

# **M.Tech in Heritage Science & Technology**

**(online, for working professionals)**



*Department of*  
**Heritage Science and Technology**

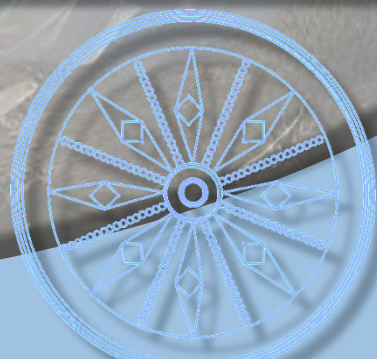


Indian Institute of Technology  
Hyderabad

## Why M.Tech in HST @ IITH

- **Are you a successful professional with an enduring passion for Indic Heritage ?**
- **Are you an engineer, scientist, clinician, designer, healthcare professional or an architect passionate about creating digital products and services around Indic Heritage ?**
- **Do you want to be a researcher in Indian knowledge systems including Yoga, Sanskrit, Manuscriptology, epigraphy, Indic architecture or heritage tourism ?**
- **Are you inquisitive about Indic Heritage and want to investigate the science behind it ?**
- **Are you excited about learning AI / ML to further Indic Heritage ?**
- **Have you ever regretted that under professional pressures you were unable to pursue your interests in Heritage ?**
- **Do you see yourself as a budding Heritage technologist ?**

**If the answer to any of the above is a Yes, then this course will allow you to pursue your dreams !**

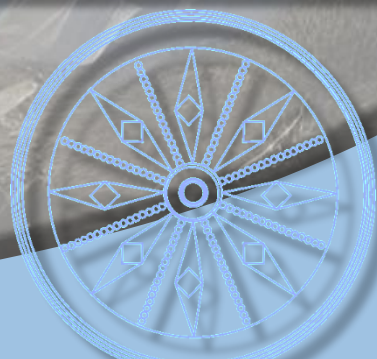


## What is HST ?

**HST encompasses the use of Science and Technology in order to study, develop and utilize heritage assets for economic prosperity, health, well-being of society and to enhance the soft power of the nation.**

**The M.Tech in HST will academically nurture the candidates through rigorous coursework in the respective areas and expose them to heritage assets and the technological know-how to gainfully leverage them.**

**First year will be spent in 24 credits of coursework and second year on thesis project, building nascent need-driven technology to address existing challenges for Heritage professionals.**



# Online M.Tech with specializations in



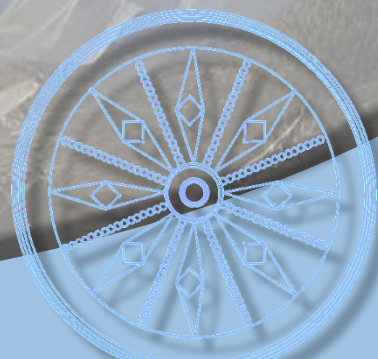
**Yoga  
Technology**



**Indic Language  
Processing**



**Conservation &  
Reconstruction  
(Digital)**

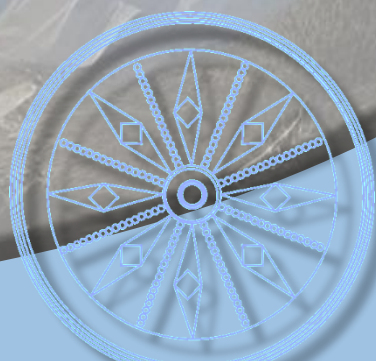


## Subjects of Study

### Core Courses (Mandatory for all specializations)

#Credits : 6

Sem	Course code	Course name	Credits	Type	Pre-requisites
1	HT5000	Elements of Indian Heritage	2	Theory	None
1	HT5013	Introductory Mathematics for Engineers	2	Theory + lab	None
1	HT5033	Elementary Machine learning	2	Theory + lab	None

