

ORIENTATION PROGRAMME FOR NEW STUDENTS: AUGUST 1, 2018

The purpose of the orientation programme is to familiarize you with the department and its ethos. This is done in two parts. In the first part, in the forenoon, one of the faculty members welcomes you and addresses everyone in the department to share his thoughts on what makes us what we are. This is followed by Chairman's address aimed at making new members a part of the growing family that the department is. In the second part, the new members visit each of the laboratories. Laboratory visits are co-ordinated by student conveners, one for each lab. These visits help you get acquainted with the wide spectrum of research activities in our department. A temporary supervisor is assigned to you to address all your concerns, academic or otherwise, till course students choose their project supervisor and research students choose their thesis supervisor. The relationship between student and supervisor in most cases slowly evolves to that of a life-long friendship! So, do feel free to interact with everyone around, old students, senior students, project assistants, research associates, and faculty and staff. Some of the faculty like to be called by their first name as well.

Forenoon

Time	Programme
10:00 - 11:00 am	Welcome Address* and Coffee
11:00 - 11:30 am	Meeting with the Chairman*
11:30 - 12:30 pm	Course/Reserch Programme Requirements (in Class Room)
*Venue: Chemical Engineering Seminar Hall	

Afternoon

Labs	Faculty	Conveners	Timings (afternoon)
1	Narendra Dixit	Subhasish/Ananya Saha	2.00-2.15
1A	Jayant Modak	Rimzim/ Bhanupriya	2.15-2.30
2	Venugopal, S.	Madhavan/Sushant	2.30-2.45
2	Kesava Rao, K.	Debnath	2.45-3.00
2	Sanjeev Gupta	Aslam/Deeksha	3.00-3.15
3	Rahul Roy	Saurabh/Suraj	3.15-3.30
4	Prabhu Nott	Prachi PG/Tabish Khan	3.30-3.45
4	Sudeep P.	Ravi Kumar/Dinesh	3.45-4.00
5	Giridhar Madras	Manirathnam/CH Anil	4.00-4.15
10	Ganapathy Ayappa	Pradyumn/Samlesh C	4.15-4.30
10 A	Kumaran, V.	Arkaprava/Ashwin Nair	4.30-4.45
11	Bhushan Toley	Sathish/Navjot/shruti	4.45-5.00
5.00 – 5.15 pm : Photo Session: Seminar Hall			
5.15pm High Tea near the seminar hall (Welcome Party by CEA)			

The institute relies on e-mail address allotted to you to communicate with you. A number of important documents and services (course registration to thesis submission) are available only online on the internal network of the institute. You therefore need a laptop. The internal network is can also be accessed from the outside world using vpn connections. The institute

provides free access to MS Office, Outlook for e-mail communication, and MatLab for computing. Outlook is also available as a robust mobile app. The department encourages you to learn MatLab and LaTeX to make the best use of your time here. Supercomputer Education and Research Center (SERC) carries out an orientation program on the computational facilities it offers to the institute community. You should get an account on the SERC machines as soon as possible. Visit Ms. Sarala in Room No. 104 of SERC with your Student Registration (SR) number, and submit a form to her.

The rest of this document has minimum details you need to get started on this great campus. For more details, please refer to <https://www.iisc.ac.in/about/student-corner/>. You will find Student Handbook and Scheme of Instructions there, among other useful links. Student Handbook has all the rules and regulations of the institute that pertain to every aspect of your stay in the institute. You must be familiar with them. Scheme of Instructions has academic programmes and courses offered in the entire institute. Please keep a copy of these documents with you for your ready reference. The back side of the pages you are reading are blank on purpose, to enable you to note down all the other important information you come across at one place, in this hard copy.

The Departmental Curriculum Committee (DCC) has brought a document containing code of ethics for conduct of research and its reporting, department requirements for format for project reports and theses, and of course home works and presentations. The document has useful sections on how to get into research and report/thesis writing. This, along with the document you are reading, and a few other DCC related documents are available from <http://chemeng.iisc.ac.in/chemeweb/dcc.htm>. DCC is entrusted with various course and research related matters in the department. It is also your first level of contact for academic issues arising between a course student and an instructor and a research student and supervisor. The DCC presently comprises of Sudeep and Sanjeev. The chairman of the department is always accessible to you. Even if the chairman is on leave, one of the faculty members will necessarily officiate, and can be approached. The institute also offers counselling facility.

