Only candidates with a B.Sc. in Home Science or Biosciences, or Mathematics/Physics/Chemistry are eligible to apply
✓ Age: preferably below 23 years as of 31st May in the year of admission

Courses taught per Semester
› The syllabus for both, the M.Sc. in Food Science and Nutrition and M.Sc. in Food Technology programmes is common for the first year of study. At the end of the first year, the Head of Department (along with the student) will decide the specialization (Food Science and Nutrition or Food Technology) to be pursued by the student in the second (final) year.

› (Unless otherwise stated, each of the courses below include both theoretical and practical assessment)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Concepts in Food Science and Technology</td>
<td>Food Grain &amp; Oil Technology, Dairy Technology, Packaging Technology, Entrepreneurship &amp; Food Plant Management (Theory only), Experimental Methods (Practicals only)</td>
</tr>
<tr>
<td>Advanced Nutritional Biochemistry, Research Methodology and Applied Statistics and Food Microbiology</td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>Design &amp; Formulation of Foods, Food Chemistry, Instrumentation Techniques and Food Standard and Quality Management</td>
<td>Food Processing Unit Operation (Theory only), Food Product Development and Evaluation, Horticultural Products Technology and Comprehensive Viva voce</td>
</tr>
</tbody>
</table>
Step 2
Eligibility requirements & Programme descriptions

PROFESSIONAL Programmes (Duration: 1 year / 2 Semesters or 2 years / 4 Semesters)

The following Course is common to all Professional Programmes:

1. AWARENESS COURSE

A course entitled 'Awareness' is taught for all four semesters of study for all Professional Programmes with the exception of the B.Ed. and M.Ed. programmes, where it is incorporated in the course structure.

The following topics are covered in this Awareness course over the four semesters:

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Semester 3</td>
</tr>
<tr>
<td>Education for Life- Individual Transformation</td>
<td>Guidelines for Life</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Semester 4</td>
</tr>
<tr>
<td>God, Society and Man</td>
<td>My Life is My Message- Bhagawan Sri Sathya Sai Baba</td>
</tr>
</tbody>
</table>

Bachelor of Education (B.Ed.)

Duration: 1 Year  
For Women Candidates only  
Admissions Test Syllabus: Page 66

Eligibility Requirements

✓ 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
✓ Either passed or appeared for Final exams at Bachelor’s degree level before the date of Admissions Test
✓ Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) /3.5 or more (5-point scale) with 50% or more in English  
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
✓ Age: preferably below 25 years as of 31st May in the year of admission

Subject Test Combinations for Admissions Test

Candidates with UNDERGRADUATE QUALIFICATIONS can choose any ONE of the following subjects for the admissions test:

| Mathematics and Physical Science | Biological Sciences | English Social Studies and English |

Candidates with POSTGRADUATE QUALIFICATIONS can choose any ONE of the following subjects for admissions test:

<table>
<thead>
<tr>
<th>Mathematics and Physics</th>
<th>Mathematics and Chemistry</th>
<th>Physics and Chemistry</th>
<th>Biology and Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>English and Social Studies</td>
<td>English and History</td>
<td>English and Civics</td>
<td>English and Geography</td>
</tr>
</tbody>
</table>

Programme Description

A one-year professional programme, B.Ed. is intended to impart teacher training, with due emphasis on human values. Equipped with courses ranging from current trends in India and the psychological foundations of education to supervision and management-related issues, it will help students to develop confidence when they step into the shoes of a teacher. The unique aspect of this programme is that it stresses on the importance of imparting values-based education to children and the wholesome and balanced development of students as a result.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
</tr>
<tr>
<td>Teacher and Education in Emerging Indian Society, Psychological Foundations of Education, Technology of Teaching and Learning, Educational Evaluation and Elementary Statistics, two courses in Methods of Teaching to be chosen from different subjects like English, Mathematics, Civics, Economics etc., Students Practice Teaching, Sessional Work (Experiments and tests in Psychology and a course in Information and Communication Technology</td>
</tr>
</tbody>
</table>
### Semester 2
School Administration Supervision and Management, Broad Trends in Indian Education, Education in Human Values, one course to be chosen from a set of electives, two courses in Methods of Teaching to be chosen from different subjects like English, Mathematics, Civics, Economics etc., Students Practice Teaching and Work Experience (OR Socially Useful Productive Work)

### Master of Education (M.Ed.)

<table>
<thead>
<tr>
<th>Duration: 1 Year</th>
<th>For Women Candidates only</th>
<th>Admission Tests Syllabus: Page 66</th>
</tr>
</thead>
</table>

**Eligibility Requirements**

- 10+2 years of schooling, 3 years of university and 1 year of a B.Ed. degree (total 16 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before the date of Admissions Test
- Only Candidates with a B.Ed. degree (with 60% Aggregate) and 50% in General English in their Undergraduate degree are eligible to apply.

  The admissions test will comprehensively evaluate aptitude in General English and courses studied at the B.Ed. level.
- Age: preferably below 27 years as of 31st May in the year of admission

**Programme Description**
M.Ed. is a professional programme that focuses on comprehensive and integrated professional development of teachers. Its purpose is to turn out fully equipped, professionally trained and deeply value-oriented teachers, teacher educators and other specialists. This professional course will help students to become Teacher- Educators / Principal’s in schools, Lecturers in colleges of Education, Teachers at the +2 level and Degree Colleges/Universities.

**Courses taught per Semester**

<table>
<thead>
<tr>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
</tr>
<tr>
<td>Philosophical and Sociological Foundations of Education, Advanced Educational Psychology, Research Methodology in Education, one course to be chosen from four Area of Specialization, Internship and Dissertation Review</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
</tr>
<tr>
<td>Educational Leadership and Management, Educational Statistics and Methods of Data Analysis, Education in Human values, one course to be chosen from four Area of Specialization, Dissertation and Dissertation Viva voce</td>
</tr>
</tbody>
</table>
Step 2
Eligibility requirements & Programme descriptions

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor's degree level before Admissions Test
- Bachelor's degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor's degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Master's degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English at the Bachelor's level
- Age: preferably below 27 years as of 31st May in the year of admission

Note: Admissions Test Question Paper is common for both MBA and MBA(Finance) Programmes.

Programme Description

The Management Programme has been structured in a balanced manner providing equal importance to the development of managerial skills and capabilities and the inculcation of healthy attitudes and values, thus enabling the student to grow into a proficient manager and a responsible member of society. It has four components. The Foundation Courses have special focus on universal human values and cover subjects such as: Self-Development, Values-based Management, Values-Centered Leadership, National Perspectives and Rural Development. The Core and Functional Courses cover concepts and techniques connected with functional management in Marketing, Operations, Finance, and Human Resources. The Integrative Courses cover subjects that span across the different functions and disciplines such as: Management Information Systems, Total Quality Management, and Management Strategies among others. Electives are offered in streams such as Marketing, Finance, Operations, Systems, Human Resources and International Business.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
</table>
M.B.A. in Finance

Duration: 2 Years
For Men Candidates only
Admissions Test Syllabus: Page 66

Eligibility Requirements

- 10+2 years of schooling and 3 years of university (total 15 years) as recognized by SSSIHL
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Bachelor’s degree: 50% or more (English) and 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English
  (If not appeared for Bachelor’s degree final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Master’s degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) / 3.5 or more (5-point scale) with 50% or more in English at the Bachelor’s level
- Age: preferably below 27 years as of 31st May in the year of admission

Note: Admissions Test Question Paper is common for both MBA and MBA(Finance) Programmes.

Programme Description

The M.B.A. in Finance Programme is similar to the M.B.A. programme. It too comprises of four components. Foundation papers, core papers, Integrative papers and Electives. The Foundation Courses have special focus on universal human values and cover subjects such as: Self-Development, Values-based Management, Values-Centered Leadership, National Perspectives and Rural Development. The core papers cover concepts and techniques connected with functional areas in Marketing, Operations, Finance, and Human Resources so as to enable the student to develop the bigger picture before drilling down into finance. Areas specifically relevant to a finance manager from a broad perspective are covered in the integrative courses such as corporate financial strategy, short-term financial management, rural finance and management control systems. The elective papers offer the advantage of a deeper focus in specialised areas in finance such as banking, insurance, equity and derivatives markets, project financing and many others.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Self-Development, Values Based Management, Financial Applications, Financial Management, Quantitative Methods, Marketing Management, Financial Services and Instruments and a practical course in Computer Applications</td>
<td>Total Quality Management, Corporate and Tax Laws, Management Control and Decision Systems, three electives to be chosen from Finance and Non-Finance streams, a practical course in Computer Applications and Project Work (Review)</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>Communication Skills, Human Resources Management, Research Methods for Managers, Operations Management – Financial Services, Management Accounting, Management Science, Banking, a practical course in Computer Applications and Internal Viva voce</td>
<td>Values-Centered Leadership, Corporate Financial Strategy, Group Dynamics for Teams, National Perspectives and Rural Development, three electives to be chosen from Finance and Non-Finance streams, a practical course in Computer Applications, Project Work, Integrated Games and Comprehensive Viva voce</td>
</tr>
</tbody>
</table>
**M.Tech. in Computer Science**

**Duration:** 2 Years  
**For Men Candidates only**  
**Admissions Test Syllabus:** Page 67

**Eligibility Requirements**

- The candidate must have either passed or appeared for final exams of one of the following:
  - a) M.Sc. in Mathematics or M.Sc. in Physics or M.Sc. in Computer Science or M.C.A., or
  - b) B.E. in Computer Science / B.Tech. in Computer Science
- Candidates with a Bachelor’s degree (B.E. / B.Tech.) in Computer Science, Computer Science and Engineering, Electronics & Communications Engineering (with Computer Science background*) and Information Technology (with Mathematics background) are eligible to apply.
- Bachelor’s degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale)
  (If not appeared B.E./B.Tech./M.Sc. final exams, aggregate marks in all the preceding Years/Semesters put together marks will be considered)
- Master’s degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale) with 50% or more in English at the Bachelor’s level
- Familiarity with the following is mandatory for admissions:
  - **Mathematics**: Calculus of one and several variable, Sequence and Series, Linear Algebra and Matrix Theory, Differential equations and Laplace Transforms, Mathematical logic.
  - **Computer Science**: Data Structures and Simple Algorithms, Computer Organization and Architecture, Data communications and Networks, Data base Systems, Languages Translators
- Age: preferably below 27 years as of 31st May in the year of admission

*Implies an adequate, formal training and qualification from a recognized institution or relevant Computer/IT industry/academic experience for a minimum period of 5 years

**Programme Description**

A masters programme for students with a background in science and engineering alike, the M.Tech. in Computer Science provides students the theoretical foundations of Computer Science as well as the practical knowledge regarding computer systems. This is achieved primarily through core theoretical courses. In the first year of study, students take software laboratory courses which assist in learning a variety of programming languages, operating environments, software packages, and development tools. Students can choose to specialize in different areas of computer science, such as Artificial intelligence, Software Systems and Hardware. A comprehensive viva voce and project work in the second year prepares graduating students with the necessary knowledge and skills for the next stage of their career upon graduation.

**Courses taught per Semester**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
</table>
| **Semester 1**  
Design and Analysis of Algorithms, Operating Systems, Parallel Processing, two electives to be chosen from the streams of Intelligent Systems and Knowledge Engineering, Advanced Computer Networks, Human Computer Interaction, Theoretical Computer Science, Computer Systems, Multi Core and Parallel Computing, Software Engineering and Mathematical Methods in Computer Science, two courses in Software Lab, a seminar, a Departmental Colloquium and a Semester End Viva voce | **Semester 3**  
Software Engineering, one elective to be chosen from the above mentioned streams and a Project Work Review |
| **Semester 2**  
Theory of Computation, Compiler Design, Distributed Systems, two electives to be chosen from the streams of Intelligent Systems and Knowledge Engineering, Advanced Computer Networks, Human Computer Interaction, Theoretical Computer Science, Computer Systems, Multi Core and Parallel Computing, Software Engineering and Mathematical Methods in Computer Science, two courses in Software Lab, a seminar, a Departmental Colloquium and a Semester End Viva voce | **Semester 4**  
Project work, Viva voce and Comprehensive Viva voce |
M.Tech. in Optoelectronics and Communications

Duration: 2 Years  For Men Candidates only  Admissions Test Syllabus: Page 68

Eligibility Requirements
- The candidate must have either passed or appeared for final exams of one of the following:
  a) M.Sc. Physics, or
  b) B.E. / B.Tech. with background in Optics and Electromagnetic Theory
- Master's degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale)
- Candidates with a Bachelor's degree in B.E. or B.Tech. (with background in Optics and Electromagnetic Theory) or a Master's Degree in Physics are eligible to apply
- Age: preferably below 27 years as of 31st May in the year of admission

Programme Description
Optoelectronics has been deemed as the 21st century revolutionary technology that will create as enormous an impact as electronics did in the 20th century. This interdisciplinary M.Tech programme aims to generate trained professionals in the broad areas of optoelectronics and communications with an emphasis on networking technologies. One half of the courses are core ones and the other half are electives, that enable students to pursue areas that have their academic interest. The core courses give a strong background of science and engineering. These are supplemented with laboratory courses, enabling the students to take up project work in the second year. Graduates with training in optoelectronics and related communication technologies will be useful in industries and R&D organizations involved in the areas of Optoelectronics, telecommunication & networks.

Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
</table>
| **Semester 1**
Fiber Optic Components, Optical communication systems, Optoelectronics, two elective courses from the streams of Optoelectronics, Network and Communications and Open Electives, a Laboratory course in Optoelectronics and Software and a Viva voce | **Semester 3**
Two elective courses from the streams of Optoelectronics, Network and Communications and Open Electives, a Comprehensive Viva voce and Project Interim Review |

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Year 4</th>
</tr>
</thead>
</table>
| **Semester 2**
Digital Communication and Information System, Opto-Electronic sensors, Optical Networks, two elective courses from the streams of Optoelectronics, Network and Communications and Open Electives, a Laboratory course in Network and Software and Viva voce | **Semester 4**
Project work and Viva voce |
M.Tech. in Analytical Methods and Chemical Instrumentation

| Duration: 2 Years | For Men Candidates only | Admissions Test Syllabus: Page 69 |

### Eligibility Requirements
- The candidate must have either passed or appeared for final exams of one of the following:
  - a) M.Sc. in Chemistry or M.Sc. in Organic Chemistry or M.Sc. in Applied Chemistry or M.Sc. in Industrial Chemistry or M.Sc. in Biosciences or M.Sc. in Nanoscience & Nanotechnology
  - b) B.E. / B.Tech. in Chemical Technology
- Either passed or appeared for Final exams at Bachelor’s degree level before Admissions Test
- Master’s degree: 60% (Aggregate incl. English) or CGPA aggregate of 6 or more (10-point scale)
- Candidates with a Bachelor’s degree in B.E. or B.Tech. (with background in Chemical Technology) or a Master’s Degree in either Chemistry, Organic Chemistry, Applied Chemistry, Industrial Chemistry, Nanoscience & Nanotechnology or Biosciences are eligible to apply
- Age: preferably below 27 years as of 31st May in the year of admission

### Programme Description
M.Tech. in Analytical Methods and Chemical Instrumentation is an interdisciplinary programme that marries the principles of Analytical and Environmental Chemistry along with Electronics and Instrumentation. It deals with the development of sophisticated analytical techniques along with chemical analysis which uses instrumentation to solve an analytical problem. The use of instrumentation has now become a part of chemical analysis just as it is applied in virtually all areas of pure and applied science. Instrumentation plays an important role in the production and evaluation of new products and in the protection of consumers and the environment. Hence, the goal of this course is to teach principles of Instrumentation followed by the various instrumental techniques for the development of better and novel analytical methods that yield societal benefits.

### Courses taught per Semester

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 4</strong></td>
</tr>
<tr>
<td>Instrumental Methods–2, Basic Electronics and Instrumental Engineering, Analytical Techniques and Instrumentation in Clinical Biochemistry and Basic Principles in Drug Action, Industrial Product Analysis, two laboratory courses in Computational Chemistry and one in Analytical &amp; Instrumentation–II, Viva voce and Colloquium</td>
<td>Project work and Viva voce</td>
</tr>
</tbody>
</table>
9 STEP APPLICATION PROCESS

1. Choose Programme
2. Eligibility & Descriptions
3. Application form
4. Post Application
5. Adv Test Application
6. Adv Test Confirmation
7. Attend Test & Interview
8. Await final decision
9. Join SSSIHL

sssihl.edu.in

PROFESSIONAL PROGRAMMES
Step 3: Complete an Application Form

SSSIHL offers all applicants TWO options of initiating the application process for admissions:

1. Online – via the online application portal, or
2. Postal – get a paper application form posted to you by the university

ONLINE APPLICATION
For students who choose this option, please visit the link for the online application portal. In this option, you will be guided step-by-step on how to fill in the form.

Note: It is mandatory that you have an email ID. If you do not have one yet, we suggest you create an online account with a popular service provider such as Google, Yahoo, Hotmail, etc. They are all free of charge.

Once you have completed filling in the form, you will be able to view the filled-in application form in PDF format and save it on your computer.

(You must have Adobe Reader to view PDFs on your computer. To download for free, visit http://get.adobe.com/reader).

POSTAL APPLICATION
If you prefer to get the application form by post, please write to:

The Admissions Office
Office of the Registrar
Sri Sathya Sai Institute of Higher Learning
Vidyagiri
Prasanthi Nilayam – 515 134,
Dist. Anantapur
Andhra Pradesh

What you must send with the written request:

1. Indian Postal Order (IPO) or Demand Draft (DD) for Rs.100/- The Bank draft should be drawn in favour of Sri Sathya Sai Institute of Higher Learning, payable at SBI, Prasanthi Nilayam/ Puttaparthi.

Note: Only one application per course of study is permitted. A candidate who wants multiple application forms for different courses of study needs to send separate written requests along with above-mentioned DD/IPO.

In case you decide to apply online, you need to fill in separate forms for each online application. You must send separate IPO/DDs/State Bank Collect challan per application. Log on to SSSIHLEDU.IN for details

2. Your name and complete postal address along with programmes for which application form is required should be clearly stated in Block letters on the reverse of the IPO/DD and also in the requisition letter.

3. Indication of which programme you would like to apply to – whether you want to apply for an Undergraduate, Postgraduate or Professional programme for admission. This is very important, since there are THREE separate application forms for admission – one each for Undergraduate, Postgraduate and Professional Programmes. Incorrect forms will be rejected.

4. Complete address for correspondence - Please indicate your complete mailing address, clearly mentioned in your written request, so that we can post you the form and related Handbooks.

HOW DO I FILL AN APPLICATION FORM?
APPLICATION FORM INSTRUCTIONS
If you choose to apply via the online portal, all instructions on filling the online form will be given on each page. For further information log on to http://sssihl.edu.in/sssuniversity/Admissions.aspx.

If you have received the application form by post, please make sure to read the full instructions for the programme you are applying.

It is important that, if for any reason you are not able to comprehend the instructions, ask for help from someone, like an elder or a friend.

Candidates who are unable to comply fully with the instructions, and whose forms are incomplete in any way, (for example doesn’t have the necessary certificates attached with the application form) will be summarily rejected and their applications will not be processed.

Only one programme per application will be accepted.

COMMON GUIDELINES FOR ALL FORMS
› The Form must be completed only in ENGLISH.
› Use blue or black ink only. Do not use a pencil.
› Write neatly, only in CAPITAL LETTERS.
› Your passport-sized photograph must be pasted on the first page of the form as indicated by gum/glue. Do NOT staple. Kindly attest the most recent photograph.
INSTRUCTIONS: UNDERGRADUATE APPLICATION FORM

Most items on the form are self-explanatory. Only items that need emphasis are explained below.

PART A: Indicate Programme of Study & Admissions Test Subject Combination

› Indicate the Undergraduate Programme you want to apply to and tick (✔) ONLY ONE programme from the choices given in the right column.

› Then, tick the choice of admissions test paper combination (for appearing for the Admissions Test) you would like from the choice of corresponding boxes on the right. Tick only ONE test paper combination from the options.

Note: Certain programmes have no choice of admissions test paper (e.g. B.Sc.(Hons.) in Mathematics / Physics / Chemistry). In this case, just tick the choice of programme.

Example: You want to apply to the B.Com.(Hons.) programme and want to take the admission test combination of Accountancy, Commerce, Economics. In this case, enter:

<table>
<thead>
<tr>
<th>B.Com. (Hons.)</th>
<th>Accountancy, Commerce, Economics</th>
<th>✔</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accountancy, Commerce, Mathematics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accountancy, Commerce, Statistics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accountancy, Economics, Mathematics</td>
<td>✔</td>
</tr>
</tbody>
</table>

PART B: Personal Information

1: Name of Applicant
Kindly follow the instructions above (Common Guidelines) for this item.

8: Permanent Address
› It is compulsory to enter all the information on your address. Failing to enter any item (e.g. if you do not enter your PIN Code) may result in you not receiving the hall ticket.

Rows 1-3: Use these for the street address.
› Row 4: Enter both your Town/City of residence and District
› Row 5: Enter your PIN Code and State

9: Mailing Address
› If your Permanent address and mailing address (where you want us to post you admissions-related information) are the same, leave this item blank. Else, follow the instructions for Item #8.

15: Annual Income
› Include the correct amount in Indian Rupees, of the annual
Step 3 Complete an Application form

INSTRUCTIONS: POSTGRADUATE APPLICATION FORM

Most items on the form are self-explanatory. Only items that need emphasis are explained below.

PART A: INDICATE PROGRAMME OF STUDY

› Indicate the Postgraduate Programme you want to apply to and tick (✓) ONLY ONE programme from the choices given in the list.

PART B: PERSONAL INFORMATION

1: Name of Applicant

› Kindly follow the instructions above (Common Guidelines) for this item.

9: Permanent Address

› It is compulsory to enter all the information on your address. Failing to enter any item (e.g. if you do not enter your PIN Code) may result in you not receiving the hall ticket.

› Rows 1-3: Use these for the street address.

› Row 4: Enter both your District and your Town/City of residence

› Row 5: Enter your PIN Code and State

10: Mailing Address

› If your Permanent address and mailing address (where you want us to post you admissions-related information) are the same, leave this item blank. Else, follow the instructions for Item #9.

13: Annual Income

› Include the correct amount in Indian Rupees, of the annual household income (father and mother separately in the respective boxes). It should not be the figure on the ration card, for example. We require this information to assess if your parents / guardian can meet the hostel expenses.

PART C: EDUCATIONAL INFORMATION

22, 29 and 36: Medium of Instruction

› Enter the language in which you were taught at your Higher Secondary School (Item 22), Bachelor’s level (Item 29) and Master’s level (Item 36). For example, if you went to a school in West Bengal and were taught all the regular subjects in BENGALI, enter that.

› Note: Do not enter VERNACULAR. You must specify the language you were taught in.

25, 32 and 40: Statement of Marks

› All the marks you enter here must be identical to the Attested photocopies of the Statement of Marks for X Std., XI Std., XII

PART D: Additional Information

34: List of achievements

› Enter here details of both academic (e.g. competitive exams) and non-academic achievements.

PARTS E and F: Declaration by Applicant and Parent/Guardian

› Both parts must be signed by the applicant and parent/guardian only. Unsigned applications will not be processed.
### 9 STEP APPLICATION PROCESS

1. **Choose Programme**
2. **Eligibility & Descriptions**
3. **Application Form**
4. **Documents Checklist**
5. **Post Application**
6. **Await Test Confirmation**
7. **Attend Test & Interview**
8. **Await Final Decision**
9. **Join SSSIHL**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choose Programme</td>
</tr>
<tr>
<td>2</td>
<td>Eligibility &amp; Descriptions</td>
</tr>
<tr>
<td>3</td>
<td>Application Form</td>
</tr>
<tr>
<td>4</td>
<td>Documents Checklist</td>
</tr>
<tr>
<td>5</td>
<td>Post Application</td>
</tr>
<tr>
<td>6</td>
<td>Await Test Confirmation</td>
</tr>
<tr>
<td>7</td>
<td>Attend Test &amp; Interview</td>
</tr>
<tr>
<td>8</td>
<td>Await Final Decision</td>
</tr>
<tr>
<td>9</td>
<td>Join SSSIHL</td>
</tr>
</tbody>
</table>

### SSIHL.edu.in

- Choose Programme
- Eligibility & Descriptions
- Application Form
- Documents Checklist
- Post Application
- Await Test Confirmation
- Attend Test & Interview
- Await Final Decision
- Join SSSIHL

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### INSTRUCTIONS: PROFESSIONAL APPLICATION FORM

Most items on the form are self-explanatory. Only items that need emphasis are explained below.

### PART A: INDICATE PROGRAMME OF STUDY & ADMISSIONS TEST SUBJECT COMBINATION

- Indicate the Professional Programme you want to apply to and tick (✓) ONLY ONE programme from the choices given in the list.

### PART B: PERSONAL INFORMATION

1. **Name of Applicant**
   - Kindly follow the instructions above (Common Guidelines) for this item.

9. **Permanent Address**
   - It is compulsory to enter all the information on your address. Failing to enter any item (e.g. if you do not enter your PIN Code) may result in you not receiving the hall ticket.
   - Rows 1-3: Use these for the street address.
   - Row 4: Enter both your District and your Town/City of residence.
   - Row 5: Enter your PIN Code and State.

10. **Mailing Address**
    - If your Permanent address and mailing address (where you want us to post you admissions-related information) are the same, leave this item blank. Else, follow the instructions for Item #9.

13. **Annual Income**
    - Include the correct amount in Indian Rupees, of the annual household income (father and mother separately in the respective boxes). It should not be the figure on the ration card, for example. We require this information to assess if your parent/guardian can meet the hostel expenses.

### PART D: ADDITIONAL INFORMATION

43. **List of achievements**
   - Enter here details of both academic (e.g. competitive exams) and non-academic achievements.

### PARTS E AND F: DECLARATION BY APPLICANT AND PARENT/GUARDIAN

- Both parts must be signed by the applicant and parent/guardian only. Unsigned applications will not be processed.

