

**Department of Computer Science and Engineering
Indian Institute of Technology, Hyderabad**

2-year MTech in Networks & Information Security (TA) Curriculum

Below is the proposed curriculum structure for two-year MTech in Networks & Information Security (TA) program from 2026 onwards:

Course No	Course Title	Credits	Semester
CS6013	Advanced Data Structures and Algorithms	3	I
CS5060	Advanced Computer Networks	3	I
CS5130	Cryptology	3	I
CSxxxx	Core Elective	3	I
CS6903	Network Security	3	II
CS5996	Industry Lecture Series	1	When offered
LA5180	Communication Skills (Advanced)	1	When offered
CSxxxx	Core Electives (see notes)	18	II,III,IV
CS6475	Capstone Project 1	3	Summer
CS6495	Capstone Project 2	6	III
CS6505	Capstone Project 3	6	IV

Mandatory restrictions:

- The Capstone problem statements are expected to lie in the broad area of cybersecurity: wireless/network/IoT/web security, cryptography/analysis, machine learning methods in security (e.g. intrusion detection), Formal Methods in Security, Secure software engineering, block chains, Malware Analysis, computational complexity aspects in crypto, etc.
- Students may complete Capstone projects in an industry setting, subject to prior approval from the DPGC.
- Only graduate-level courses offered by the CSE department can be counted towards the Core electives requirement.
- The DPGC will decide the list of NIS electives to be offered each semester. The approved electives will be indicated in the departmental timetable, which is available at: <https://cse.iith.ac.in/academics/timeTable.html>. Students are advised to refer to the departmental timetable for the latest list of NIS electives being offered each semester
- In case a student desires to count a non-graduate level course offered by CSE, or a course not offered by CSE, towards the core electives requirement, then the student

needs to formally apply for an exception to DPGC along with an appropriate and detailed justification, and include a recommendation from his thesis advisor, or any other CSE faculty in case the advisor is not allocated. The DPGC is the approval authority in this matter; however, the DPGC cannot approve such an exception for more than three credits for the same student in case of non-CSE courses, and for more than nine credits in case of non-graduate CSE courses.

3-year MTech in Networks & Information Security (RA) Curriculum

Below is the proposed curriculum structure for three-year MTech in Networks & Information Security (RA) program from 2026 onwards:

Course No	Course Title	Credits	Semester
CS6013	Advanced Data Structures and Algorithms	3	I/II
CS5060	Advanced Computer Networks	3	I/II
CS5130	Cryptology	3	I/II
CS6903	Network Security	3	I/II
CS5996	Industry Lecture Series	1	When offered
LA5180	Communication Skills (Advanced)	1	When offered
CS6000	Research Methods	1	I/II
CSxxxx	Core Electives (see notes)	12	I, II, III, IV
CS6035	Thesis (Stage-1)	4	Summer+III
CS6065	Thesis (Stage-2)	6	IV
CS6075	Thesis (Stage-3)	6	Summer+V
CS6085	Thesis (Stage-4)	8	VI

Mandatory restrictions:

- Thesis topics are expected to lie in the broad area of cybersecurity: wireless/network/IoT/web security, cryptography/analysis, machine learning methods in security (e.g. intrusion detection), Formal Methods in Security, Secure software engineering, block chains, Malware Analysis, computational complexity aspects in crypto, etc.
- Only graduate-level courses offered by the CSE department can be counted towards the Core electives requirement.

- The DPGC will decide the list of NIS electives to be offered each semester. The approved electives will be indicated in the departmental timetable, which is available at: <https://cse.iith.ac.in/academics/timeTable.html>. Students are advised to refer to the departmental timetable for the latest list of NIS electives being offered each semester
- In case a student desires to count a non-graduate level course offered by CSE, or a course not offered by CSE, towards the core electives requirement, then the student needs to formally apply for an exception to DPGC along with an appropriate and detailed justification, and include a recommendation from his thesis advisor, or any other CSE faculty in case the advisor is not allocated. The DPGC is the approval authority in this matter; however, the DPGC cannot approve such an exception for more than three credits for the same student in case of non-CSE courses, and for more than nine credits in case of non-graduate CSE courses.

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