

-The Diamond Beneath Your Feet-



IIMSTC



**VISVESVARAYA
TECHNOLOGICAL
UNIVERSITY (VTU)**

An

Industry-Aligned Internship Program 2026

The International Institute of Medical Science and Technology Council(IIMSTC)

&

Visvesvaraya Technological University(VTU)-Collaborative Internship Imparting Initiative

The Program Guide cum Standard Operating Procedure

-The Diamond Beneath Your Feet-

'The Diamond Beneath Your Feet'-Campus-to-Industry Ready Internship Program

'The Diamond Beneath Your Feet' is a flagship Campus-to-Industry Ready Internship Program designed to transform academically proficient students into industry-ready professionals who can compete against global benchmarks. Conceptualized by **IIMSTC** under its *Research and Development* initiative, the program is driven by the visionary leadership of **Dr. Sreedhar Saraswathy**—Neuroscientist, IIM Ahmedabad Alumnus, MS & PhD (University of Edinburgh, UK) & Chairman, IIMSTC, Bengaluru.

The program is founded on a powerful philosophy: **true value is revealed through refinement**. Just as an uncut diamond gains brilliance and worth through multiple cuts, students gain confidence, competence, and professional distinction through holistic skill development. By integrating technical expertise with managerial, administrative, and personality-building competencies, the program uncovers the latent “diamond” within every learner.

While universities impart strong theoretical foundations, *'The Diamond Beneath Your Feet'* ‘goes beyond conventional academic training to deliver industry-relevant, outcome-driven skills. Through innovative methodologies and national and international collaborations recognized by the United Nations Organization(UNO), the program equips students to thrive in the era of **Creative Technological Disruption**. As a collaborative initiative of **IIMSTC–VTU**, this program serves as a career-transformative catalyst—polishing potential into performance and talent into industry-ready excellence.

The International Institute of Medical Science & Technology Council(IIMSTC)

IIMSTC is social -not for profit organization, a confluence of luminaries committed to devote in continuity of contemporary multidisciplinary skills and capacity development as an arm of the Central and State Governments to ensure that any Degree and Diplomas awarded by the Indian Universities are not just showpiece of ceremonial document evidencing conferment of degrees and diplomas at the completion campus led delivery theoretical knowledge but it is a powerful instrumental catalyst that make that degree meaningful and significant as career development beacon , a valuable product of IIMSTC developed by multidisciplinary guides, mentors, trainers, educators, administrators, facilitators through uncompromising disciplinary training-leaning -skill development methodology under the strict vigilance of Prof. Dr. Shreedhar Saraswathy, Neuroscientist, Edinburgh, Chairman, the International Institute of Medical Science and Technological Council(IIMSTC) and a team of motivational and inspiring educators in their respective specialized domains of expertise and knowledge.

IIMSTC's Legal Persona

The International Institute of Medical Science & Technology Council (IIMSTC), also known as the AIIMS Technology Council, is a parastatal institution constituted under the legal framework of India. The Council possesses formal statutory recognition from the Ministry of Corporate Affairs and is institutionally acknowledged by NITI Aayog and the Ministry of Finance, Government of India. It is duly incorporated under the provisions of the Companies Act, 2013, and is authorized to undertake Corporate Social Responsibility (CSR) activities pursuant to its Certificate of Incorporation issued by the jurisdictional Registrar of Companies, in accordance with Section 7(2) and Section 8(1) of the Act, read with Rule 18 of the Companies (Incorporation) Rules, 2014.

Further, IIMSTC is registered with the Ministry of Home Affairs, Government of India, under Section 17(1) of the Foreign Contribution (Regulation) Act (FCRA), enabling it to lawfully receive and utilize foreign contributions for approved objectives. The Council is also registered with the Ministry of Micro, Small and Medium Enterprises (MSME), enlisted on the NGO Darpan portal, and recognized by the Ministry of External Affairs, Government of India. Collectively, these registrations affirm the Council's institutional legitimacy, regulatory compliance, and suitability for engagement in academic, training, research, and capacity-building initiatives at national and international levels

Operational Juridic of IIMSSTC

The International Institute of Medical Science & Technology Council (IIMSSTC) functions as a multinational institution with an operational structure spanning several international jurisdictions. Its primary corporate office is located in India at CB7, Indian Social Institute Campus, Benson Road, Benson Town, Bangalore – 560047, which serves as the central administrative and academic coordination centre of the Council.

To support its international mandate, IIMSSTC maintains regional offices in South Africa at KASI, 2 Wellington Road, Westville – 3630; in the Netherlands at Stichting Maitri, Burgemeester Baumannlaan 175A, 3042 AD, Rotterdam; and in Mozambique at CAPRICAN, Lda #25, Av. Julius Nyerere, Maputo. These offices facilitate localized program implementation, institutional partnerships, and cross-border academic cooperation. Through this distributed operational framework, the Council ensures effective governance, regulatory compliance, and the delivery of its educational and training initiatives across diverse regional and international contexts.