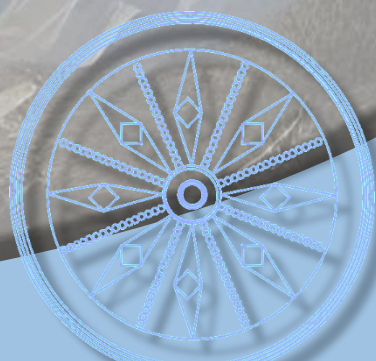


## Subjects of Study

### Core Courses (Mandatory) for Yoga Technology

#Credits : 13

Sem	Course code	Course name	Credits	Type	Pre-requisites
1	HT5010	Control systems and human body	1	Theory	None
1	HT5030	Brain & neuroscience	1	Theory	None
1	HT5020	Human anatomy & physiology	1	Theory	None
2	HT5050	Experimental design & statistics	1	Theory	None
1	HT5040	Sāṃkhya	1	Theory	HT5000
2	HT5060	Foundations of Yoga	2	Theory	HT5040
2	HT5070	Foundations of Ayurveda	1	Theory	HT5040
2	HT5053	Human movement- Measurement and control	1	Theory + lab	HT5020; HT5030
1	HT5043	Instrumentation for human electrophysiology	1	Theory + lab	HT5020; HT5030
1	HT5080	Neuroimaging	1	Theory	HT5020; HT5030
2	HT5090	Neuroscience of Yoga	2	Theory	HT5050; HT5060

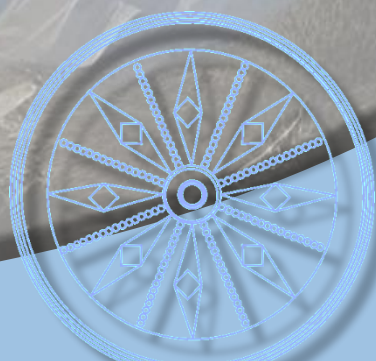


## Subjects of Study

### Core Courses (Mandatory) for Indic Language Processing

#Credits : 13

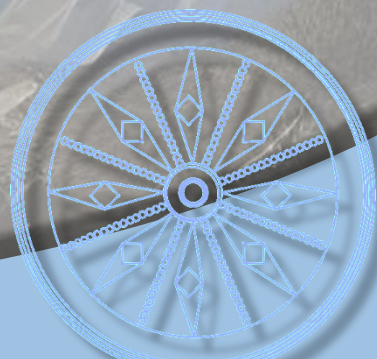
Sem	Course code	Course name	Credits	Type	Pre-requisites
1	HT5063	Automata & compilers	2	Theory + lab	None
1	HT5100	Paninian grammar	2	Theory	HT5000
2	HT5073	Speech Technologies for Indian Languages with specific focus on Hindi, Tamil, Kannada & Telugu	2	Theory + lab	HT5033
2	HT5083	Text-to-Speech systems for Indian Languages	2	Theory + lab	HT5033
2	HT5093	NLP and information processing-Indian theories	2	Theory + lab	HT5000, HT5033
1	HT5110	Phonetics and Prosody in Indic heritage texts	1	Theory	HT5000
2	HT5120	Etymology in Indic heritage texts	1	Theory	HT5000
2	HT5160	Scripts of India	1	Theory	HT5000



## Subjects of Study

### Core Courses (Mandatory) for Conservation & Reconstruction (Digital) #Credits : 12

Sem	Course code	Course name	Credits	Type	Pre-requisites
1	HT5103	Defect mapping using Artificial Intelligence	2	Theory + Lab	HT5033, HT5000
1	HT5113	Digital Documentation of Heritage Structures	2	Theory + Lab	HT5000
2	HT5123	Digital Visualization	2	Theory + Lab	HT5113
2	HT5133	Design principles in Indian architecture	2	Theory + Lab	HT5000
1	HT5140	Principles of Town Planning	2	Theory	HT5000
2	HT5150	Risk Assessment of Heritage Structures	2	Theory	HT5103, HT5033

