PLACEMENT
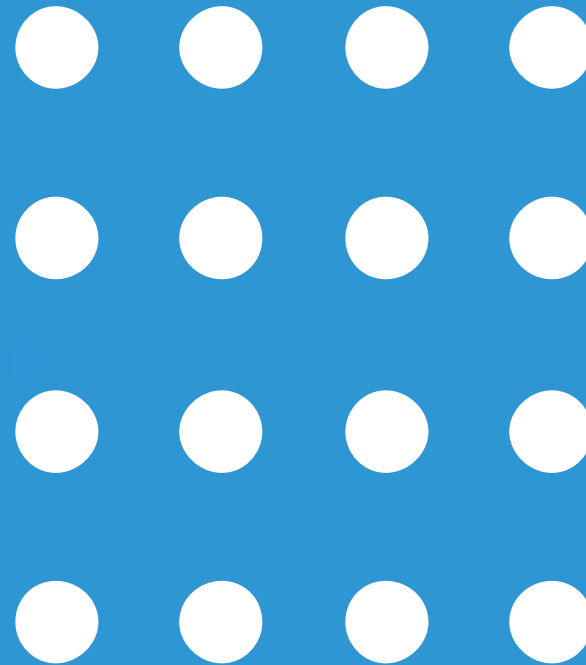## BROCHURE
2016-17

Office of Career Counselling and Placement,
Indian Institute of Science, Bangalore

CONTENTS

Contact Information: Office of career Counselling and Placement, Indian Institute of science,
Bangalore 560012, INDIA. || Web: http://placement.iisc.ernet.in/occap
email: placement.occap@admin.iisc.ac.in; occap.iisc@gmail.com || Tel.: +91(80) 22932853;

A message
FROM THE DIRECTOR

Over the 107 years since its establishment, the Indian Institute of Science (IISc)has become India's top-ranked institute for advanced scientific and technological research and education in India. Today IISc has over 40 departments, units, or centres, around 4000 students, and about 550 academic and scientific staff. Out of this population of students, about 2600 are in various PhD programs, almost 930 are enrolled for various masters degrees, whereas about 450 are registered in the newly established, research oriented, four year Bachelor of Science (Research) programme, of which the third batch will graduate in 2017. Recently, on an annual basis, the Institute produces 300 -350 PhDs, and a similar number of students graduate with various masters degrees.

The students at IISc are trained in a world-class academic environment comprising top-notch, globally connected, research faculty, and state-of-the-art research facilities. The education of the students take place in an environment of high quality fundamental and applied research, thus producing individuals who are trained to think beyond textbook material. The courses are taught by faculty who bring to bear on teaching their unique insights gained from using the subject matter in their own research. All students, whether doctoral, or masters, or undergraduate, undergo hands-on involvement in one more scientific or engineering research projects, and thereby are trained in problem formulation and solution, laboratory and/or computing skills, technical writing, technical presentation, and the peer evaluation process.

As the industry in India seeks to expand their research, design, and development activities, we are confident that the individuals we produce will provide the innovation and leadership skills that the industry will be looking for.

Our new Office for Career Counselling and Placement (OCCaP) serves as the interface between the graduating students and the prospective employers during the placement process. This Placement Booklet provides an overview of our departments/centres/units and the various academic programs.

I invite you to visit our campus to visit the research and teaching facilities, and to interview our students. OCCaP will provide you with all the required logistical support.