---

### PART C: EDUCATIONAL INFORMATION

22, 29, 36 and 44: **Medium of Instruction**

- Enter the language in which you were taught at your Higher Secondary School (Item 22), Bachelor’s level (Item 29) and Master’s level (Item 36). For example, if you went to a school in West Bengal and were taught all the regular subjects in BENGALI, enter that.

- **Note**: Do not enter VERNACULAR. You must specify the language you were taught in.

25, 32, 40 and 46: **Statement of Marks**

- All the marks you enter here must be identical to the Attested photocopies of the Statement of Marks for X Std., XI Std., XII Std., Bachelor’s and Master’s degrees.

- Make sure you accurately fill the percentage of marks obtained in **General English** and **Aggregate/GPA**.

- For items 32 and 40, you can enter the marks either per year or per semester, depending on your institution of study and what is published on your mark sheets.

- Candidates applying for B.Ed Programme should specify their two-subject combination under the Item 41.

- Item 46 is to be filled in only by applicants for the M.Ed. programme.

- Attach attested photocopies of X Std., XII Std. and the qualifying degree mark sheets.

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### PART D: ADDITIONAL INFORMATION

50. **List of achievements**

- Enter here details of both academic (e.g. competitive exams) and non-academic achievements.

---

### PARTS E and F: DECLARATION BY APPLICANT and PARENT/GUARDIAN

- Both parts must be signed by the applicant and parent/guardian only. Unsigned applications will not be processed.
STEP 4: DOCUMENTS CHECKLIST

Once you have filled in the application form in full – complete with signatures, attested photograph, etc. you will have to make sure that all the supporting documents are included with the form before posting the application to SSSIHL.

Online applicants will be able to view their form in full in PDF format after they go through the online application portal and will be able to print the same.

Note: All Mark sheets (and photographs), must be attested by the Head of the Institution last attended or by a Gazetted Officer. Attestation means that a person of responsibility actually signs across the photograph and that below the signature there is rubber stamp of the official who is attesting. The Official Stamp must be so imprinted that it overlaps both the photo and the form. Similarly, for mark sheets, the signature and rubber stamp go together.

THE COMPLETE LIST OF SUPPORTING MATERIALS TO INCLUDE IS:

1. **One additional passport-sized photograph**
   This is in addition to the one you have attested and stuck on the application form. On the reverse side of the photograph, please clearly write the following: Your name and applicant ID (online applications) or application number (paper applications)

2. **Statement of Marks**
   For Undergraduate Programmes applicants:
   Attested photocopies of the Statement of Marks for X Std. issued by your Higher Secondary School Board
   Attested photocopies of the Statement of Marks for XI Std. issued by your Higher Secondary School.

   Note: If you are successful and get admission, your final attested mark sheets for XII Std. will need to be submitted within a month after joining the institute.

   For Postgraduate / Professional Programmes applicants:
   Attested photocopies of the Statement of Marks for X Std. issued by your Higher Secondary School Board
   Attested photocopies of the Statement of Marks for XI Std. issued by your Higher Secondary School Board
   Attested photocopies of the Statement of Marks (along with the final degree certificate) of all semesters/years issued by the authority (University/College/Institution) that conducted the Qualifying Examinations leading to your final degree.

   Note: If you have just finished your final exams or are about to take them, please send final mark sheets for all the years preceding the final year. If your institution follows a semester system, please send exam mark sheets for all semesters preceding the final semester.

3. **Co-curricular Achievements**
   This is optional. If you have certificates that highlight your involvement in co-curricular (non-academic) activities, please include attested copies of these with your application for consideration.

STEP 5: SUBMIT APPLICATION FORM WITH REQUIRED DOCUMENTS

Once you are satisfied that you have completed all the necessary requirements for the application form and the supporting materials, you will now be in a position to post the same to the Admissions office of the university.

Please follow these four steps to ensure your application will be processed and not rejected:

1. **Staple** the filled application form with all supporting materials. Then, seal them in an A4-sized envelope. This is important so you do not fold the form and certificates attached.

   Note: ONLINE APPLICANTS ONLY - If you have chosen to pay online, kindly print and attach a copy of the electronic receipt. Otherwise, kindly send an Indian Postal Order (IPO) or Demand Draft (DD) for ₹100/- per application. The Bank draft should be drawn in favour of Sri Sathya Sai Institute of Higher Learning, payable at SBI, Prasanthi Nilayam/Puttaparthi.

2. Write the Applicant ID (online applications) or Application Number (paper applications) and the course for which you have applied on the envelope that you are posting.

3. Post the completed application so that it reaches the university BEFORE the application deadline: 28 February. On average, allow one week for applications posted within South India and two weeks for the rest of India. Late Applications reaching after this date will be rejected.

4. It is compulsory that all applications are posted either by Registered Post or via a courier service to the address provided below. Should you opt for a courier service, it is advisable that you check with them if they have an office
or delivery service at Puttaparthi, Andhra Pradesh. Two examples include: DTDC or Professional Couriers, both of whom have offices at Puttaparthi.

The postal address to use is:

**Admissions Office**
Office of the Registrar
Administrative Building
Sri Sathya Sai Institute of Higher Learning
Prasanthi Nilayam – 515 134
Dist. Anantapur
Andhra Pradesh
Tel: +91 8555 287239

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**STEP 6: AWAIT CONFIRMATION ON ELIGIBILITY FOR WRITTEN TEST**

Once the Admissions Office receives your application, it will be duly processed to make sure that you meet all the preliminary eligibility criteria and that all the supporting materials (including your application form) are accurate.

If you meet all these criteria, the university will write to you on the mailing address that you indicated in your application form. You will receive an Admissions Entrance Test card (Hall ticket). This will allow you to sit for the Admissions Entrance Test.

If you do not meet the criteria, you will also hear in writing from the university, stating that your application has been rejected.

The list of candidates called for the admissions test will be put on the university’s website by 31st March 2015. Those candidates who have been called for admissions test but have not received the hall ticket, can collect the same, one day prior to their scheduled admissions test from the test centre.
If your application is successful - meaning you have met the minimum eligibility criteria and submitted all the information to SSSIHL exactly as requested - the Admissions office will post you an Admissions Entrance Test Card. Once you receive this, you are required to travel to Prasanthi Nilayam, Puttaparthi (in Andhra Pradesh) to take your admissions test. If you clear the written test, you will have to attend an interview/group discussion. The interview is usually conducted on the very next day following the test.

What about the ADMISSIONS TESTS SCHEDULE?
Admissions Tests and interviews for 2015 entry will be held between 17-30 April 2015. You must arrive at least the day before your test. Refer to the Admission Test schedule below for exact dates.

**DATES & DEADLINES**
Admissions Test Results: Fri, 1 May 2015
Reporting date for selected candidates: Sun, 31 May 2015
Academic Year 2015/16 begins: Mon, 1 June 2015

**ADMISSIONS TEST AND INTERVIEW SCHEDULE FOR WOMEN**

**Undergraduate Programmes**
B.A. | B.Com. (Hons.) | B.B.A. | B.Sc. in Food Science and Nutrition | B.Sc. in Food Technology | B.Sc. (Hons.) in Mathematics / Physics / Chemistry | B.Sc. (Hons.) in Biosciences / Chemistry

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Written Tests</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Programmes, except B.B.A.</td>
<td>Fri 17 April</td>
<td>9.00 A.M. – 12.15 noon</td>
<td></td>
</tr>
<tr>
<td>B.B.A.</td>
<td>Fri 17 April</td>
<td>2.00 P.M. – 5.15 P.M.</td>
<td></td>
</tr>
<tr>
<td>All Programmes</td>
<td>Interviews</td>
<td>Sat 18 April, Sun 19 April and Mon 20 April</td>
<td></td>
</tr>
</tbody>
</table>

**Professional Programmes**
B.Ed. | M.Ed. | M.B.A.

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Written Tests</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Ed.</td>
<td>Sat 18 April</td>
<td>9.00 A.M. – 12.00 noon</td>
<td></td>
</tr>
<tr>
<td>M.Ed.</td>
<td>Sat 18 April</td>
<td>2.00 P.M. – 4.00 P.M.</td>
<td></td>
</tr>
<tr>
<td>M.B.A.</td>
<td>Sat 18 April</td>
<td>9.00 A.M. – 11.15 A.M.</td>
<td></td>
</tr>
<tr>
<td>Group Discussions</td>
<td>Sun 19 April</td>
<td>9.00 A.M. onwards</td>
<td></td>
</tr>
<tr>
<td>All Programmes</td>
<td>Interviews</td>
<td>Mon 20 April</td>
<td></td>
</tr>
</tbody>
</table>

**Postgraduate Programmes**
M.A. in English Language & Literature | M.Sc. in Biosciences | M.Sc. in Food Science and Nutrition | M.Sc. in Food Technology

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Written Tests (General English)</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Programmes (common for all candidates)</td>
<td>Sun 19 April</td>
<td>9.00 A.M. – 10.30 P.M.</td>
<td></td>
</tr>
<tr>
<td>M.Sc. in Food Science and Nutrition and M.Sc. in Food Technology</td>
<td>Written Tests (Subjects)</td>
<td>Sun 19 April</td>
<td>10.45 A.M. – 12.45 P.M.</td>
</tr>
<tr>
<td>M.A. in English Language &amp; Literature and M.Sc. in Biosciences</td>
<td>Written Tests (Subjects)</td>
<td>Sun 19 April</td>
<td>2.15 P.M. – 4.15 P.M.</td>
</tr>
<tr>
<td>All Programmes</td>
<td>Interviews</td>
<td>Mon 20 April</td>
<td></td>
</tr>
</tbody>
</table>
# ADMISSIONS TEST AND INTERVIEW SCHEDULE FOR MEN

## Undergraduate Programmes

- **B.A.** | **B.Com. (Hons.)** | **B.B.A.** | **B.C.A.** | **B.Sc. (Hons.) in Mathematics / Physics / Chemistry** | **B.Sc. (Hons.) in Biosciences / Chemistry** | **B.Sc. (Hons.) in Mathematics / Economics / Statistics**

<table>
<thead>
<tr>
<th>Programme</th>
<th>Written Tests</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Programmes, except B.C.A. and B.B.A.</td>
<td>Tue 21 April</td>
<td>9.00 A.M. – 12.15 P.M.</td>
<td></td>
</tr>
<tr>
<td>B.C.A.</td>
<td>Wed 22 April</td>
<td>9.00 A.M. – 12.15 P.M.</td>
<td></td>
</tr>
<tr>
<td>B.B.A.</td>
<td>Wed 22 April</td>
<td>2.00 P.M. – 5.15 P.M.</td>
<td></td>
</tr>
<tr>
<td>All Programmes</td>
<td>Wed 22 April, Thu 23 April and Fri 24 April</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Professional Programmes

- **M.B.A.** | **M.B.A. in Finance** | **M.Tech. in Computer Science** | **M.Tech. in Optoelectronics and Communications** | **M.Tech. in Analytical Methods and Chemical Instrumentation**

<table>
<thead>
<tr>
<th>Programme</th>
<th>Written Tests</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.B.A. and M.B.A. in Finance</td>
<td>Fri 24 April</td>
<td>9.00 A.M. – 11.15 A.M.</td>
<td></td>
</tr>
<tr>
<td>Group Discussions</td>
<td>Sat 25 April</td>
<td>9.00 A.M. onwards</td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>Sun 26 April, Mon 27 April and Tue 28 April</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Tech. in Computer Science</td>
<td>Sun 26 April</td>
<td>9.00 A.M. – 12.00 noon</td>
<td></td>
</tr>
<tr>
<td>Oral / Practical Tests</td>
<td>Mon 27 April</td>
<td>9.00 A.M. onwards</td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>Wed 29 April</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Tech. in Optoelectronics and Communications</td>
<td>Mon 27 April</td>
<td>9.00 A.M. – 12.00 noon</td>
<td></td>
</tr>
<tr>
<td>Subject Vivas</td>
<td>Tue 28 April</td>
<td>9.00 A.M. onwards</td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>Wed 29 April</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Tech. in Analytical Methods and Chemical Instrumentation</td>
<td>Mon 27 April</td>
<td>9.00 A.M. – 12.00 noon</td>
<td></td>
</tr>
<tr>
<td>Subject Vivas</td>
<td>Tue 28 April</td>
<td>9.00 A.M. onwards</td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>Wed 29 April</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Postgraduate Programmes

- **M.A. in Economics** | **M.Sc. in Mathematics** | **M.Sc. in Physics** | **M.Sc. in Nanoscience & Nanotechnology** | **M.Sc. in Chemistry** | **M.Sc. in Biosciences**

<table>
<thead>
<tr>
<th>Programme</th>
<th>Written Tests (General English)</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Programmes (common for all candidates)</td>
<td>Tue 28 April</td>
<td>9.00 A.M. – 10.30 P.M.</td>
<td></td>
</tr>
<tr>
<td>M.A. in Economics, M.Sc. in Mathematics, M.Sc. in Physics, M.Sc. in Chemistry and M.Sc. in Biosciences</td>
<td>Tue 28 April</td>
<td>10.45 A.M. – 12.45 P.M.</td>
<td></td>
</tr>
<tr>
<td>M.Sc. in Nanoscience &amp; Nanotechnology</td>
<td>Tue 28 April</td>
<td>2.15 P.M. – 4.15 P.M.</td>
<td></td>
</tr>
<tr>
<td>All Programmes</td>
<td>Thu 30 April</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WHAT DO I DO ON THE MORNING OF THE ADMISSIONS TEST?

