Ph.D curriculum

Guidelines for doing Ph.D in the CSE Department of IIT Hyderabad

The set of guidelines for doing Ph.D. by a candidate in the CSE department of IIT Hyderabad is as follows:

- A guide will be allotted in the first semester based on factors such as student choices, availability of opening with a given faculty member, nature of the PhD position (MHRD-funded vs. research project-funded), etc. For a research project-funded position, the faculty executing that research project himself/herself will be the guide.

- The guide will constitute a Doctoral Committee (DC) comprising himself/herself and at least two members of his/her choice selected from amongst faculty of IITH or scientists from reputed outside Organizations/Institutes. At least one member, besides the guide should be an IITH faculty. The DC would conduct annual meetings to evaluate the progress of the work.

- The Ph.D. candidate must complete a few courses as required by the department with a minimum CGPA of 7.0 within the first year of admission. The set of courses as required are described in later sections.

- Based on the background of the candidate, the DC may recommend additional course(s).

- The research proposal needs to be defended within thirteen months of registration. This is applicable for students from August 2017 batch onwards (as a onetime exception, students from August 2016 and January 2017 batches are allowed to complete the proposal defense within 18 months). If a student fails to clear it, he/she must appear for proposal defense again within 2 months. For external (part-time) PhD students, research proposal needs to be defended within 18 months and in case of failure, it needs to be repeated within 3 months.

- Original work should be carried out at least partly under the supervision of a research guide from among the faculty members of IIT Hyderabad and defended in the form of a thesis. A co-guide, if needed, may be co-opted from IITH, industry or another institute of repute.

- Publication of at least two research papers in reputed journals or refereed conferences is mandatory for graduation.

Ph.D. (Computer Science and Engg) Curriculum Effective from August 2017

Course No.	Course Title	Credits	Semester
CS6013	Advanced Data Structures & Algorithms	3	I/II
CSxxxx	Core electives (See Notes)	15	I,II
CS7005	Research Project	3	II

Total number of credits: 21

Notes:

- A **core elective** is a graduate-level elective offered by the CSE department.
- In each of the semesters 1 to 2, a maximum of 15 credits can be taken.
- Toward fulfilling the requirement of core elective credits, the student is allowed to take up to 6 credits in **mathematics or other engineering** department with the permission of DPGC.

Direct Ph.D. (Computer Science and Engg) Curriculum Effective from August 2017

Course No.	Course Title	Credits	Semester
CS6013	Advanced Data Structures & Algorithms	3	I/II
CSxxxx	Core electives (See Notes)	27	I,II,III
CS7005	Research Project	3	III

Total number of credits: 33

Notes:

- A **core elective** is a graduate level elective offered by the CSE department.
- In each of the semesters 1 to 3, a maximum of 15 credits can be taken.
- Toward fulfilling the requirement of core elective credits, the student is allowed to take up to 6 credits in **mathematics or other engineering** department with the permission of DPGC.
- The curriculum for the students who register in the January will be similar. But they will be required to take the CS6013: **Advanced Data Structures & Algorithms course** in the **August Semester** when this course is offered.
- For direct PhD students, the research proposal needs to be defended within thirteen months of registration.

Ph.D. Curriculum Effective from 2015 for JAN Semester Joinees

SEMESTER – I (January Semester)		
No.	Title	Credits
CSxxx0	Core elective 1	3
CSxxx0	Core elective 2	3
xxxx	Elective 1	3
Total Semester Credits		9

SEMESTER – II (August Semester)		
No.	Title	Credits
CS6010/CS6011	Advanced Data Structures & Algorithms; Advanced Programming Lab	3+2
xxxx	Elective 2	3
CSxxx0	Core elective 3	3
CS7005	Research Project	3
Total Semester Credits		14

Total number of credits: 23

Notes:

- A core elective is an elective offered by the CSE department

- A free elective is an elective course chosen by the student from any department in the Institute

- An elective can either be a core elective or a free elective

Ph.D. Curriculum Effective from 2015 for AUG Semester Joinees

SEMESTER – I (AUG Semester)		
No.	Title	Credits
CS6010/CS6011	Advanced Data Structures & Algorithms Advanced Programming Lab	3+2
xxxxx	Elective 1	3
CSxxx0	Core elective 1	3
Total Semester Credits		11

SEMESTER – II (JAN Semester)		
No.	Title	Credits
CSxxx0	Core elective 2	3
CSxxx0	Core elective 3	3
xxxx0	Elective 2	3
CS7005	Research Project	3
Total Semester Credits		12

Total number of credits: 23

Notes:

- A core elective is an elective offered by the CSE department

- A free elective is an elective course chosen by the student from any department in the Institute

- An elective can either be a core elective or a free elective.

Direct Ph.D. Curriculum Effective from 2014 for JAN Sem Joinees

SEMESTER – I (JAN Semester)		
No.	Title	Credits
CSxxx0	Core elective 1	3
CSxxx0	Core elective 2	3
CSxxx0	Core elective 3	3
xxxx0	Elective 1	3
CSxxx0	Core elective 4	3
Total Semester Credits		15

SEMESTER – II (AUG Semester)		
No.	Title	Credits
CS6010/CS6011	Advanced Data Structures & Algorithms Advanced Programming Lab	3+2
xxxxx	Elective 2	3
CSxxxx	Core elective 5	3
CS7005	Research Project	3
Total Semester Credits		15

Total Credits: 29

Notes:

- A core elective is an elective offered by the CSE department

- A free elective is an elective course chosen by the student from any department in the Institute

- An elective can either be a core elective or a free elective

Direct Ph.D. Curriculum Effective from 2014 for AUG Sem Joinees

SEMESTER – I (AUG Semester)		
No.	Title	Credits
CS6010/CS6011	Advanced Data Structures & Algorithms Advanced Programming Lab	3+2
xxxxx	Elective 1	3
CSxxxx	Core elective 1	3
CSxxxx	Core elective 2	3
Total Semester Credits		14

SEMESTER – II (JAN Semester)		
No.	Title	Credits
CSxxx0	Core elective 3	3
CSxxx0	Core elective 4	3
CSxxx0	Core elective 5	3
xxxx0	Elective 2	3
CS7005	Research Project	3
Total Semester Credits		15

Total Credits: 29

Notes:

- A core elective is an elective offered by the CSE department

- A free elective is an elective course chosen by the student from any department in the Institute

- An elective can either be a core elective or a free elective