PROF. **ANURAG KUMAR**
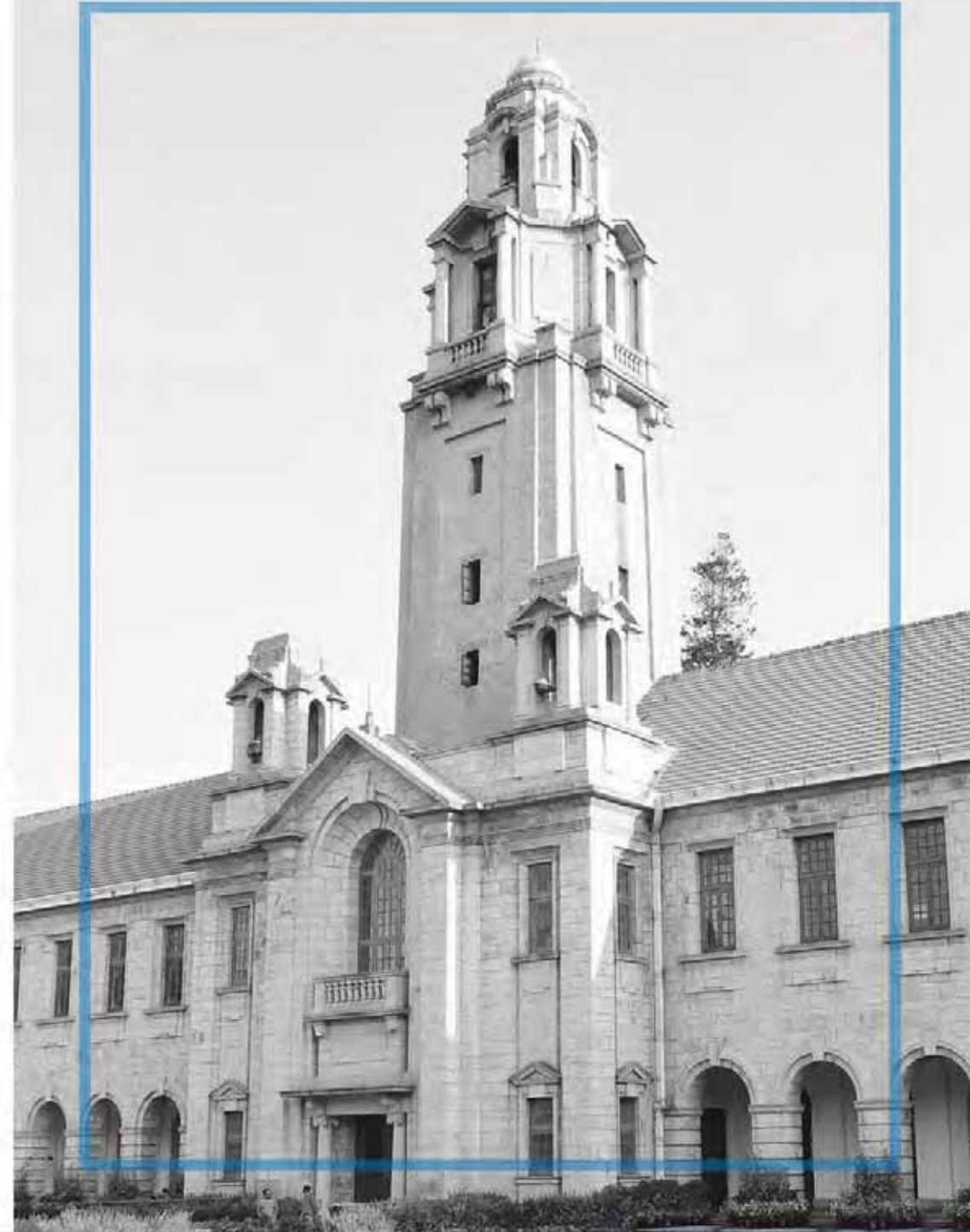Director, IISc

INDIAN INSTITUTE OF SCIENCE

The Indian Institute of Science was founded by Jamshetji Nusserwanji Tata in 1909, to promote scientific temper and research aptitude in the nation.

A **focus on excellence** in research, the academic freedom it offers, coupled with a beautiful campus and a salubrious climate has meant that the Institute is the most sought after destination for top researchers and young minds.

With **thirty seven departments** and **centres** organized in to the six divisions of Biological, Chemical, Electrical, Mechanical, Physical & Mathematical and Interdisciplinary sciences, IISc offers an unmatched range of technical expertise and a large talent pool for industry to choose from.

The Institute has consistently **topped national rankings** and has made the nation proud by scoring high on many reputed international rankings.

It is our endeavour to make the Institute a natural destination for companies that put a **premium on intellectual capital**.