All admissions tests will be held at the Prasanthi Nilayam Campus of the university. The building is located 200 meters from the Ganesh Gate of the ashram. (Take a right once you exit the ashram and walk past the bus stand, the police station and the shops. The college building will be on your left). It is a five minutes walk.

You are required to report to the premises 45 minutes prior to your scheduled test time. For example, if your test begins at 9 a.m., reach the college building at 8:15 a.m.

When you reach the main entrance of the building, various instructions and announcements pertaining to the tests, interviews etc. will be displayed on the notice board at the entrance of the college building.

Do I need to bring anything with me to the Entrance Test?

All candidates need to bring:
1. Two HB pencils
2. An eraser and sharpener for the admissions test.
3. A pen (preferably blue ink).

Electronic Calculators are strictly NOT allowed.

The university uses an Optical Mark Recognition (OMR) system for evaluation. A sample OMR response sheet is given below to ensure that the candidate is familiar with it. The points to be noted with regard to use of the OMR response sheet are elucidated below.

WHAT ABOUT THE INTERVIEW?

Only candidates who pass the written test will be invited for an interview. Candidates are shortlisted for an interview on the basis of their performance in General English and the total aggregate of other tests, both of which have a minimum cut-off point.

The interview process evaluates the suitability of the candidates keeping in view the unique requirements of the fully residential, values-based system of education at SSSIHL.

The interview is usually conducted on the very next day following the written test.

Candidates who pass written tests for the MBA and MBA (Finance) programmes, will have a group discussion in addition to an interview, as part of the admissions procedure. Also, those candidates successful in passing the written test for the M.Tech. programmes, will have to attend a practical and oral test in addition to the written test.

Admission Test results are published on the same day of the test (late evening/night) or early morning of the following day.

They will be posted on notice boards at the following two places:
1. Opposite the Accommodation Office in the ashram
2. Prasanthi Nilayam Campus

The above notice will also contain details regarding the date and the time of Interviews.

If you are selected for the interview stage, and other tests (such as practical tests or group discussions), you will be required to spend more time at Prasanthi Nilayam.

HOW DO I REACH PRASANTHI NILAYAM?

Prasanthi Nilayam is the name of the ashram established by Bhagawan Sri Sathya Sai Baba. It is also the name of the main campus of Sri Sathya Sai Institute of Higher Learning. It is located in Puttaparthi, in the district of Anantapur, Andhra Pradesh.

By train:
Prasanthi Nilayam has a railway station by the name Sri Sathya Sai Prasanthi Nilayam (station code: SSPN). The campus and ashram are located at about 10 km from the railway station. Several trains come directly to Sri Sathya Sai Prasanthi Nilayam.
Auto rickshaws will charge around ₹80 for a one-way fare to the main entrance of the ashram.

Alternatively, you can reach Puttaparthi by taking a train to the Dharmavaram Junction (station code: DMM). Dharmavaram is about 40 km from Puttaparthi and is on the Guntakal-Bangalore section of the South-Central Railway.

Those alighting at Dharmavaram Railway Station may board direct buses from the railway station to Prasanthi Nilayam. If direct buses are not available from the station, you can take an auto rickshaw to the Dharmavaram Bus Stand, from where buses to Puttaparthi are available for a nominal charge. Private taxis and vans may also be available in the vicinity of the Dharmavaram Bus Stand.

A computerized Railway Reservation facility is available at the Puttaparthi bus stand for those who wish to book return tickets.

**By bus:**
Puttaparthi may be reached directly by bus from Chennai, Bangalore, Hyderabad, and major towns of Andhra Pradesh. Buses alight at the Puttaparthi Bus Stand which is conveniently located directly opposite to the entrance gate of the ashram.

**By car:**
Puttaparthi is located off National Highway (NH) 7, which connects Bangalore to Hyderabad. Look out for signs to Puttaparthi or visit Google Maps for point-to-point directions.

**By flight:**
The nearest airport to Puttaparthi is Bangalore International airport. Once you exit the terminal building, you can negotiate a taxi to take you to Puttaparthi. On average, expect to pay ₹1800 to ₹2000 for a one-way taxi fare. It takes less than three hours to reach Puttaparthi from Bangalore airport.

**When should I arrive?**
We strongly recommend that you arrive in Prasanthi Nilayam the day prior to the Written Test.
To ensure that you get accommodation in the ashram, we strongly suggest that you arrange your travel plans so that you arrive at the ashram accommodation office before 8 p.m. (latest) on the day of your arrival.

**How can I get accommodation?**
The entrance of the ashram (Ganesh Gate) is located opposite the bus stand. Following a brief security check (of your luggage), you may proceed directly to the accommodation office. For any help or directions, just ask a sevadal (women or men volunteers with yellow or blue scarves) to assist you.

**Accommodation**
All candidates (and their accompanying parents/wards) visiting Prasanthi Nilayam for entrance tests will be provided accommodation at nominal prices inside the ashram. However, it is mandatory that you have your Admission Test Entrance card at hand and produce it to the Accommodation Officer on arrival.

The accommodation office is located inside the ashram opposite the South Indian canteen and is open from 6:15 a.m. to 8 p.m. everyday. You cannot get accommodation in the ashram outside of these hours. Entry to the Ashram – via car or by foot (Ganesh Gate) is between 4 a.m. and 9:30 p.m., everyday.

**WHAT ABOUT THE ADMISSIONS TESTS SYLLABUS?**

It is advisable that you prepare well in advance to better your chances of passing the admissions tests. Given in the following pages are the admissions test syllabus for all programmes. Please note that it is compulsory to write a test in General English along with subject-related tests.

The admissions tests are largely objective multiple-choice questions that are evaluated by an Optical Mark Recognition (OMR) system. The OMR system is foolproof and 100% accuracy is guaranteed during evaluation. **Negative marks are awarded for every incorrect answer.** This is usually 25% of the total marks allocated for that particular question.
Admissions Test Syllabus

General and Physical Chemistry
- Elements, compounds and organic chemistry
- Chemical reactions and equilibrium
- Electrochemistry-chemical equilibrium
- Nuclei; Solids and Semi-Conductor Devices.

Modern Physics
- Electrons and Photons; Atoms, Molecules and Radiation
- Alternating Currents.
- Electrical and Magnetic effects of Currents; Magnetostatics
- Oscillations; Waves, Sound; Heat & Thermodynamics
- Thermal and Chemical effects of Currents; Magnetic effects
- Oscillations, Waves, Heat & Thermodynamics and Optics.
- Electricity and Magnetism: Electrostatics; Current Electricity
- Thermal and Chemical effects of Currents; Magnetic effects
- Oscillations, Waves, Heat & Thermodynamics; Transference of Heat; Ray Optics; Wave Optics; Electromagnetic Waves.

Mathematics
- Algebra and Trigonometry: Sets, Relations and functions; Complex Numbers; Matrices and Determinants; Quadratic Equations; Permutations and Combinations; Mathematical Induction and its applications; Binomial theorem and its applications; Sequences and Series; Trigonometry.
- Calculus: Differential Calculus; Integral Calculus; Differential Equations.
- Two Dimensional Geometry.
- Statistics: Measures of Central tendency and Dispersion; Probability.

Physics
- Mechanics: Units and Measurement; Description of Motion in one dimension; Description of Motion in two and three dimensions; Laws of Motion; Work, Energy and power; Rotational Motion and Moment of Inertia; Gravitation; Solids and Fluids, Elasticity, Surface tension.
- Oscillations, Waves, Heat & Thermodynamics and Optics: Oscillations; Waves, Sound; Heat & Thermodynamics; Transference of Heat; Ray Optics; Wave Optics; Electromagnetic Waves.
- Electricity and Magnetism: Electrostatics; Current Electricity; Thermal and Chemical effects of Currents; Magnetic effects of Currents; Magneto statics; Electromagnetic Induction and Alternating Currents.
- Modern Physics: Electrons and Photons; Atoms, Molecules and Nuclei; Solids and Semi-Conductor Devices.

Chemistry
- Chemical kinetics and surface chemistry.

Botany
- Plant Kingdom: Five kingdom classification major groups and their salient features. Bacteria, Fungi, Bryophytes, Pteridophytes, Gymnosperm.
- Morphology: Structural organization of stem, leaf and root and their modifications (Steem-climber, Rhizome, tuber, bulb, corn; leaf - foliage, scale and bract; root - tap and adventitious roots) in dicot and monocot plants.
- Embryology: Structure and function of flower, Inflorescence, (Racemose, cyme and special types) Androecium (Anther structure, microsporangium, microsporogenesis and male gametophyte), Gynoecium (Ovule - structure, mega sporangium, megasporogenesis, female gametophyte), Pollination, (Self and cross pollination), Anemophily, Entomophilies, Hydrophily, Zoophily, Fertilization, Fruits (Simple, aggregate and multiple fruits).
- Physiology: Water absorption, Ascent of sap, Transpiration (Exchange of gases, stomatal mechanism), Respiration (Glycolysis, Krebs cycle, electron transport system), Photosynthesis (Light reaction, Dark reaction (Calvin cycle), factors affecting photosynthesis - light, temperature and Carbon dioxide), Growth (Plant hormones and growth regulation) and movements (Turgor and growth movements), Mineral nutrition (essential and non-essential elements) in plants.
- Cell Biology: Cell theory, Prokaryotic, Eukaryotic cell, Cell wall, cell membrane and cell organelles, Plastids, mitochondria, endoplasmic reticulum, golgi bodies, ribosome, lysosome, nucleus and chromosomes, Mitosis, Meiosis.
- Ecology: Organism and population, Ecological adaptation, Ecosystem: Components, types, energy flow, nutrient cycling.

Zoology
- Diversity of living organisms: Classification of animals, salient features of non-chordata upto phyla level, chordate to class level.
- Anatomy, histology and physiology (Earthworm, cockroach, Frog and Human): Integumentary system, digestive system, respiratory system, circulatory system, excretory system, Muscular system, nervous system, endocrine system and reproductive system, connective tissue, epithelial tissue, small intestine, Histology of stomach, bone, blood, lymph, liver, pancreas, lung, spleen, kidney, skin, testis and ovary.
- Developmental Biology: Basic features of vertebrate development, Gametogenesis, fertilisation, cleavage, blastulation.
- Genetics: Mendel’s laws of inheritance, Chromosome theory of
inheritance, incomplete dominance, co-dominance, deviations from Mendelian ratios, multiple alleles, sex determination, linkage or crossing over, Mendelian disorder, chromosomal disorders, DNA and RNA replication, transcription genetic code, gene expression, regulation and human genome project, DNA finger print.


COMMERCE

Business Organization and Principles of Management:
- Economic activities and business
- Formation of business units
- Corporate Organization – Types
- Stock exchange
- Transport and storage warehousing
- Banking and financial institutions
- Evolution and growth of management
- Organization of modern business office
- Nature and purpose of business
- Structural aspects of business
- Business and sources of finance
- Trade: Internal and external
- Elements of insurance/types
- Nature and significance of management
- Planning, organizing, staffing, directing and controlling

ACCOUNTANCY (Including Quantitative Aptitude)
- Basic Accounting theory
- Recording of transactions: Subsidiary books - Journal - Ledger
- Trial balance, rectification of errors
- Financial statements, trading and profit and loss account (with adjustments) and balance sheet
- Final accounts for non-trading concerns
- Bills of exchange
- Partnership accounting: Admission, retirement, death and dissolution
- Company accounts: Issue of shares, forfeiture, re-issue, issue and redemption of debentures, final accounts: classification of assets and liabilities of presenting balance sheet
- Depreciation Accounting: Straight line and Diminishing value methods; Provision for Depreciation
- Single entry: Statement of affairs and determination of profit.
- Quantitative Aptitude:

STATISTICS
- Statistical data: Definition and scope of the Statistics - collection and organisation of data, frequency distributions - diagrams and graphical representation of data.
- Measures of Location: Arithmetic mean - Median, Quartiles, Deciles and Percentiles - Mode - Weighted arithmetic mean, Geometric mean and Harmonic mean - Simple problems.
- Correlation: Concept of bivariate distributions - Scatter diagram, Karl Pearson’s co-efficient of correlation - Spearman’s rank correlation (without ties) - Simple Problems.
- Data interpretation: Interpretation of quantitative variables from tables and from diagrams.
- Index Numbers: Meaning- types- Wholesale Price Index - Consumer Price Index - Inflation and Index Numbers - Uses of Index Numbers.

ECONOMICS
- Production: Supply- Law of variable proportions - Cost and Revenue concepts- Economics of scale (large scale and small scale production)- Returns to Scale.
- Distribution: Factor Pricing-derived demand- The concepts of Rent, Wages, Interest and Profit.
- Macro economics: Aggregate demand – Aggregate supply- Effective demand- Equilibrium level of income - Propensity to consume- Propensity to save and invest - MEC – MEI- Multiplier-Accelerator (only concepts).