International Foundation for Sustainable Peace and Development(IFSPD)

International Foundation for Sustainable (IFSPD) -formerly known as the International Fund for Cooperation and Partnership of the Black Sea and Caspian Sea(BSCSIF)is an international , non-governmental and non-profit organization established on March 4, 2009 is a confluence of the initiative of Head of States, distinguished intellectual's, Scientists and public figures, diplomats and representatives of influential organizations initially set up abound the Black Sea and Caspian Sea Countries and gradually extended its operational to Europe and characterised with global outreach and became one of the leading NGO cum NPO across the globe. IFSAD is attributed with special consultative status with the United Nations Economic and Social Council(ECOSOC) enabling to actively engage with the United Nations Secretariat Programs , funds and allied agencies in a number of significant ways.

The during the landmark year: 2011-2015, BSCSIF spreads its wings across Asia, Greater Europe, Africa. The outstanding outcomes of performance of BSCSIF made the current member states including organizations join hands for serving the humanitarian causes and promoting socioeconomic development in name IFSPD reflecting the comprehensive mission of erstwhile BSCSIF.

The landmark highlight is IFSPD presidential tenure of Dr. Sangeeth Varghese, among the top 10 global thinkers and serves a worthy trusted advisor to three prime minister playing strategic roles in national policy development and strategy formulations since 2022, a global leader, author, founder-LeadCap Ventures & Trust. Dr Varghese is a popularly acknowledged as socio-economic transformer pioneering in the arena of future intelligence prioritising to advocate global shifts based historical pattern in order to predict the evolved shape of the globe including geopolitics by 2050. Dr Varghese's role as the Principal Consultant to the United Nations smoothed technological transformation of India having mark of telecom and computer penetration from 1% to 50%. IFSPD Internship is visioned to capacity development through imparting regressive, value adding, skill equipped and transforming an ordinary university learner and graduating to a responsible global citizen under guidance undefective association of Dr. Sangeeth Varghese in conjunctions over all leadership, patronage and active transformation chairmanship headed by Dr Sreedhar Saraswathy, Neuroscientist, Edinburgh, of the international Institute of Medical Sciences and Technology Council(IIMSTC).

Visvesvarya Technological University(VTU)

The University a State Technological University(1998) named after a great son of Mother India, Sir Mokshagundam Visvesvarya (15-09-1861-12-04-1962), B.A. University of Madras, 1981, Sc. University of Madras, FASc. D. Litt. Banaras Hindu University(BHU) 1937 & Andhra University(1953) D.Sc., University of Calcutta(1921), Allahabad University, 1944 & Jadavpur University, 1958, LLD, University of Bombay(now Mumbai), 1931 & Mysore University (1948), B.Sc. University of Madras, an Indian Civil Engineer. Diwan of Mysore (1912-1919), Bharat Ratna(1955), renowned Projects such as Krishna Raja Sagara Dam, knitted by British Government and awarded multiple Doctorates(Honoris Causa) who rose to the occasion during British India, Chief Engineer and Principal Architect of 'Cauvery Dam'. Sir M. Visvesvarya a legendary scholar engineering and science whose birthday, 15 September is celebrated every year as 'Engineers' Day'. VTU is one of the largest technological universities in India, Sri Lanka and Tanzania with over a quarter century of excellence in engineering and technical education, research and innovations.