ALUMNI ACHIEVEMENTS

Over the course of the century, many eminent personalities have been associated with the institute, among whom are stalwarts like C. V. Raman, G. N. Ramachandran, Harish Chandra, S. Ramaseshan, A. Ramachandran, C. N. R. Rao and R. Narasimha. Alumni of the institute have been instrumental in kindling quality research and education across the country. Notable among them are Homi J. Bhabha who conceived the idea of Tata Institute of Fundamental Research (TIFR); Vikram Sarabhai and Satish Dhawan, the pioneers of the Indian space programme and the Indian Space Research Organization (ISRO); and J. C. Ghosh who established the first Indian Institute of Technology (IIT) at Kharagpur.

Suparna Bhattacharya
Distinguished Scientist, HP

My PhD at IISc was an extremely enriching experience - it opened my mind to the joys of research, exposed me to many fascinating subjects and most of all created a strong foundation to build depth of knowledge needed to tackle difficult problems and perseverance needed to aim for high standards of research excellence.

Manjuprakash Rama Rao
Director, Advanced Research and Development, Tyco International

The rigorous student selection process at IISc coupled with eminent faculty creates talent pool which can hit the ground running may it be in research, product development or entrepreneurial endeavours.

Tilak Mitra
CTO, IBM Global Business Services Industrial Sector, Distinguished Engineer

Some say that confidence is self-grown; and while I would not deny the same, but for me, it was my tenure at IISc that helped me discover my inner self belief that has fueled my passion to achieve whatever little I have been able.

Amit Phadnis
President, Engineering and India Site Leader CISCO Systems

My stint at IISC was a true game changer for me. Outstanding batchmates, great faculty and a scientific and engineering environment helped me expand my horizons and increase my confidence in myself.

Why
RECRUIT FROM IISc

Rankings || 2015

The institute has pioneered nation-leading research and education across a wide range of science and engineering fields, and university rankings by several global organizations testify this. IISc as a whole, and several departments in particular, have been consistently **ranked among the best** in the world, and as the **absolute best in India.**

Times Higher Education University Ranking
1st in India

27th in Asia,

99th in Engineering and technology, 251-300 overall, worldwide

QS University Ranking
1st in India

6th among all BRICS countries

147th worldwide

National Institutional Ranking Framework
MHRD, Govt. of India: 1st

Careers 360
Top universities in India: 1st

Academic ranking of World Universities (Shanghai Rankings)
1st in India

301-400 worldwide

Times Higher Education Global Employability University Ranking
20th worldwide (only one from India, fifth in Asia) (22nd in 2014, 23rd in 2013)

Why
RECRUIT FROM IISc

CENTURY-OLD TRADITION

Upholding the revolutionary vision of Swami Vivekananda and J. N. Tata, IISc takes pride in producing graduates who can transform societies through their contributions to science, technology and industry.

CONSISTENTLY AT THE TOP

In all recent rankings, national and international, IISc stands out as the top institute in India, attracting the best talent nationally and often globally.

INDUSTRY INTERACTIONS

Strong, long-lasting ties with industry through joint research as well as teaching programs provides our students prior exposure to the corporate environment.

WORLD-CLASS INFRASTRUCTURE

IISc houses state-of-the-art facilities, some even unique internationally, allowing students unparalleled exposure to the best investigational tools.

INTERNATIONALLY COMPETITIVE FACULTY

IISc is the most sought-after destination for academics in India. Faculty members on roll are well-networked and competitive internationally.

OUTSTANDING STUDENT BODY

With stringent admission criteria, a rigorous training program that pays attention to individual needs, and a residential campus that naturally nurtures team spirit, our students grow into a community of confident, resourceful, and versatile thinkers and problem solvers.

RESEARCH PROJECTS

Student projects are invariably designed to be published or patented when complete, giving students exposure to the highest standards of critical thinking as well as exposure to project management and completion skills.

INTER-DISCIPLINARY TRAINING

Students are exposed to cutting-edge research and are encouraged to take courses in the ~40 departments on campus. A large number of collaborative projects are ongoing to solve problems that require multi-disciplinary approaches.

INTERNATIONAL EXPOSURE

Participation in international conferences, exchange visits and collaborations, the presence of international students on our campus as well as regular international seminar speakers give our students continuous exposure to an international setting.