CIVICS
- Civics - Meaning and scope; Aims and value of its study; its relationship with History, Political Science, Economics and Ethics.
- Individual and his relationship with family and society, Society - meaning and advantages of social life; Role of various Associations, eg., Religious, Political, Economic and Cultural.
- Citizenship - meaning and importance: Single and dual citizenship - advantages and disadvantages; Rights and Duties of Citizens; Hindrances to good citizenship.
- Nation - meaning and importance: Nationality, meaning and elements, India as a Nation.
- State and its essential elements; Population; Territory; Government and Sovereignty. Definition of the term sovereignty - nature, characteristics and coercive nature of the State.
- Individual and the Modern State (Basic concepts):
  - (a) Law - meaning, characteristics, sources - law and morality, (b) Liberty - meaning and kinds; Law and Liberty, (c) Equality - meaning and kinds; Relation between liberty and equality, (d) Fraternity - meaning - need for co-operation and co-existence of individuals for common good.
- Liberty - meaning and kinds; Law and Liberty
- Forms of Government; Unitary and Federal, Parliamentary and Presidential - characteristics - merits and demerits. (Provide stress on the functions of the Legislature, Executive and Judiciary).
- Spheres of State activity, Individualism, socialism, communism, capitalism and dictatorship.
- Democracy: meaning - kinds - features - merits and demerits of
direct and indirect democracy, conditions necessary the success of
democracy; role of parties and public opinion in democracy.
› Constitution of India: Brief study of the features as given below:
   › (a) Preamble, (b) Fundamental rights, (c) Directive principles of
     State Policy, (d) Federal System, (e) Parliamentary features.
   › Govt. of India:
     (a) Parliament, (b) Cabinet, (c) All India Services, (d) State
     Legislatures and Cabinet, (e) Centre-State relations - Administrative,
     Legislative and Financial.
› Structure and working of Local Governments (Brief Study)
   (a) Corporations and Municipalities, (b) Panchayat Raj, (c) Zilla
     Parishads and Mandala Parishads, (d) The role of District Collectors.
› Adult Franchise: Meaning and working. Advantages and
disadvantages; Development of Weaker Sections.
› National Integration and its need:
   (a) Communalism, (b) Casteism, (c) Linguism, (d) Regionalism.
› United Nations - Its aims and principal organs. Its role in promoting
  international peace and understanding.

POLITICAL SCIENCE

› Political Science - meaning, nature and scope
› Citizen - State and Society; Citizenship - Rights and duties of citizens
  (a brief study of the fundamental rights and fundamental duties of
  Indian citizens).
› State and Government: Nature and definition of State; Elements of
  state: State and Society; State and Associations.
› Nation and Nationality: Meaning of the terms Nation and
  Nationality, Elements of Nationality; Nationalism - meaning,
  importance, merits and demerits.
› Sovereignty - meaning, characteristics and kinds of sovereignty,
  legal, political and popular sovereignty.
› Law, Liberty and equality: Meaning of the terms Law and Liberty,
  Law and morality. Liberty and Law, Sources of Law, Kinds of Law;
  Definition of the term Liberty, Kinds of liberty; Equality - Definition
  of the term, kinds - liberty and equality.
› Forms of Government: Unitary and Federal - meaning, merits and
  demerits, Parliamentary and Presidential - explanation - merits and
  demerits of both systems.
› Spheres of State activity: Individualism, Socialism, Communism,
  Capitalism and Dictatorship, Gandhism and Sarvodaya.
› Constitution: Classification - Written and Unwritten; Rigid and
  flexible - meaning - merits and demerits.
› Indian Constitution: Salient Features - Indian National Movement:
› Legislature: Organization, powers and functions of the legislature;
  A brief study of the organization, functions and working of Indian
  Parliament.
› Executive in India: President - election, powers and functions; Vice-
  President, Prime Minister and the Council of Ministers; Governor
  - appointment - powers and functions, Chief Minister and the
  Council of Ministers.
› Judiciary: Role and importance, Independence of Judiciary,
  Supreme Court and the High Courts in India.
› Civil Services: Nature - importance and functions of Civil Services;
  Bureaucracy, U.P.S.C., Organization and functions.
› Electorate: Types of franchise, Merits and Demerits, Direct
  Democratic Devices.
› Party system: Political parties, their role and functions, Role of
  opposition in democracy.
› Public Opinion: Meaning - Agencies of public opinion, role and
  importance of Public Opinion.
› Local Self Government: Panchayat Raj, Municipal Govt., planning
  - importance - socio economic development - rural and urban
  development; development of scheduled castes and tribes.
› Factors conditioning Indian Democracy: Inequality - social and
  economic; Regional imbalance, communalism and casteism,
  Regionalism and Linguism.
› Internationalism and Linguism.
› History
   › Introduction: Pre-history - The Stone Age:
     (a) The Harappan Culture (b) The Vedic Period (c) Jainism and
     Buddhism
   › (a) The rise of the Magadha
     (b) Age of the Mauryas: i) Chandragupta ii) Ashoka iii)
     Mauryan Administration
   › Age of the Guptas: i) Samudragupta, ii) Chandragupta - II, iii)
     The Golden Age of the Guptas, (b) The Kushanas – Kanishka
   › The Deccan:
     (a) The Satavahanas - Gautamiputra Satakarni, (b) The Chalukya
     of Badami - Pulikesi II (c) The Rashtrakutas - Dhruba; Nripatunga
     (d) The Pallavas – Narasimhavarman, (e) The Cholas - Chola
     Administration
     Harshavardhana and his time - Medieval India
   › 5. (a) Arabs in India - Muhammed-bin-Qasim
     (b) Invasion of Mahmud Ghazni and Mahmud Gholi
   › 6. (a) The Rajputs – Prithwiraj
   › 7. The Age of Vijayanagara Empire - Krishnadevaraya - The battle
     of Talikota
   › 8. India under the Mughals:
     a) Sher Shah – Administration, b) Age of Akbar, c) Aurangzeb and
     the decline of the Mughal Empire d) Mughal contribution to:
     (i) Art and Architecture (ii) Literature
   › 9. Rise of the Marathas - Shivaji - The Peshwas
   › 10. Baji Rao (b) Balaaji Baji Rao
   › 11. Advent of Europeans in India – Portuguese, Dutch, Danes,
     English and French.
   › 12. Revolt of 1857 – Causes of Revolt – Causes of failure of Revolt
     – Effects of the Revolt.
   › 13. Rise of the British Power in India – Battles of Plassey, Buxar
     and three Carnotic wars.
   › 14. Nationalism Movement in India – Genesis of Indian National
     Congress – Moderates – Surat split – Rise of extremism – Home
     Rule Movement – Revolutionary and Terrorist movement –
     Jallian-Walabagu Tragedy, 1919 – Non Cooperation Movement
     – Civil Disobedience Movement – Quit India Movement – Indian
     Independence.

SPECIAL ENGLISH

› Comprehension: Literary Prose and Poetry
› Vocabulary: Affixes, One-Word Substitutes, Sentence completion
› Grammar: Parts of Speech, Gender, Phrases / Clauses, Reported
   Speech
› Usage: Idioms, Proverbs, Figures of Speech, Correction of
   Sentences
› Guided Composition- Reordering Jumbled Sentences into a
   Narrative

B.B.A.

› General English:
   › Comprehension of Unseen Passage: Prose and Poetry.
   › Vocabulary: Antonyms, Synonyms, One-word Substitutes, Pairs of
     Words Often Confused
   › Usage: Idioms
   › Grammar: Tenses, Prepositions, Phrasal Verbs, Voice(s), ‘too –
     enough’,‘since’ and ‘for’
   › Structure: Reported Speech, Spellings, Punctuation, Correction of
     Sentences
   › Composition: Re-ordering or re-arranging of sentences to form
     a coherent whole, guided composition, paragraph writing, letter
     writing.
Numerical skills and Reasoning skills:
› Basic arithmetical operations
› Basic properties of numbers
› HCF & LCM
› Fractions
› Decimals
› Percentages
› Ratio & proportions
› Power & groups
› Simple Interest & Compound Interest
› Mensuration - Problem solving in Algebra
› Elementary Geometry
› Statistical tables & averages and logical reasoning.

B.C.A.

General English:
› Comprehension of Unseen Passage: Prose and Poetry.
› Vocabulary: Antonyms, Synonyms, One-word Substitutes, Pairs of Words Often Confused
› Usage: Idioms
› Grammar: Tenses, Prepositions, Phrasal Verbs, Voice(s), ’too – enough’, ’since’ and ’for’
› Structure: Reported Speech, Spellings, Punctuation, Correction of Sentences
› Composition: Re-ordering or re-arranging of sentences to form a coherent whole, guided composition, paragraph writing, letter writing.

Mathematics:
Part A: Algebra, Vectors, Linear Programming
› Real Numbers, Complex Numbers
› Polynomials, Linear Equations in one and two variables, Quadratic Equations in one variable, Permutations and Combinations, Binomial Theorem, Arithmetic Progression, Geometric Progression, Standard Progressions and Series
› Types of Vectors, Vector addition, Scalar multiplication, Scalar and Vector products of 2, 3 and 4 vectors
› Linear Inequalities, Linear Programming – Graphical Method

Part B: Mensuration, Geometry, Analytical Geometry
› Areas, Surface Areas and Volumes of standard plane and solid regions
› Euclid’s Axioms and Postulates, Lines, Angles, Triangles, Congruent Triangles, Quadrilaterals, Area, Circles, Similar Triangles
› Cartesian coordinate system for a plane, Distance formula, Section formula, Area of Triangle, Equations of a straight line, Equations of a plane, Conic Sections
› Cartesian coordinate system for space, Direction Cosines, Direction Ratios, Lines and Planes in Space

Part C: Trigonometry, Calculus and Differential Equations
› Trigonometric Ratios, Identities, Trigonometric Functions of sum and difference of Angles, Trigonometric Equations
› Sets, Relations, Functions, Simple problems on Limits, Continuity, Derivatives of First and Higher Order, Rules of Differentiation, Bernoulli Rule, Partial Derivatives of First order
› Indefinite Integral, Definite Integral, Rules of Integration, Applications of Integrals
› Ordinary Differential Equations, General and Particular Solutions, First Order Differential Equations – Classification and Solution, Second Order Homogeneous Differential Equations

Part D: Statistics and Probability
› Introduction to Statistics, Data Collection & presentation, Mean, Median, & Mode, Cumulative Frequency Distribution, Measures of Dispersion, Range, Mean Deviation, Standard Deviation,
The test is designed to ensure that selected candidates are able to cope with the requirements of the M.A. (Economics) programme at the university. This programme is designed to enable students to handle issues within an analytical frame, argue logically and articulate their views clearly. They are also expected to undertake processing of data to derive meaningful conclusions and to make empirical judgments consistent with social realities and ethical values.

**QUESTION PAPER FORMAT:**

The question paper of two hours duration and carrying 75 marks, is divided into three sections:

- **Section A:** Objective type questions
- **Section B:** Short answer questions
- **Section C:** One essay type question

The coverage of questions is comparable to those of a good undergraduate programme in economics. Topics covered are as follows:

1. **Economic Theory:**
   - Consumer behaviour: preference ordering, utility, budget sets and demand functions; Theory of the firm; Costs, supply and factor demand; Market structure: pricing and production under perfect and imperfect competition, General equilibrium and welfare; Taxation; Elements of national income accounting; Level of economic activity under classical assumptions; Keynesian theory of effective demand and employment; Monetary and fiscal policies; International trade.

2. **Quantitative Methods:**
   - Functions of one variable; Linear and quadratic equations; Derivatives and rules of differentiation; Measures of central tendency and dispersion; Correlation and regression with two variables; Index numbers; Elements of probability theory; Random variables and common distributions.

3. **Indian Economy and Development:**
   - Basic issues and indicators of economic development; Economic growth; Aspects of development policy: Population growth and employment; Strategies and theories of development; Human values and economic development; Structure of the Indian economy; Human resource development; Persistence of poverty and inequality; New economic policy regime; Indian ethos and policies for all round development; Aspects of the International Economy.

**M.Sc. in MATHEMATICS**

M.Sc. (Mathematics) program is an intense 2 year PG program with avenues for obtaining anyone of the three possible specializations viz. Pure Mathematics, Applied Mathematics, and Computer Science if candidates wish to choose a specific domain of expertise. Applicants who wishes to enter this BSc-MSc Integrated Program at MSc level must satisfy the pre-requisite qualification criteria. Those who are found suitable will be tested for their competence in General English, Mathematics and Computer Science.

**QUESTION PAPER FORMAT:**

Test on Mathematics and Programming skills will be of 2 hours duration carrying 75 marks with the following pattern:

- **Section A:** 40 multiple choice questions - 40 marks
- **Section B:** 5 problem solving type questions - 5 marks each - internal choice - 25 marks
- **Section C:** Short C-Programming Test- 10 Marks

Viva-Voce: 30 marks- Those who are qualified in English and Written Test will undergo a technical Viva-voce.

The candidate must be familiar with the following topics of Mathematics and Computer Science.