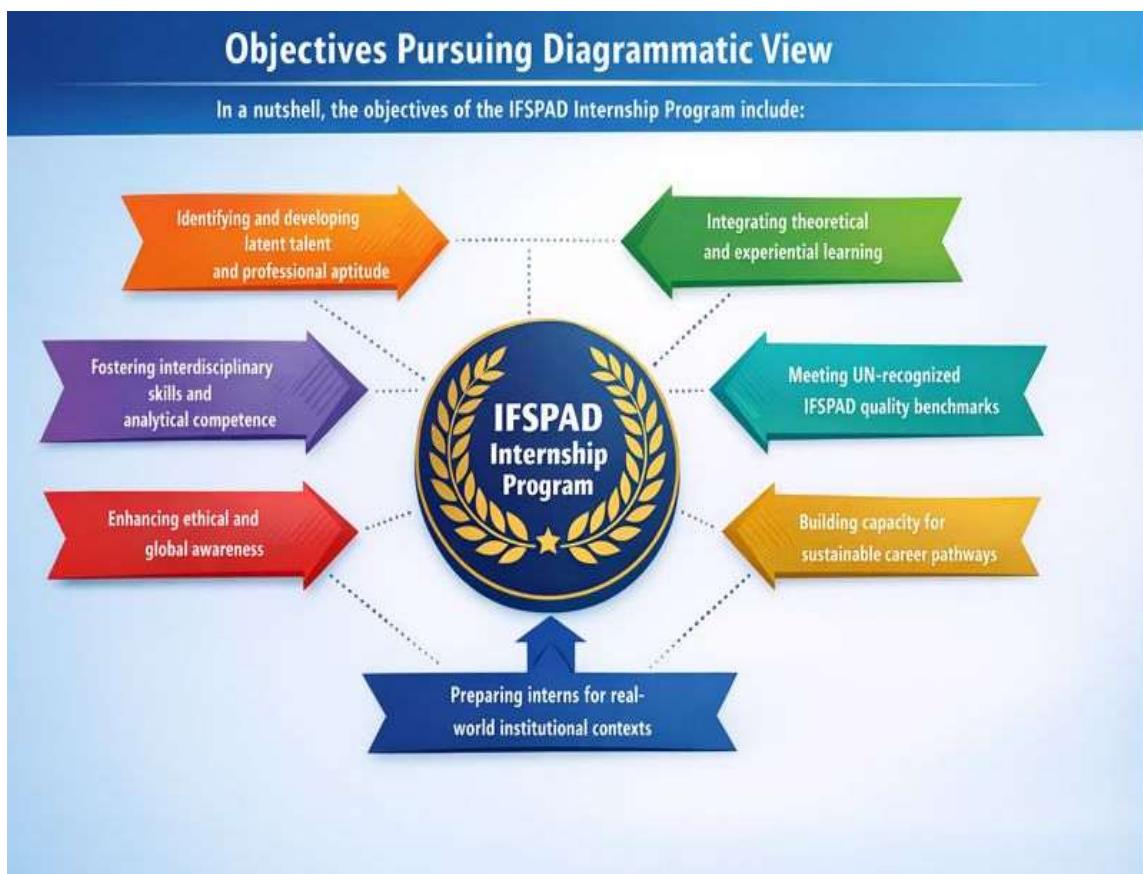
Objectives and Mission of "The Diamond Beneath Your Feet" Internship Program

The "Diamond Beneath Your Feet" Internship Program is structured to systematically identify and cultivate latent human capital through rigorous experiential learning and applied research. Its mission is to integrate theoretical instruction with practice-based training, emphasizing interdisciplinary competence, analytical skills, and evidence-informed decision-making. The program seeks to enhance professional readiness, ethical standards, and global academic engagement by exposing participants to institutional, community, and international operational environments. Anchored within IIMSSTC's multinational framework, the internship advances capacity building, innovation, and sustainable professional development aligned with contemporary educational and workforce paradigms.

In brief, the objectives of the IFSPAD Internship Program inter alia include:

- Identification and systematic development of latent talent and professional aptitude among interns.
- Integration of theoretical knowledge with structured experiential and practice-based learning.
- Promotion of interdisciplinary skills, analytical competence, and evidence-based problem-solving.
- Adherence to IFSPAD quality benchmarks recognized within the United Nations framework, ensuring international academic and professional standards.
- Enhancement of ethical awareness, professional responsibility, and global outlook.
- Capacity building aligned with multinational institutional, research, and development environments.
- Preparation of interns for sustainable career pathways through exposure to real-world institutional and societal contexts.

Diagrammatic Overview of IFSPA Intershop Program



interpretive Interface between the all variablesFor the sake of clarity and users' friendly understanding of the stakeholders and interested

entities in general, the Matrix presented below can act as self-explanatory guidance.

Interpretive Interface Between IFSPAD Internship Program Objectives

-  **Latent talent identification** functions as the **foundational input**, enabling **targeted skill development** and informed training pathways.
-  The **integration of theoretical instruction with experiential learning** acts as the core linkage between academic knowledge and applied competence.
-  **Interdisciplinary and analytical skill formation** operates as a cross-cutting variable, reinforcing adaptability across institutional and sectoral contexts.
-  **IFSPAD's UN-recognized quality benchmarks** provide the normative framework ensuring consistency, credibility, and global alignment of outcomes.
-  **Ethical orientation** and **global awareness** mediate professional conduct and social responsibility.
-  **Capacity building** and **real-world institutional exposure** serve as outcome variables, translating internal competencies into sustainable career and societal impact.

IFSPAD Industry-Aligned Internship Program 2026

Structured Capacity Development & Internship Delivery Model

Vision Statement

Title: *The Diamond Beneath Your Feet*

Tagline: *Transforming Talent into Global Leaders*

Vision: To provide students with immersive, industry-aligned, and globally recognized training that bridges academic learning, applied problem-solving, leadership, and social impact.