IMPACTFUL RESEARCH

While maintaining the highest levels of academic excellence, students are trained to align their research with national missions or to address problems that would improve the human condition, preparing them to be the leaders of tomorrow.

RESEARCH at IISc

The main emphasis of the Institute is on research, and it expects the faculty and students to initiate and carry out research programs of a quality that is on par with international standards. The Institute continuously strives to provide the required support and the entire setup is geared for facilitating the pursuit of excellence. The Institute offers complete freedom to the faculty to pursue his/her research interests. Students of the Institute get the unique opportunity to be a part of this endeavour, often setting up their own experimental facilities, interacting with internationally recognized colleagues, thus grooming themselves to be the leaders of the future.

Our Patent Portfolio (1994-2014)

255 Indian   **94** USA   **24** European   **31** Others

PRESTIGIOUS NATIONAL AWARDS

2   Bharat Ratnas

34   Padma Awards

70   JC Bose Fellowship Awards

91   Shanti Swarup Bhatnagar Awards

31   Swarnajayanti Fellowship Awards

3   Infosys Prizes

RESEARCH

Collaboration with Industry

A representative list of companies with which IISc faculty have research interactions include Boeing, Cadila Pharmceuticals, Daimler Chrysler, General Electric, General Motors, Hindustan Unilever Limited, Indian Immunologies, Intel, IBM, Microsoft, Nokia, Nortel, Pratt & Whitney, Bosch, Texas Instruments etc.

Some of them have set up specialized laboratories or research centers within IISc to foster long term collaborations.

FELLOWSHIPS IN ACADEMIES AND INSTITUTIONS TO IISc FACULTY

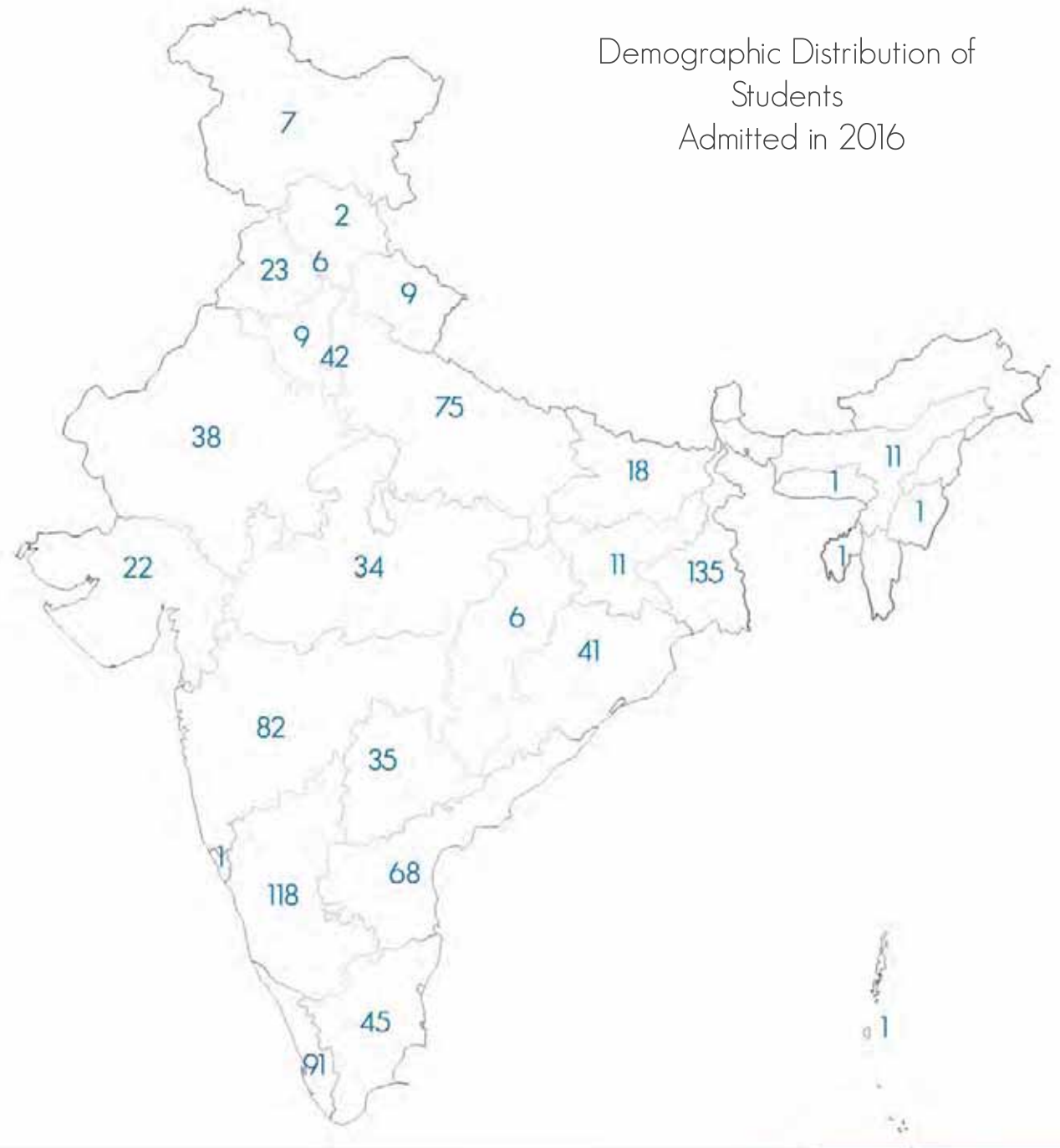|	
111	Indian National Science Academy
117	Indian Academy of Sciences
79	National Academy of Sciences
72	Indian National Academy of Engineering
10	Royal Society of London
33	The World Academy of Sciences
13	IEEE (Institution of Electrical and Electronics Engineers)