COURSE REGISTRATION

Courses in the Department

August Semester			January Semester		
CH 201	3:0	Engineering Mathematics	CH205	3:0	Chemical Reaction Engineering
CH 202	3:0	Numerical Methods	CH 207	1:0	Applied Statistics & design of Experiments
CH 203	3:0	Transport Phenomena	CH 232	3:0	Physics of Fluids
CH 204	3:0	Thermodynamics	CH 234	3:0	Rheology of Complex Fluids
CH 206	1:0	Seminar	CH 236	3:0	Statistical Thermodynamics
CH 235	3:0	Modelling in Chemical Engineering	CH 243	3:0	Mechanics of Particle Suspensions
CH 242	3:0	Special Topics in Theoretical Biology	CH 245	3:0	Interfacial and Colloidal Phenomena
CH 244	3:0	Treatment of Drinking Water	CH 247	3:0	Introduction to Molecular Simulations
CH 248	3:0	Molecular Systems Biology	CH 249	3:0	Structural and Functional DNA Nanotechnology
CH 299	0:32	Dissertation Project (M Tech)			

The detailed content of the active courses in a given academic year is available online (go to <https://www.iisc.ac.in/about/student-corner/> and click 'Scheme of Instructions'). Please note that all the courses listed above are not offered every year.

The following table shows the department's course requirements for its various programmes.

Programme	Credits	Department requirements
M Tech Programme, 2 yr	64	Course work of 32 credits includes a core of 17 credits (CH 201 to CH 207), and a soft core of 6 credits from the department offerings. The project work is equivalent of 32 credits.
M Tech (Res) Programme, 2.5 yr	12	CH 201 or CH 202, and a minimum of two from CH 203, CH 204, and CH 205. CH 206 and CH 207 are compulsory. A maximum of 21 credits is permitted.
PhD Programme after Bachelor's degree, 5 yr	24	A minimum of four from CH 201, 202, 203, 204, and 205. CH 206 and CH 207 are compulsory. A maximum of 33 credits is permitted.
PhD Programme after Master's degree, 5 yr	12	CH 201 or CH 202, and a minimum of two from CH 203, 204, and 205. CH 207 is compulsory. A maximum of 21 credits is permitted.

Activity	Date
Course registration	1 August / 1 January
Course drop without mention in transcript	15 October / 1 March
Course drop with mention in transcript	15 November / 1 April

You may **initially register for more credits** to determine what excites/interests you, and drop the extra courses soon after. The course instructors normally expect you to finalize courses within the first two weeks of classes.

Exemption from a Required/Core Course

Within 15 days of registration, a student may apply to the Chair of the department seeking exemption from a required/core course on the basis of his/her prior background. If the Chair approves, the student will be given a written examination, before Sep 15 for August term and Feb 15 for January term.

Exemption is granted only if a student secures a B or a higher grade in this examination. The total credits to be taken at the institute in any of the department programmes is not affected by the exemption secured in this manner.

Leave

Students are strongly advised to take no more than 30 working days leave in the two year period.

Departmental seminars and colloquia

It is **MANDATORY** for students to attend all the department seminars and colloquia. An attendance sheet will be circulated at the seminars. However, attendance is optional for the thesis defense of research students.

GUIDELINES FOR ACADEMIC ACTIVITIES FOR M.TECH STUDENTS

Activity	Dates
Presentation of project proposals by faculty	Last week of October
Students turn in their preferences for projects	Second Friday of November
Assignment of project advisor	Last Friday of December
Project evaluation – first	3 rd week of January, +1 yr
Project evaluation – final	4 th week of June, +1 yr

1. Course registration

- Total number of course credits: 32 (minimum)
- August term: Typically 16 credits (core courses CH 201, 202, 203, 204 and 206 and one Elective).
- January term: Typically 16 credits (core courses CH 205 and 207, one more department elective at the least).

2. Assignment of the project advisor

- Faculty will discuss the projects on offer with the students.
- Students to give their preferences for projects.
- Based on the faculty and student preferences, projects will be assigned.
- Elective courses for January semester will be decided in consultation with project supervisor(s).

3. Evaluation of the project

- The first evaluation will be based on the presentation and report of work done till **January, +1 yr**. The evaluation committee will consist of advisor(s) + one additional faculty member, assigned by DCC.
- The second and final evaluation will be based on the presentation and final complete project report. This will be completed by the last week of **June, +1 yr**. The evaluation committee will consist of advisor(s) + two additional faculty members, assigned by DCC.
- The reports should be submitted to the examiners at least one week before the first day of the week of evaluations.
- The final grades will be awarded based on the following weightages: 30% for the first evaluation, and 70% for the final evaluation.
- The advisor(s) should certify that the final project report incorporates the corrections suggested by the examiners. The project report should be submitted in the final form by the **last working day of June, +1 yr**.