**Mathematics:** Calculus, Differential Equations, Probability Theory, Real Analysis, Group Theory, Ring Theory, Linear Algebra, Complex Analysis, Discrete Mathematics, and Numerical Analysis. The detailed syllabus is as follows:

- **Calculus:** Higher Order Partial Derivatives, Differentiability, Gradient, the Chain Rule, Directional Derivative, Total Differential and Approximation, Constrained Extrema and Lagrange Multipliers, Double and Triple Integration.
- **Differential Equations:** Classification of Ordinary and Partial Differential Equations, Types of Solutions, Existence and Uniqueness of Solution for an Initial Value Problem, Bernoulli Equation, Exact Differential Equations, Types of Solutions, Existence and Uniqueness of Solution for an Initial Value Problem, Bernoulli Equation, Exact Differential Equations and Integrating Factors, Cauchy-Euler Equation, Method of Variation Of Parameters, Method of Undetermined Coefficients, Wronskian, Method of Separation of Variables for solving Boundary Value Problems.
- **Probability Theory:** Conditional Probability-Bayes’s Formula, Independent Events, Discrete and Continuous Random variables, Expected Value, Variance, Covariance, Variance of sums and Correlations, Moment generating functions.
- **Real Analysis:** Logic, Sets and Relations, Functions, Cardinality, Natural Number and Induction, Ordered Field, Completeness Axiom, Topology of the Reals and Compactness, Convergence,
Sequences and Series, Convergence Tests, ε-δ definition, Limit theorems, Continuous Function and Uniform continuity, Intermediate Value Theorem, Mean Value Theorem, L’Hospital’s rule, Point-wise and Uniform Convergence, Taylor’s Theorem, Riemann Integration, Radius and Interval of Convergence for Power Series.

**Group Theory**: Groups, Subgroups, Cyclic Groups, Normal and Quotient Subgroups, Permutation Groups, Homomorphism, Automorphism, Cayle’s and Sylow’s Theorem.

**Ring Theory**: Rings, Integral Domain, Division Rings, Ideals, Quotient Rings, Euclidean Rings, Polynomial Rings, Field of Quotients, Polynomials over Rational Fields.

**Linear Algebra**: Vector Spaces, Linear Independence and Dependence, Bases and Dimension, Linear Transformations, Systems of Linear Equations, Eigenvalue and Eigenvector Theory.

**Complex Analysis**: Algebra of Complex Numbers, Analyticity - Harmonic Functions, Elementary Functions, Cauchy Integral Formula, Convergence of Sequence and Series, Taylor Series - Laurent Series, Types of Isolated Singularities, Residue Theorems.

**Discrete Mathematics**: Logic, Counting, Graphs and Trees.


**C Language Programming**: A minimal exposure to programming is expected from the students. Nevertheless, those qualified for the M.Sc. (Maths) programme and desirous of opting for computer science specialization will be tested in fundamentals of Computer Science and Programming once they are enrolled for the course.

**M.Sc. in PHYSICS**

**QUESTION PAPER FORMAT**
The question paper of two hours duration and carrying 75 marks, is divided into three sections:

- **Written Test**: Objective Type questions- 70 % weightage
  - Paper 1: General English (as already explained above)
  - Paper 2: Subject Paper will contain two sections A & B.

- **Section A**: 25 marks- to test the basic understanding in Mathematics, Electronics, Chemistry & Computer Science at the under graduate level
  - Section A- 25 marks- to test the basic understanding in Mathematics, Electronics, Chemistry & Computer Science at the under graduate level
  - Section B- 50 marks- to test the depth of knowledge in the under graduate level physics

- **Technical Interview**: 30% weightage- Subject to qualification in the written test

- **Final Personality Interview**: Subject to clearing the Technical Interview

**Admission Test syllabus for Written Test (Paper-2) & Technical Interview**

**SECTION A - 25 MARKS**

**Mathematics**: Calculus of single and multiple variables, partial derivatives, Matrices and determinants, Algebra of complex numbers, Taylor expansion, Fourier series; Vector algebra, Vector Calculus, Multiple integrals, Divergence theorem, Green’s theorem, Stokes’ theorem. First order equations and linear second order differential equations with constant coefficients.

**Integral Calculus**: Integration as the inverse process of differentiation, definite integrals and their properties, Fundamental theorem of integral calculus. Double and triple integrals, change of order of integration. Calculating surface areas and volumes using double integrals and applications. Calculating volumes using triple integrals and applications. Vector Calculus: Scalar and vector fields, gradient, divergence, curl and Laplacian. Scalar line integrals and vector line integrals, scalar surface integrals and vector surface integrals, Green’s, Stokes and Gauss theorems and their applications.

**Linear Algebra**: Vector spaces, Linear dependence of vectors, basis, dimension, linear transformations, matrix representation with respect to an ordered basis, Range space and null space, rank-nullity theorem; Rank and inverse of a matrix, determinant, solutions of systems of linear equations, consistency conditions. Eigenvalues and eigenvectors. Cayley-Hamilton theorem. Symmetric, skew-symmetric, hermitian, skew-hermitian, orthogonal and unitary matrices.

**Probability**: Basic concepts of probability theory. Binomial, Poisson & Normal distributions.


**Electronics**: Boolean algebra: Binary number systems; conversion from one system to another system; binary addition and subtraction. Logic Gates AND, OR, NOT, NAND, NOR exclusive OR, Truth tables; combination of gates; de Morgan’s theorem; Zener diode and its applications, BIT characteristics in CB, CE, CC modes. Single stage amplifier, two stage R-C coupled amplifiers. Simple Oscillators: OP AMP and applications: Inverting and non-inverting amplifier. 8085 or 8086 Microprocessor architecture and knowledge of assembly language programming.

**Chemistry**: Periodic Table: Periodic classification of elements and periodicity in properties; general methods of isolation and purification of elements. Chemical Bonding and Shapes of Compounds: Types of bonding-ionic and covalent bonding, M.O. and V.B. approaches for diatomic molecules, VSEPR theory and shape of molecules; hybridisation; Chemical Thermodynamics: Reversible and irreversible processes; First law and its application to ideal and nonideal gases; Thermocchemistry; Second law; Entropy and free energy, Criteria for spontaneity. Chemical and Phase Equilibria: Law of mass action; K, Kp, Kc; Effect of temperature on K; Ionic equilibria in solutions; pH and buffer solutions; Chemical Kinetics- Reactions of various order; Basis of Organic Reactions Mechanism: Elementary treatment of SN1, SN2, E1 and E2 reactions; Acids and Bases: Arrhenius, Lowry -Bronsted concepts of acids and bases - Strengths of acids and bases.

**Computer Science**: Basic knowledge of computer systems, software and programming; Number systems. Basic electronic gates. Algorithmic approach to solve problems. Fundamentals of C language.

**SECTION B (PHYSICS) - 50 MARKS**

**Mechanics and General Properties of Matter**: Newton’s laws of motion and applications, Velocity and acceleration in Cartesian, polar and cylindrical coordinate systems, uniformly rotating frame, centrifugal and Coriolis forces, Motion under a central force, Kepler’s laws, Gravitational Law and field, Conservative and non-conservative forces. System of particles, Centre of mass, equation of motion of the CM, conservation of linear and angular momentum, conservation of energy, variable mass systems. Elastic and inelastic collisions. Rigid body motion, fixed axis rotations, rotation and translation, moments of inertia and products of Inertia, parallel and perpendicular axes theorem. Principal moments and axes. Kinematics of moving fluids, equation of continuity, Euler’s equation, Bernoulli’s


Solid State Physics and Devices: Crystal structure, Bravais lattices and basis. Miller indices. X-ray diffraction and Bragg’s law; Intrinsic and extrinsic semiconductors, variation of resistivity with temperature. Fermi level. p-n junction diode, I-V characteristics.


M.Sc. in NANO SCIENCE & NANO TECHNOLOGY

As the M.Sc. (Nanoscience and Nanotechnology) is an inter disciplinary course, the aspiring students are tested for the knowledge and familiarity in all the four basic science courses. The following is the question paper model and syllabus for the admission test.

QUESTION PAPER FORMAT: The question paper is of two hours duration carrying 75 marks, it is divided into two parts:

SECTION A - 25 MARKS: common to all the students of different disciplines (for Bioscience, Chemistry and Physics) - 10th /12th CBSE syllabus level.

SECTION B - 50 MARKS: Discipline specific- B.Sc. level syllabus- 1st section for B.Sc.(Biosciences), 2nd section for B.Sc.(Chemistry) and 3rd section for B.Sc.(Physics & Mathematics).

M.Sc. in CHEMISTRY

QUESTION PAPER FORMAT: The question paper is of two hours duration carrying 75 marks, it is divided into three parts.

Section – A: (25 marks maximum) Objective type – 25 questions

Section – B: (6x5=30 marks) Short answer type. 6 questions out of 8 questions Global choice.

Section – C: (1x20=20 marks) Essay type – long answer type- One out of two questions.

GENERAL CHEMISTRY:


Analytical Chemistry:


Inorganic Chemistry:

Group I: General characteristics - Alkali metals in liquid ammonia-alkali metal complexes, crown ethers and cryptands.

Group II A: General characteristics - Diagonal relationships - complexes of Be & Ca.

Noble gases: Uses, general characteristics - Fluorides of Xenon-Clathrates.

GROUP A: General properties - Oxidation states and types of bonds-oxygen compounds of boron - Diborane and Boron - Nitrogen compounds.

GROUP IV A: Physical properties, inert pair effect, multiple bonding.

Group VII A: Electronic structure, oxidation states and general characteristics - Oxoacids of halogens - Interhalogen compounds, Polyhalogen compounds - pseudo halogens and pseudo halides. Chemistry of transition elements: General characteristics - periodic trends; Magnetic properties; Metallic nature - oxidation states, catalytic properties, complexes.

Coordination chemistry: Werner’s theory - Nomenclature of coordination compounds -Isomerism — EAN (effective atomic number) rule - Crystal field theory - Applications of crystal field theory. Periodicity: Basic trends - First and second row anomalies.

Nuclear chemistry: Composition of the nucleus - radioactive decay modes - law of radioactivity, natural and artificial disintegration series - Nuclear reactions, Applications of radioisotopes as tracers; Counting statistics - Counting techniques.

ORGANIC CHEMISTRY:
Aliphatic hydrocarbons: Nomenclature; chain and conformational isomerism; General methods of preparation, reactions of alkanes/alkenes/alkynes; Geometric isomerism in alkenes-sequence rules.
Cycloalkanes: Nomenclature - General methods of preparation - Geometrical Isomerism - conformational analysis.
Aromatic Hydrocarbons: Chemical criteria for aromaticity - Aromatic sextet - Substitution reactions of Aromatic compounds - Substituent effects - Reactions of Polycyclic benzenoid aromatic hydrocarbons: Naphthalene, Anthracene & Phenanthrene.

Stereochemistry: Absolute configuration – assignment of R&S - Optical activity - concept of dissymmetry (chirality) - optical isomers of tartaric acid.

Halogen derivatives: Methods of preparation and reactions of alkyl and aryl halides. SN1, SN2 reactions, rearrangements - E, Z, E2, reactions. Organometallic compounds: Organomagnesium compounds - Grignard reagents.

Alcohols: Nomenclature, physical properties - preparation, and reactions.

Phenols: Acidity and structure -Synthesis and Reactions.

Ethers: Nomenclature, synthesis and reactions.


Reactive methylene compounds: Diethylmalonate and ethylacetocetate.

Organic compounds of nitrogen, Amines: Effect of structure on basicity, preparation and reactions of amines - synthetic applications of azo compounds.

PHYSICAL CHEMISTRY:

Chemical kinetics: The rate of reactions - rate laws - rate constants - reaction order - Methods of determining reaction orders and rate laws - Radioactive decay - Half life.

Complex reactions: Parallel, consecutive and reversible reactions.


BIOCHEMISTRY:
Carbohydrates: Introduction, classification, nomenclature, monosaccharides-structure and reactions, disaccharides, oligosaccharides, polysaccharides; Aminoacids and Proteins.

SPECTROSCOPY:

Infrared spectroscopy: Theory-instrumentation - Sampling techniques; Analysis of IR spectral data- identification of functional groups.

INDUSTRIAL CHEMISTRY:
Surface coatings: Paints and varnishes - Pigments: classification and applications.

Petroleum Refining: Occurrence - composition - processing - applications; Fuels from petroleum - raw materials (chemicals) from petroleum for industrial applications.

Polymers: Importance of polymers - basic concepts - Types of polymers - Structure and properties. Polymer processing, classification based on methods of preparation.

Dyes: Definition - classification based on method of application, color and structure - Classification based on chemical constitution - Methods of application.

Fertilizers: Classification - organic fertilizers, inorganic/commercial fertilizers.

M.Sc. in BIOSCIENCES

QUESTION PAPER FORMAT: The question paper is of two hours duration carrying 75 marks, it is divided into three parts:

Section – A: (25 marks maximum) Objective type – 25 questions
Section – B: (6×5=30 marks) Short answer type. 6 questions out of 8 questions- Global choice.
Section – C: (1×20=20 marks) Essay type - long answer type- One out of two questions

BOTANY:
Cryptogams and Phanerogams: Important features (habit, morphology and reproduction) and General classification of Virus, Bacteria, Algae and Fungi. Common Viral, fungal and Bacterial diseases in Plants, Animals and Man. Economic importance of Bacteria, Algae and Fungi.

Evolutionary trends among Bryophytes, Pteridophytes and Gymnosperms and their economic importance systems of classification, Binomial nomenclature and modern trend in taxonomy. Economic importance of Brassicaceae, Meliaceae, Regimunicae,
Solaceae and Poaceae.