OUR INCOMING STUDENTS

Student admission to IISc at all levels are based on highly competitive national level eligibility tests followed by interviews with wide participation from candidates. Our cutoff scores are generally the highest in the country. According to our 2016 admissions data only one candidate is selected among 12 MTech, 25 research and 115 undergraduate degree aspirants. Hence we are able to attract student of the highest caliber from each across the country.

In addition, IISc offers admissions to a small number of candidates from the Government and private industries. We also admit students from other countries.

All admitted regular students get a monthly stipend from the Institute. A number of our students are awarded highly coveted fellowships by the Government of India, and many industries from India and abroad.

Demographic Distribution of Students
Admitted in 2016

ACADEMIC DEPARTMENTS

Present day research encompasses all the domains of human knowledge, and is interdisciplinary in nature. The institute provides a varied range of academic programmes. These can be broadly divided into course programmes and research programmes or a combination of these. Students are free, and even encouraged, to take courses from outside their parent departments. Students at IISc have the unique opportunity to listen to lectures, meet and interact with eminent scientists from around the world, regularly.

Biological Sciences

Biochemistry (BC)
Centre for Ecological Sciences (CES)
Centre for Infectious Disease Research (CIDR)
Centre for Neuroscience (CNS)
Microbiology and Cell Biology (MCB)
Molecular Biophysics Unit (MBU)
Molecular Reproduction, Development and Genetics (MRDG)

Chemical Sciences

Inorganic and Physical Chemistry (IPC)
Materials Research Centre (MRC)
Nuclear Magnetic Resonance (NMR) Research Centre (NRC)
Organic Chemistry (OC)
Solid State and Structural Chemistry Unit (SSCU)

Interdisciplinary Research

Center for Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP)
Centre for Biosystems Science and Engineering (BSSE)
Centre for Contemporary Studies (CCS)
Centre for Nano Science and Engineering (CeNSE)
Department of Computational and Data Sciences (CDS)
Department of Management Studies (MS)
Interdisciplinary Centre for Energy Research (ICER)
Interdisciplinary Centre for Water Research (ICWaR)
Robert Bosch Centre for Cyber Physical Systems (RBCCPS)
Supercomputer Education and Research Centre (SERC)

Electrical Sciences

Computer Science and Automation (CSA)
Electrical Communication Engineering (ECE)
Electrical Engineering (EE)
Electronic Systems Engineering (ESE)