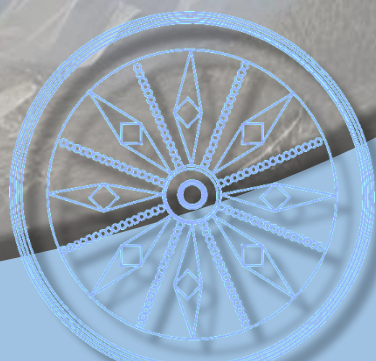


## Subjects of Study

### Elective Courses \*

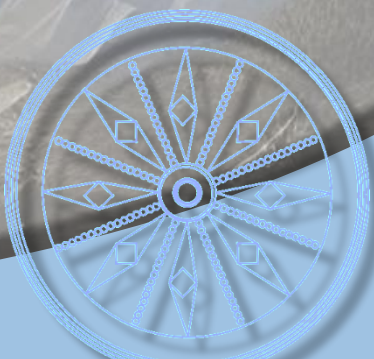
Sem	Course code	Course name	Credits	Type	Pre-requisites
1	HT5170	Techniques to unravel metallurgical and population histories of the world	2	Theory	HT5000
1	HT5180	Genetics, Human Origins, Evolution and history of human population	2	Theory	HT5000
1	HT5190	Building Materials in Heritage structures	2	Theory	HT5000
2	HT5200	Technology Applications in Built Heritage	1	Theory	HT5000
2	HT5210	Heritage Building Information Modeling	1	Theory	HT5000
1	HT5023	Introduction to software programming	1	Theory + lab	None

**\* Core courses of a stream are automatically electives for other streams. In addition, the above listed are electives for all specializations.**



# Program Details

Duration	2 years
Coursework	24 credits
Thesis project	Yes - One year project with focus on research or entrepreneurship
Total course fee	~ ₹ 4.2 lakhs
Mode	Online – Week evenings / Weekends  2-day in-campus workshop at end of each semester

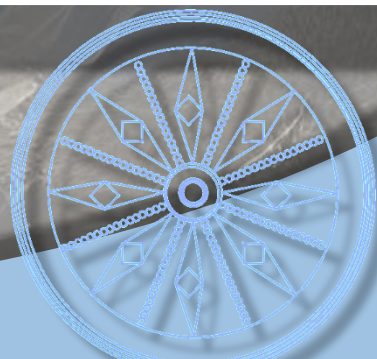


## Program Eligibility

- First class or 60% marks (55% for SC/ST reserved categories) in
  - 4-yr Bachelors program in (Technology/ Engineering/ Architecture/ Medicine/ Science) or equivalent in any relevant discipline

OR

- M Sc or equivalent (2 years subsequent to a 3 year bachelors degree) in relevant area.
- At least two years of documentable work experience
- In special cases, applicants not meeting the above eligibility criteria may be offered a 1-year PG Diploma in HST. 1-year PGD has coursework identical to M.Tech but without a thesis project.



## Contact info & Last date for application

**Apply @**

<https://iith.ac.in/academics/post-graduate/>

**Email** : [admissions@hst.iith.ac.in](mailto:admissions@hst.iith.ac.in)

**Coordinator : Dr. Surendra Somala**

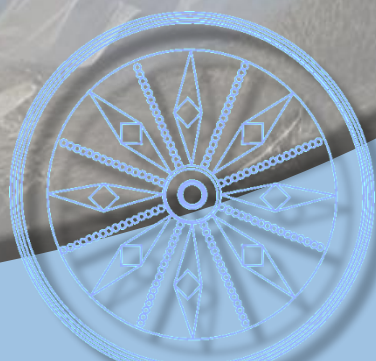
**Website** : [www.hst.iith.ac.in](http://www.hst.iith.ac.in)

**Faculty** : [www.hst.iith.ac.in/faculty](http://www.hst.iith.ac.in/faculty)

**FAQ** : [www.hst.iith.ac.in/faq](http://www.hst.iith.ac.in/faq)

**Last Date**

**23<sup>rd</sup> April 2023**



**HST @ IITH - 28<sup>th</sup> Feb 2023**