**Plant Anatomy:** Types of meristematic and other tissue systems in Plants Anatomy of root, stem and leaf in Dicots and monocots. Micro and Macro Sporogenesis, Endosperm, Polymembrony and embryogenesis in Dicots and Monocots.

**Plant Physiology:** Osmosis, Active Transport, Physiology of Photosynthesis Respiration, Transpiration and translocation, flowering, growth dormancy and Mineral nutrition in plants.

**ZOOLOGY:**
- **Non-Chordates & Chordates:** Classification of Non-Chordates, Prochordates and Chordates Nutrition, Locomotion and reproduction in Protozoa Protozoan and Helminthes Parasites of Man, Comparative anatomy of Chordates, flight adaptations and migration in Birds. Poisonous and Non-Poisonous snakes of India. Dentition in Mammals, Apiculture, Sericulture, Pearl, Prawn and Fish culture techniques.

**CELL BIOLOGY, GENETICS & EVOLUTION:**
- Structure of cell, Cell organelles, Types of Chromosomes Mitosis and Meiosis, Gametogenesis, mechanism of fertilization, cleavage patterns, Gastrulation, Placentation and Menstruation in Mammals, Extra foeta membranes.
- Mendel’s laws of inheritance, Multiple a1ludes, linkage and crossing over, sex determination. Sex-linked inheritance Mutations, Operon concept, genetic code Eagenics, Principles of Plant and Animal Breeding; Evidences of evolution Divin’s and Lamarcian Theories of Evolution, Divin’s and Lamarcian Theories of Evolution origin and evolution of Man, Isolation and Speculation.

**ENVIRONMENTAL BIOLOGY:**
- Abiotic and Biotic factors of environment, Biogeochemical cycles, Ecological Succession, Ecosystem, Population ecology, Arboreal, Volany1, Deepesea, Xerophytic, Hydrophilic and epiphytic adaptations, Environmental pollutions, wild Life-conservation.

**MICROBIOLOGY:**
- Classification and characteristics of microorganisms Physiology and Cultivation of microbes. Microbes in water, soil, air food and secauge.
- Air, Water, Soil, food and Vector bore diseases prophylactic measures Antigen, Antibody reactions and Principles of immunization.

**BIOCHEMISTRY & BIOTECHNOLOGY:**
- Classification of enzymes, coenzymes and vitamins, structure functions and classification of carbohydrates, proteins and lipids and their energy metabolism.
- Plant and Animal tissue culture techniques, Micro-Propagation, Monoclonal Antibodies, Protoplast culture, DNA sequencing, Recombinant DNA, Applied aspects of Biotechnology in Agriculture, Animal Husbandry, Medicine, disease, diagnosis and Therapy.

**M.Sc. in FOOD SCIENCE AND NUTRITION / M.Sc. in FOOD TECHNOLOGY**

**QUESTION PAPER FORMAT**
- The question paper has two sections with time duration of 2 hours:
  - **Section A-** 50 marks: common to B.Sc Homescience, B.Sc. Biosciences and B.Sc. (M.P.C) students
  - **Section B-** 25 marks: specific to B.Sc Homescience, B.Sc. Biosciences and B.Sc. (M.P.C) students

**For B.Sc. in Home Science students**

**Food Science, Nutrition and Dietetics:** Food as a source of nutrients, composition, properties, characteristics, and nutritive value of different foods (cereal grains, millets, pulses, nuts and oil seeds, fruits and vegetables, milk and milk products, meat, egg, poultry, fish, spices and condiments. Chemistry and biochemical roles of fat soluble vitamins, water soluble vitamins, inorganic elements. 1. Energy requirement: Basal metabolism, total energy requirements. 2. Study of Nutrients: (a) Carbohydrates, proteins, fats - chemistry, biochemistry and nutritional aspects such as digestion, absorption, metabolism, functions, sources and requirements. (b) Vitamins and minerals - functions, sources, requirements, and deficiencies. 2. Water balance. 4. Methods of assessing the nutritional status. 5. Principles involved in adoption of normal diet for formulating therapeutic diet - use of food exchange groups. 6. Diets during pregnancy, lactation, infancy, school age, adolescent, adulthood and old age. 7. Nutritional deficiency diseases. 8. Diet in diseases (metabolic disorders, febrile conditions, surgical & other stress conditions) - causes, symptoms, physiological changes and dietary management. 9. National and International agencies and programmes in the betterment of Nutritional status.


**Home Management:** 1. Principles of Home Management of resources; 2. Interior decoration and furnishing: Art elements, principles of design, colour, functions and types of lighting, selection, use and care of household equipments.


**For B.Sc. in Biosciences students**

**I. Botany:** Cryptogams and Phanerogams: General classification of Virus and Bacteria Common Viral and Bacterial diseases in Plants, Animals and Man. Classification, Reproduction and Economic importance of Algae and Fungi Common fungal diseases. Evolutionary trends among Bryophytes, Pteridophytes and Gymnosperms and...


V. Microbiology: Classification and characteristics of microorganisms Physiology and CuItivation of microbes. Microbes in water, soil, air food and secare. Air, Water, Soil, food and Vector borne diseases, prophylactic measures Antigen, Antibody reactions and Principles of immunization.

VI. Biochemistry & Biotechnology: Classification of enzymes, coenzymes and vitamins, structure functions and classification of carbohydrates, proteins and lipids and their energy metabolism. Plant and Animal tissue culture techniques, Micro-Propagation, Monoclonal Antibodies, Protoplast culture, DNA sequencing, Recombinant DNA, Applied aspects of Biotechnology in Agriculture, Animal Husbandry, Medicine, disease, diagnosis and Therapy.

Food Science, Nutrition and Dietetics: Food as a source of nutrients, composition, properties, characteristics, and nutritive value of different foods (cereal grains, millets, pulses, nuts and oil seeds, fruits and vegetables, milk and milk products, meat, egg, poultry, fish, spices and condiments. Chemistry and biochemical roles of fat soluble vitamins, water soluble vitamins, inorganic elements. 1. Energy requirement: Basal metabolism, total energy requirements. 2. Study of Nutrients: (a) Carbohydrates, proteins, fats - chemistry, biochemistry and nutritional aspects such as digestion, absorption, metabolism, functions, sources and requirements. (b) Vitamins and minerals - functions, sources, requirements, and deficiencies. 3. Water balance. 4. Methods of assessing the nutritional status. 5. Principles involved in adoption of normal diet for formulating therapeutic diet - use of food exchange groups. 6. Diets during pregnancy, lactation, infancy, school age, adolescent, adulthood and old age. 7. Nutritional deficiency diseases. 8. Diet in diseases (metabolic disorders, febrile conditions, surgical & other stress conditions) - causes, symptoms, physiological changes and dietary management. 9. National and International agencies and programmes in the betterment of Nutritional status.


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PROFESSIONAL PROGRAMMES

Candidates can refer to the various syllabi, depending on the course they have applied for, as indicated in their application forms.

There will be negative marking for all multiple choice questions.

B.Ed. (BACHELOR OF EDUCATION)

Admission to B.Ed. programme of the Institute will be based on the performance in admission test and interview.

QUESTION PAPER FORMAT:

General English and Aptitude Test

Test 1: This will consist of two sub-tests of 80 minutes duration and for 65 marks.

Sub-test 1(a): General English – 30 marks - 40 minutes: This sub-test is designed to test the candidate's knowledge and her command over English language and language skills.

Sub-test 1(b): Situation Analysis - 35 marks - 40 minutes: The purpose of this sub-test is to assess the candidate's ability to analyse a given situation in all its implications and, her capacity to respond to different problems and value issues raised.

Test 2: This test will consist of two papers on the core subjects studied in the qualifying degree.

The test will be of 100 minutes duration and for 100 marks (50+50): This test is designed to assess and evaluate candidate's knowledge in two specific subjects in teaching methodology. For this purpose, candidates have to choose any two papers from the following which they have studied in the qualifying degree:

Students with Postgraduate qualification:
Mathematics and Physics; Mathematics and Chemistry; Physics and Chemistry; Biology and Chemistry; English and Social Studies; English and History; English and Civics; English and Geography.

Students with Undergraduate qualification:
Mathematics and Physical Sciences; Biological Sciences and English; Social Studies and English.

M.Ed. (MASTER OF EDUCATION)

Admission to M.Ed. programme of the Institute will be based on the performance in admission test and interview.

QUESTION PAPER FORMAT: There will be two papers which are compulsory viz, Paper-I – General English of 50 marks for one hour duration, and Paper-II – related to B.Ed curriculum consisting of objective questions of 100 marks for ½ hours duration. Total duration of the test is 2 and ½ hours with 150 marks.

Syllabus:

Paper-I: General English (One hour) – 50 marks.

Paper-II: Education (One and half hours) – 100 marks.

› Philosophical & Sociological foundations of Education (20 marks)
› Psychological foundations of Education (20 marks)
› Educational Technology (20 marks)
› School Administration, Planning & Management (20 marks)
› Educational Evaluation & Elementary Statistics (20 marks)

M.B.A. / M.B.A. (FINANCE)

Admission to M.B.A./M.B.A.(Finance) Programme of the Institute will be based on performance in the Admission Test, Group Discussion and Interview.

QUESTION PAPER FORMAT:

There will be three written tests of 3 hours total duration. They would be of a pattern similar to CAT, GMAT and MAT. The details of various tests are as follows:

English: This test is designed to test the candidate's command over English and Grammar, his vocabulary, and his ability to use words and phrases effectively. This test is also designed to test the ability of the candidate to read and rapidly digest literature, his ability to extract qualitative and quantitative information, and his ability to communicate precisely.

Quantitative Analysis & Logical Reasoning: This test is intended to assess the candidate's ability to handle quantitative information with speed and accuracy. This test is also designed to determine the candidate's ability to draw valid inferences from available information, using logical reasoning and simple mathematical formulae.

Management Aptitude: The purpose of this test is to assess the candidate's aptitude for Management profession and his ability to comprehend facts, and analyze given situation. The purpose of this test is also to assess the awareness of the candidate pertaining to national and international issues.

NOTE: The Institute reserves the right to allocate successful candidates of these two courses as it deems fit, notwithstanding the preference indicated by the applicant.

Reference Books: Standard books used for CAT/MAT/GMAT Entrance Examinations.

ADMISSIONS TEST AND RESPONSE SHEET

› Each candidate will have to answer the following Tests:

<table>
<thead>
<tr>
<th>Sub-test I: English</th>
<th>60 questions</th>
<th>1 hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-test II: Quantitative Analysis &amp; Logical Reasoning</td>
<td>30 questions</td>
<td>45 min.</td>
</tr>
<tr>
<td>Sub-test III: Aptitude Test</td>
<td>30 questions</td>
<td>30 min.</td>
</tr>
<tr>
<td>Written English</td>
<td>A short write upon a specific theme</td>
<td>15 min.</td>
</tr>
</tbody>
</table>

› The university uses an Optical Mark Recognition (OMR) system for evaluation. A sample OMR response sheet is exhibited on the reverse of this sheet to ensure that the candidate is familiar with it.

› IMPORTANT: The candidate needs to carry two HB pencils along with an eraser and sharpener for the admission test. The candidate is also required to carry a pen (preferably blue ink).

› The points to be noted with regard to use of the OMR response sheet are elucidated below:

› You are required to write your (i) Applicant Id and (ii) Question Paper Code no. and SHADE THE NUMERALS appropriately in the space provided on the RESPONSE SHEET. You are also required to write the (iii) Room number and (iv) Test Date in the space provided separately.

› The correct answer, chosen from the Question Paper, should be SHADED ON THE RESPONSE SHEET viz., A, B, C, D or E. The
The subjects to be covered under this area are: Data Structures & Algorithms, Computer Organization and Architecture, Data Communication and Networks, Database Systems, Operating system and System programming, and C, C++, & Java programming concepts.

**Data Structures and Algorithms:**

**Computer Organization and Architecture:**

**Data Communication and Networks:**

**Database Systems:**
- Database languages, View of Data, Relational Model, SQL, set operations, Aggregate functions, Nested sub queries, Joined relations; ER Model: Constraints, Weak Entity sets, Generalization, Specialization, Reduction to Relational Schemas; Normalization: Different Normal Forms, Functional Dependency, Multi-valued Dependency; Transaction: Transaction concept, ACID properties, Serializability, Recoverability, Testing for serializability.

**Operating Systems and System Programming:**
- The concept of a process, operations on processes, process states, concurrent processes, process control block, process context, Job and processor scheduling, scheduling algorithms, Problems of concurrent processes, critical sections, mutual exclusion, synchronization, deadlock, Memory organization and management, storage allocation. Virtual memory concepts, paging and segmentation, File organization: blocking and buffering, file descriptor, directory structure, Basics of assemblers, Macro preprocessors and compilers.

**Object Oriented Programming Concepts:**
- Principles of Object Oriented Programming, Classes, objects, constructors and destructors, Operator overloading, Type conversions, Type of constructors, function over loading, Inheritance, Polymorphism, File stream – File operators.

**Calculus of One and Several Variables:**
- Limit, continuity, differentiation and integration of functions of one and more variables. Directional derivative and gradient of a function.