Mechanical Sciences

Aerospace Engineering (AE)
Centre for Atmospheric and Oceanic Sciences (CAOS)
Centre for Earth Sciences (CEaS)
Centre for Product Design and Manufacturing (CPDM)
Centre for Sustainable Technologies (formerly known as ASTRA) (CST)
Chemical Engineering (CE)
Civil Engineering (CiE)
Divecha Centre for Climate Change (DCCC)
Materials Engineering (Mat. Eng.)
Mechanical Engineering (ME)

Physical and Mathematical Sciences

Astronomy and Astrophysics Programme (AAP)
Centre for Cryogenic Technology (CCT)
Centre for High Energy Physics (CHEP)
Instrumentation and Applied Physics (IAP)
Mathematics (MA)
Physics (PHY)

IISconnect:
RESEARCH CAREER PLATFORM

OCCaP introduced a new initiative to engage our patron industries with our students on a one-on-one basis. This new platform strives to connect top level R&D managers, and our alumni with our graduating students. The platform was launched at an event held on October 3rd, 2016 and was attended by around 100 delegates from industries. About 100 posters were presented by students at this event.

We plan to organize visits of experts from industries to some our key facilities/ Laboratories to explore collaborations with research groups in IISc. In addition, we plan to periodically circulate documents containting a short summary of research works of our graduating students seeking emplyment.

This is a flagship initiative of the Office of Career Counselling and Placement at IISc, and is supported by Society for Innovation and Development (SID, IISC) Centre for Scientific and Industrial Consultancy (CSIC, IISC) Office of Development and Alumni Affairs (ODAA, IISc), and IISc Students Council.

We seek active participation by Industries by visiting our website to explore new hiring avenues. Please see the booklet available in the downloads page of our website or contact us at placement.occap@admin.iisc.ac.in.

INTERNSHIP AT INDUSTRIES

The Institute allows students to take up internship positions in Industries for up to three months, without affecting academic activities. Undergraduate and Masters students may take up these internships during summer months (May to July). Research students can avail internship if their coursework is completed, subject to approvals from the advisor/ department. Longer internships are allowed with special arrangements. OCCaP plans to organize special events to facilitate such interactions between students and Industries.

PhD at IISc

Research students at IISc get a unique international flavour by interacting with a large number of international visitors at the campus, or by being given an opportunity to visit foreign countries for training, collaborative research, or attending conferences.

More than 350 PhDs graduated during 2015-16.

Number of Researchers

DIVISION	FACULTY	STUDENTS	Anticipated GRADUATES in 2016-2017
Biological Sciences	82	405	68
Chemical Sciences	61	349	62
Electrical Sciences	94	342	60
Interdisciplinary Research	29	141	30
Mechanical Sciences	148	602	120
Physical and Mathematical Sciences	87	262	45

STUDENT AWARDS (2015-16)

18   Fellowships

12   Best Paper awards

16   Best Poster awards

8   Best oral presentation awards

5   Best Researchers/Thesis Awards

7   Travel Awards

23   Other awards and medals

MASTER'S DEGREE PROGRAMS IN ENGINEERING

IISc offers MTech, ME, MDes, MMgt degrees offered in a total of 20 different specializations to around 400 students each year

Master of Engineering / Technology, ME / M. Tech.

Both ME and M. Tech. are two-year, course based program designed to prepare students to address complex industrial and technological problems through an advanced knowledge of engineering subjects. A bachelor's degree in the relevant engineering or a related field is necessary to enter the program. The program consists of rigorous course work involving core courses and electives and up to a year of project work.

Master of Management, M. Mgt.

This program aims to produce executives with expertise in technology management and business analytics and the ability to understand, assess and forecast how technologies impact the systems within and outside organizations (environment, economy and society at large). Graduates receive formal education in analytics to strengthen their capability to perform robust analyses to take decisions in information and data driven organizations.

M.Sc (Engg.) / M. Tech. (Res.)

The M.Sc (Engg.) / M. Tech. (Res.) are research based programs designed to prepare students for advanced engineering practice through research, development, production, design and/or management. Each student works with a research advisor and plans a program of course work and thesis research. Independent research work is assessed through a general test midway into the program and a final defense of the thesis.

Master of Design, M. Des.