GUIDELINES FOR ACADEMIC ACTIVITIES FOR M.TECH (RES.) STUDENTS

No	Activity	Dates
1	Course registration	1 August
2	Submission of preferences for supervisor	5 October or the next working day
3	Assignment of research supervisor	10 October or the next working day
4	Synopsis submission	June, +1 yr or earlier
5	Thesis submission	July, +1 yr or earlier
6	Colloquium	Six weeks before thesis submission
7	Scholarship renewal	Yearly
8	Monitoring progress	Annually by Departmental Advisory Committee; six monthly reviews after completion of 2 years.

Guidelines

1. Course registration

Students are expected to complete course requirements (given in an earlier table) preferably in the first term, and no later than the second term. We expect you to complete 16 credits in the first semester, of which the best 12 credits must have a CGPA of 7.0 or better (equivalent of 'B' grade as per the basket rule) to complete Research Training Program in time.

2. Assignment of the research supervisor

Faculty discuss projects with students in the months of August and September. You must indicate through a form available in the office your preferences for projects on offer by the due date. Once your supervisor is assigned, you may wish to discuss the courses you are registered for with him.

GUIDELINES FOR ACADEMIC ACTIVITIES FOR Ph.D. STUDENTS

No	Activity	Dates
1	Course registration	1 August 2018
2	Preferences for research supervisor (RS)	5 October or the next working day
3	Assignment of RS	10 October or the next working day
3	Comprehensive exam	April, +1 yr or earlier
4	Synopsis submission	Within one month before the submission of thesis
5	Thesis submission	31 July, +4 yr or earlier for students with a B.E./B.Tech degree, and 31 Jan, +4 yr or earlier for students with a M.E./M.Tech degree
6	Colloquium	Within six months before the submission of thesis
7	Scholarship renewal	Every year
8	Monitoring progress	Annually by Departmental Advisory Committee (DAC); six monthly reviews after completion of 5 years.

Guidelines

1. Course registration

1.1. **Students with Master's degree:** Students are expected to complete course requirements (given in an earlier table) preferably in the first term, and no later than the second term. We expect you to complete 16 credits in the first semester, of which the best 12 credits must have a CGPA of 7.0 or better (equivalent of 'B' grade as per the basket rule) to complete Research Training Program in time.

1.2. **Students admitted to the direct Ph.D. program after B.E./B.Tech degree:** Students are expected to complete course requirements (given in an earlier table) preferably in the first two terms, and no later than one and half years. We expect you to complete 16 credits in the first semester. Your RTP requires you to have a CGPA of 7.0 (equivalent of 'B' grade) or better in a minimum of 24 credits (as per the basket rule) to complete Research Training Program in time.

2. Assignment of research supervisor

Faculty discuss projects with students in the months of August and September. You must indicate through a form available in the office your preferences for projects on offer by the due date. Once your supervisor is assigned, you may wish to discuss the courses you are registered for with him.

3. Comprehensive examination

Comprehensive examination is an important milestone during your PhD journey. The examination is carried out by a panel appointed by Senate Committee on Research Conferments (SCRC), which consists of two external examiners, a department faculty representative, Chairman, and research supervisor(s). The panel tests you for your in-depth understanding of the research work you have carried out and a minimum of three subjects. Normally, these subjects are the courses you have completed to acquire the necessary base and skills in the area of research undertaken. Your comprehensive examination must be completed by **March, +1 yr or earlier.**

4. Annual Reviews

Research students will be reviewed every year, after comprehensive examination is cleared, by a Departmental Advisory Committee consisting of two faculty members of the department, besides the supervisor(s).

5. Teaching assistantship

Ph.D. students are required to be Teaching Assistants in at least one course offered in the department during the research program.

Other Activities

No	Activity	Date
1	Department seminars/colloquium/defense	Thursday, 4.00 p.m.
2	In house symposium	Second/third week of February 2019
3	Open day	First week of March 2019
4	CEA Nite	June 2019

Timetable: August-December 2018

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30 - 9:00					
9:00 - 9:30	CH 202	CH 203	CH 202	CH 203	CH 202
9:30 - 10:00					
10:00 - 10:30	CH 235	CH 248	CH 235	CH 248	CH 235
10:30 - 11:00					
11:00 - 11:30			CH 206		CH 206
11:30 - 12:00					
12:00 - 12:30	CH 204	CH 201	CH 204	CH 201	CH 204
12:30 - 13:00					
13:00 - 14:00	Lunch Break				
14:00 - 14:30					
14:30 - 15:00					
15:00 - 15:30	CH 244		CH 244		CH 244
15:30 - 16:00					
16:00 - 16:30	CH 242		CH 242		CH 242
16:30 - 17:00					

CH 201: Engg. Maths

CH 202: Num. Methods

CH 203: Transport Ph.

CH 204: Thermodynamics

CH 206: Seminar

CH 235: Modelling in Chem. Engg.

CH 242: Spl. Topics in Theor. Biol.

CH 244: Treatment of Drinking Water

CH 248: Molecular Systems Biology