**Mathematics**
- The subjects to be covered are: ODE, Discrete Mathematics, Linear Algebra, Probability and Statistics and Basic Calculus

**Linear Algebra:**
- Vector spaces, subspaces, basis, linear transformation, matrix of linear transformations, system of linear equations and their solutions using Gaussian elimination method, Eigen values and Eigen vectors, diagonalization of a linear transformation.

**Discrete Mathematics:**
- Set theory, Mathematical logic, Relations and functions, Trees and Graphs.

**Computer Science**
- Data structures and algorithms in C, by Mark Allen Weiss
- Computer Organization and design by David A. Patterson and John L. Hennessy, Elsevier Pub.


Systems programming by Lelend Beck, 3rd edition, Pearson India.

C++ How to Program, 4/e by Paul Deitel

MATHMATICS


Linear algebra by Larry smith, 3rd edition, Springer Verlag.


M.Tech. in OPTOELECTRONICS AND COMMUNICATIONS

Question Paper Format

General English Aptitude Test- 20 marks- ½ hour - essay type question to test English language written communication skills
Written Test- 100 Marks- 3 hours- short answer and problem solving type questions
Technical Viva-Voce
Final Interview

Written Test: Duration of the test will be 3 hours and it will contain multiple choice, short answer and problem solving type questions.

Common for B.E. / B.Tech. / M.Sc. in Physics

General English Aptitude Test: This will consist of an essay type question to test English language written communication skills. The test will be for half an hour with allocation of 20 marks.

Linear Algebra: Determinants, System of linear equations, Eigenvales and eigenvectors, Diagonalization of matrices.


Complex variable: Analytic functions, Taylor’s and Laurent’ series, Residue theorem, Cauchy’s theorem.

Vector Calculus: Gradient, Divergence and Curl, Line, surface and volume integrals, Stokes, Gauss and Green’s theorems.

Ordinary and Partial Differential Equations: ODEs with constant coefficients, variation of parameters, Initial and boundary value problems (BVPs), Power Series solutions, Legendre, Hermite and Bessel’s functions, Variables separable method, Solutions heat, wave and Laplace equations.


For B. E. / B. Tech Applicants only

Networks: Network graphs: matrices of graphs, Solution methods, Nodal and mesh analysis, Network theorems, Thevenin’s and Norton’s, Wye-Delta transformation. Steady state analysis, Time and Frequency domain analysis, Solution using Laplace transform, 2port network parameters: transfer functions and state equations.

Electronic Devices: Energy bands, Carrier transport, diffusion, drift, mobility, resistivity, Diodes: p-n junction, Zener, BJTs, FETs, JFETs, MOSFETs, PIN and Avalanche; LEDs, LASERS.

Analog Circuits: Equivalent circuits of diodes, BJTs, JFETs, and MOSFETs. Simple diode circuits, Single-and multi-stage, differential, operational, feedback and power amplifiers, Frequency response of amplifiers, Op-amp circuits, Filters, Oscillators.

Digital circuits: Boolean algebra, logic gates, Digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinational circuits, arithmetic circuits, code converters, multiplexers and decoders. Latches and flip-flops, counters and shift-registers. Sample and hold circuits, ADCs, DACs, Memories, Microprocessor (8085): architecture, programming, memory and I/O interfacing.


Control Systems: Feedback; transfer function; steady-state errors; Stability criteria; Bode plots; Elementary state variable formulation; Transition matrix and response for L TI systems. On-off, cascade, P, PI, PID and feed-forward controls. Controller tuning and general frequency response.

Communications: Analog systems: modulation and demodulation systems, spectral analysis, superheterodyne receivers; hardware, realizations of analog communication systems; signal-to-noise ratio (SNR) AM, FM. Digital systems: PCM, DPCM, DM; ASK, PSK, FSK; matched filter receivers, bandwidth consideration and probability of error calculations for these schemes.

Electromagnetics: Maxwell’s equations, Wave equation, Pointing vector. Plane waves: propagation, reflection and refraction; phase and group velocity; skin depth; Transmission lines: characteristic impedance; impedance transformation; Smith chart; Waveguides: modes in rectangular waveguides; boundary conditions; cut-off frequencies; dispersion relations. Antennas: Dipole antennas; antenna arrays; radiation pattern; reciprocity theorem, antenna gain.

For M.Sc. in Physics Applicants only

Classical Mechanics: Lagrange’s and Hamilton’s formalisms; Equation of motion, Poisson bracket; small oscillations, normal modes; wave equation; Special theory of relativity – Lorentz transformations, relativistic kinematics, mass-energy equivalence.

Electromagnetic Theory: Laplace and Poisson equations; conductors and dielectrics, boundary value problems; Ampere’s and Biot-Savart’s laws; Faraday’s law; Maxwell’s equations; boundary conditions; electromagnetic waves; radiation from moving charges.

Quantum Mechanics: Schroedinger equation; Bound state problems, hydrogen atom; angular momentum and spin; addition of angular momentum; matrix formulation, time independent perturbation theory; elementary scattering theory.

Atomic and Molecular Physics: Spectra of one-and many-electron atoms; LS and jj coupling; Zeeman and Stark effects; X-ray spectra; rotational and vibrational spectra of diatomic molecules; electronic transition in diatomic molecules, Franck-Condon principle; Raman effect; NMR and ESR.

Thermodynamics and Statistical Physics: Laws of thermodynamics; calculation of thermodynamic quantities; microstates, macrostates, phase space; partition function, free energy, classical and quantum statistics; Fermi gas; Black body radiation; Bose-Einstein condensation; first and second order phase transitions, critical point.

Solid State Physics: Elements of X-crystallography; structure determination; bonding, elastic properties, defects, lattice vibrations and thermal properties; free electron theory; band theory of solids; metals, semiconductors and insulators; transport properties; optical, dielectric and magnetic properties of solids; elements of superconductivity.

Nuclear and Particle Physics: Rutherford scattering; basic properties of nuclei; radioactive decay; nuclear forces; two nucleon problem; nuclear reactions; conservation laws; fission and fusion; nuclear
models; particle accelerators, detectors; elementary particles; photons, baryons, mesons and leptons; Quark model.

**Electronics**: Network analysis; semiconductor devices; bipolar transistors; FETs; power supplies, amplifier, oscillators; operational amplifiers; elements of digital electronics; logic circuits.

**M.Tech. in ANALYTICAL METHODS AND CHEMICAL INSTRUMENTATION**

**QUESTION PAPER FORMAT**

**General English Aptitude Test**: 20 marks- ½ hour - essay type question- to test English language written communication skills

**Written Test**: 100 Marks- 2 ½ hours- multiple choice, short answer and problem solving type questions:
- **SECTION A**: 50 Marks - Multiple choice: 50 questions each with FIVE alternatives.
- **SECTION B**: 30 Marks - Short answer questions: Three out of four- Each question carrying 10 marks.
- **SECTION C**: 20 Marks - Long answer question- One with internal choice carrying 20 marks.

**Technical Viva-Voce**

**Final Interview**

**SYLLABUS**

**Atomic structure and periodicity**: Planck's quantum theory, wave particle duality, uncertainty principle, quantum mechanical model of hydrogen atom; electronic configuration of atoms; periodic table and periodic properties; ionization energy, electron affinity, electronegativity, atomic size.

**Structure and bonding**: Ionic and covalent bonding, M.O. and V.B. approaches for diatomic molecules, VSEPR theory and shape of molecules, hybridisation, resonance, dipole moment, structure parameters such as bond length, bond angle and bond energy, hydrogen bonding, van der Waals interactions. Ionic solids, ionic radii, lattice energy (Born-Haber Cycle).

**s.p. and d Block Elements**: Oxides, halides and hydrides of alkaline and alkaline earth metals, B, Al, Si, N, P, and S, general characteristics of 3d elements, coordination complexes: valence bond and crystal field theory, color, geometry and magnetic properties.

**Chemical Equilibria**: Colligative properties of solutions, ionic equilibria in solution, equilibrium constants (Kc, Kp and Kx) for homogeneous reactions.

**Electrochemistry**: Conductance, Kohlrausch law, Half Cell potentials, emf, Nernst equation, galvanic cells, thermodynamic aspects and their applications.

**Reaction Kinetics**: Rate constant, order of reaction, molecularity, activation energy, zero, first and second order kinetics, catalysis and elementary enzyme reactions.

**Thermodynamics**: First law, reversible and irreversible processes, internal energy, enthalpy, Kirchoff’s equation, heat of reaction, Hess law, heat of formation, Second law, entropy, free energy, and work function. Gibbs-Helmholz equation, Clausius-Claapeyron equation, free energy change and equilibrium constant, Troutons rule, Third law of thermodynamics.

**Basis of Organic Reactions Mechanism**: Elementary treatment of SN1; SN2, E1 and E2 reactions, Hoffmann and Sayteff rules, Addition reactions, Markonikoff rule and Kharash effect, Diels-Alder reaction, aromatic electrophilic substitution, orientation effect as exemplified by various functional groups. Identification of functional groups by chemical tests.

**Structure-Reactivity Correlations**: Acids and bases, electronic and steric effects, optical and geometrical isomerism, tautomerism, conformers, concept of aromaticity.

**Carbonyl compounds**: Nomenclature-nature of carbonyl groups - preparation of aldehydes and ketones. General mechanism of Nucleophilic addition-C,S,O and N-nucleophiles- General features to be highlighted - Mechanisms of bi-sulphite addition, cyanohydrin reaction, Cannizzaro reaction, crossed aldol condensation, benzoin condensation using KCN and also Thiamine hydrochloride.

**Analytical Chemistry**: Non aqueous solvents- comparison of the solvent characteristics of liquid ammonia and liquid SO2 with water - Different types of reactions in each solvent system.

**Solubility of substances**: - Mechanism of solution - Chemical interactions involved, activity, activity coefficients, ionic strength of electrolytes, electrolytic dissociation --weak and strong electrolytes.


Sparingly soluble salts - solubility product principle - calculation of solubility and solubility product- Application of the solubility product principle and common ion effect in qualitative inorganic analysis to be illustrated with examples.

**Complex ions**: Formation, consequences of complex formation - Importance of complex ion formation in qualitative inorganic analysis. Salt hydrolysis - Interaction of salts with water: Hydrolysis of salts - hydrolysis constant, degree of hydrolysis - Derivation of expressions for pH of aqueous solution of different types of salts. Buffers - concept, buffer components, mechanism of buffer action, types of buffers, preparation of buffers - Henderson’s equation, buffer capacity, importance of buffers.


Theory of indicators for neutralization indicators -Theory of indicators for red-ox indicators - Basic discussion of types of indicators - internal and external, self-indicator, pH indicators, redox indicators with suitable examples.
Complete an application form

Step 8
Await final decision
Join SSSIHL

STEP 8: WAIT FOR RESULTS / FINAL DECISION

After all the admissions tests and interviews are completed in April, final decisions about admissions will be made and posted on the university website (www.sssihl.edu.in) on the day following the completion of tests and interviews for that particular programme. By 1 May 2015, all results will be posted on the website.

Additionally, provisional list of selected candidates will also be put up at the Ashram (opposite the Accommodation office).

In addition, a selection letter will be sent to all selected candidates. Along with the letter, related information will also be included.

STEP 9: JOIN THE UNIVERSITY!

Congratulations! If you make it to this stage, you have got a place to study at Sri Sathya Sai Institute of Higher Learning. We look forward to welcoming you at one of our campuses.

The Academic Year 2015/16 commences on 1 June 2015.

LIST OF DOCUMENTATION TO BE SUBMITTED UPON ADMISSION

All newly admitted candidates must submit the following to the Director of the Campus on the opening day of the university academic year:

UNDERGRADUATE PROGRAMMES
› Original Marks Certificate of X/XII Standard. If your XII Std. results are not yet published, you should submit the original marks certificate of X Standard.
› Transfer Certificate
› Conduct Certificate

POSTGRADUATE AND PROFESSIONAL PROGRAMMES
› Original Marks Certificate of your college / university degree. If your final year results are not yet published, you should submit the original marks certificate of you previous degree / XII Standard.
› Transfer Certificate
› Conduct Certificate

How do I contact the admissions office if I need further help?

The Admissions pages of the website (http://sssihl.edu.in/sssuniversity/Admissions.aspx) are designed to make sure that candidates have all the information that they require to successfully apply to SSSIHL.

You may refer to the Application Guide to get all the information you need for getting and filling an application form completely, supporting documentation and materials, and related information about test dates, schedules and how to find out about the progress of your application. We even have a dedicated Related Downloads page to further assist you.

The Application Guide will give you the answers to most, if not all, queries that you may have for admissions.

If you need further assistance please contact us either by email or telephone.

By Email:
› For admissions related queries, please email: admissions@sssihl.edu.in
› For online applications related queries, please email: onlineadmissions@sssihl.edu.in

We will answer all email enquiries within two working days of receipt.

By Telephone:
To contact the admissions office for Admissions related queries, please telephone:

+91 9441 911 381 or
+91 9441 911 391

The above numbers are for admissions related queries only between 9 a.m. and 5 p.m., Monday to Saturday. Outside of these hours, please email us on either one of the above addresses, depending on the nature of your query.

You are wished the very best.
Sai Ram!

Sri Sathya Sai Institute of Higher Learning
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APPLICATION No.

Please note down your Application No. here (located on your Application form) for your future reference.

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