The M. Des. is a two-year full-time post-graduate program that aims to impart education in the design and development of products that are innovative and competitive. Students are trained to approach product design with a holistic viewpoint, integrating the various facets of design in a balanced and harmonious manner, and through creative problem solving, bring about innovation in the product manufacturing industry.

Masters 2015-17
BATCH SIZE

ME in Aerospace Engineering	26
M.Tech. in Climate Science	3
M.Tech. in Earth Science	5
ME in Civil Engineering	34
M.E. in Transportation and Infrastructure Engineering	5
ME in Mechanical Engineering	20
ME in Materials Engineering	38
M.E. in Chemical Engineering	17
M.Tech. in Nano Science and Engineering	9
M.Tech. in Electronic Systems Engineering	32
M.Tech. in Instrumentation	9
ME in Microelectronic Systems	15
ME in Signal Processing	13
ME in Communication and Networks	31
ME in Computer Science and Engineering	58
M.Tech. in Computational Science	10
ME in Systems Science and Automation	21
ME in Electrical Engineering	19
M. Des. in Product Design and Engineering	25
Master of Management (M. Mgmt.)	13

INTEGRATED MASTER'S IN SCIENCES

These course peograms are designed as a blend of Core Science topics and essential engineering skills that can serve as a launching pad into Industry. The novelty of this programme lies in its interdisciplinary approach, strong flavour of engineering, exposure to disciplines in the humanities and social sciences, and a year-long research project. With a strong conceptual understanding and excellent hands-on skills, the versatile graduates of this programme are second to none in the country.

Students who complete all requirements for the award of the Bachelor of Science (Research) degree have the option of getting an integrated Master of Science degree by studying at the Institute for a fifth year. Students opting for the Master of Science programme will get both Bachelor of Science (Research) and Master of Science degrees at the end of the fifth year if they complete all requirements for the award of the Master of Science degree.

Graduates of this programme major in one subject Biology, Chemistry, Environmental Science, Material Sciences, Mathematics and Physics. In addition, they may also choose another field of interest as a minor. Around 120 students are admitted into these programs.

OCCaP
PLACEMENT PROCEDURE

The Placement Season begins in Sept 2016 and goes on till May 2017.

Invitations with the placement timeline and other relevant information are sent out to the recruiters by OCCaP. New recruiters can contact OCCaP directly by sending a brief email to [placement.occap@ admin.iisc.ac.in] explaining their interest.

Recruiters are registered on the OCCaP website. All the registered recruiters have individual login credentials for their account. The website is an interactive portal for job opportunities..

The recruiters fill an online Job Description Form containing details of the job and the offer. They should provide compensation breakup details of the posted job oppurtunity.. They can also include an attachment with company profile.
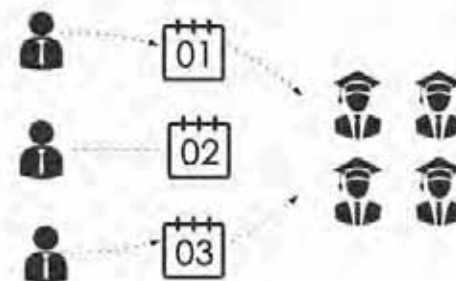
The Job Description is made available to eligible students. Only after students apply, these will be shared with the recruiter. OCCaP will schedule visits of recruiters for pre placement talks, and recruitment visits,

Interested and eligible (as per the criteria specified by the recruiter) students confirm their willingness to appear for the recruitment process of a company through online portal. Details of all such students become available to the recruiter through the OCCaP portal.

Recruiters can shortlist students online. Recruiters are also urged to maintain a waitlist of students who can be interviewed in the event of non-availability of some of the shortlisted students.

Recruiters visit the campus on the alloted date(s) and conduct tests and/or interviews according to their internal recruitment processes.

The company/recruiter is required to furnish the final list of selected students in a sealed envelope at the end of the assigned interview slot. Recruiters are also urged to maintain a waitlist of students in case of non-availability of some of the selected students.

INTERVIEW SCHEDULING PROCESS

▮ All tests and interviews will be held within the IISc premises. Video conferencing option may be facilitated by OCCaP subject to availability.

▮ Based on student preferences, existing relationship with IISc, and the package offered, OCCaP will announce a sectorwise schedule for companies to visit IISc. Recruiters will be provided a band of dates to choose from for placement tests and interviews, typically separately.

▮ More than one company may be invited to campus on any day.

▮ Students can register for a dream job option.

Slot A Interviews: October 21-22

Top recruiters chosen based on CTC (>25 Lakhs PA) and other criteria
Shortlisting of candidates for interviews to be completed before Oct 21.
Companies to choose from 7am to 2PM, 2PM -9PM, and 10am to 5pm slot on one of the days.
Final results to be announced the same day but will be disclosed to students on Oct 22.

Slot B Interviews: November 07 – Nov 18

For the first few days, companies to choose from 7am to 2PM, 2PM -9PM, or 10am to 5pm slots; shortlisting for these days to be completed before Nov 7. Companies will be invited sectorwise on these days.
On subsequent days, interviews to happen during 10am to 5pm slot; written tests can be conducted from 7-10 am on the same day.
Results to be announced and disclosed to students on the same day.

Slot C Interviews: November 24-26

Companies to choose from 7am to 2PM, 2PM -9PM, or 10am to 5pm slot.
Written tests/shortlisting to be completed before November 23.
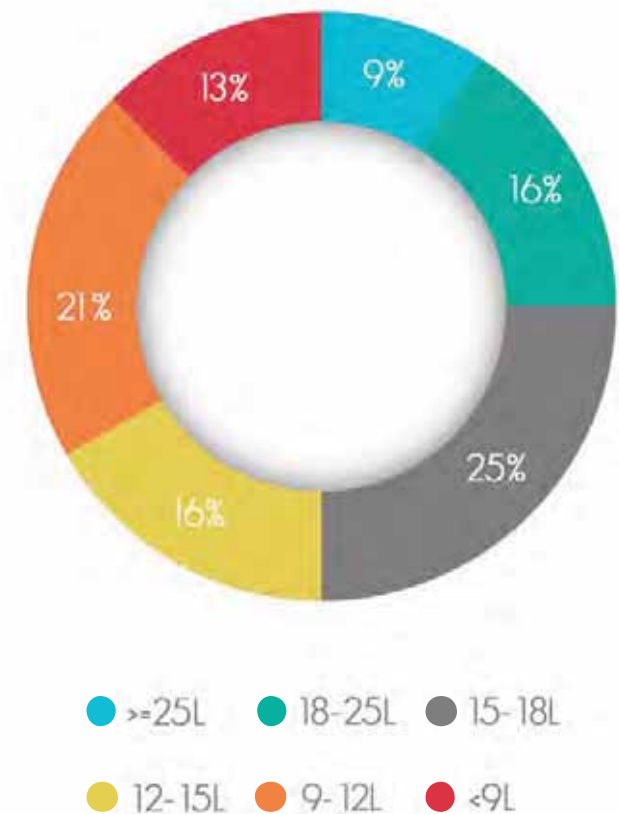Results to be announced the same day but disclosed to students on Nov 26.

Slot D Interviews: after December 11

Written tests may be held on the interview date. Results will be announced each day. This may continue till May 2017.

SOME PAST RECRUITERS

Distribution of CTC for 2015-16 Master Students

- >=25L: 9%
- 18-25L: 16%
- 15-18L: 25%
- 12-15L: 16%
- 9-12L: 21%
- <9L: 13%

and many more...

Office of Career Counselling and Placement (OCCaP)

placement.occap@admin.iisc.ac.in
occap.iisc@gmail.com

http://placement.iisc.ernet.in/occap

OCCAP COMMITTEE

Prof. K.J. Vinoy, ECE
Prof. Nagasuma Chandra, Biochemistry
Prof. Narendra Dixit, Chemical Engineering
Prof. Srikanth K Iyer, Mathematics

Tel.: +91(80) 2293 2853

BROCHURE CREDITS

Design: Aman Negi, Milap Singh, Pallavi Ray
Data: Debabrita Paria, Snigdha Athaiya, Subham Mridha
Photos: Photography Club, IISc
Publicity: Mukund S., Pradeep Gupta, Rolif Lima, Sachin S.