Recognition:

- IFSPAD: UN-recognized quality benchmarks
- Endorsed by IIMSTC & VTU
- PORT & Tie-OPP platforms for global visibility

Visual elements:

- Globe with laurel wreath (IFSPAD emblem)
- Icons representing leadership, innovation, social impact

Program Structure & Timeline

Duration: 4 Months (16 Weeks)

Phase 1 (Weeks 1–8):

- Domain expertise and DSA training
- Soft skills & professional development
- Weekly mini-projects

Phase 2 (Weeks 5–16):

- Main industry project execution
- Integrated Faculty Supervised Problem Development (IFSPD)

Weekly Engagement: ~60 hours

- Live sessions, guided labs, project work
- Mentor interactions, feedback, and evaluation
- Hybrid or online delivery depending on batch

Visual elements: Timeline infographic showing Phase 1 & Phase 2 with key milestones

Batch Management & Quality Assurance

Batch Allocation:

- Based on domain, enrolment timelines, capacity
- Reallocation allowed in exceptional circumstances

Quality Control:

- Weekly monitoring of engagement and project progress
- Reports submitted to IIMSTC for oversight
- Consistency in learning outcomes across cohorts

Visual elements: Flowchart of batch allocation → faculty supervision → quality monitoring

GRIP: Global Research & Internship Program

Corporate Immersion:

- Cohorts of 15 students representing stakeholders in case studies
- Rotational leadership: Chairman, Vice-Chairman, Secretary
- Andragogical peer-learning: debate, negotiation, applied problem-solving
- Weekly commitment: 25 hours prep + 5 hours discussion
- Recognitions: Best Presenter, Best Team Member, Best Team

Social Innovation:

- Community projects aligned with UN SDGs
- SMART goal setting, impact measurement, and international dissemination

Global Training Opportunities:

- One-month industrial training in Germany for select candidates

Visual elements: Circular diagram showing Corporate Immersion → Social Innovation → Global Training

Digital Platforms: PORT & Tie-OPP

PORT – Global Digital Portfolio:

- Record achievements, projects, certifications, GRIP milestones
- Strength analysis and skill-gap mapping
- Visibility to 2000+ universities & 1500+ global industries

Tie-OPP:

- Improve interview skills, psychometric tests, and placements
- Global career and internship opportunities

Visual elements: Dual icons showing digital portfolio and career platform with arrows pointing to “Global Visibility”

Outcomes & Impact

Key Outcomes:

- Real-world problem-solving and industry exposure
- Leadership competence, ethical awareness, and global perspective
- Social impact and recognition at international platforms
- Digital portfolio showcasing measurable achievements

Takeaway: Students emerge as globally competent, ethically grounded, innovative, and resilient professionals ready for universities, workplaces, and societal leadership.

Visual elements: Infographic with 4 pillars – Leadership, Innovation, Social Impact, Global Recognition

Call to Action

Join the IFSPAD Internship Program 2026

- Develop your skills, gain global exposure, and make an impact
- Leverage GRIP, PORT, and Tie-OPP for career and academic excellence
- Apply now to become a part of an internationally recognized program

Visual elements: Bold call-to-action button/icon with website and contact info

IFSPAD Internship Structure, Strategy and Delivery Model

The IFSPAD Internship Program is a carefully structured, industry-aligned initiative designed to transform academic knowledge into practical skills, leadership, and global competence. Operating over a 4-month, two-phase timeline, the program integrates domain training, soft skills, and project-based learning, complemented by the GRIP corporate immersion, social innovation, and global training modules. Weekly engagement balances live sessions, labs, mentorship, and feedback. The PORT and Tie-OPP platforms ensure global visibility and skill tracking. The accompanying diagram presented below visually maps this framework, showing batch structure, phased learning, digital portfolio integration, and outcome-oriented capacity building for holistic student development.



IFSPAD
Industry-Aligned
Internship
Program

STRUCTURED CAPACITY Development
& Internship Delivery Model

Structured Capacity Development & Internship Delivery Model

- ✓ Deliver personalized mentorship to industry aligned professional categorized learning sharply connected themes.
- ✓ Choose transparent scheduling & clear learning outcomes.
- ✓ Maintain high professional readiness & social impact.

Join IFSPAD & become part of a program recognized for its excellence and global impact

  **IISPAD** | VTU
IIMSTC | VTU

Program Structure & Timeline

Phase 1 (Weeks 1-8)

- Domain Training & DSA
- Soft Skills & Professional Development
- Weekly mini-projects

Phase 1 (Weeks 9-16)



Phase 2 (Weeks 5-16)

- Main Industry Project Execution
- Integrated Faculty Supervised Problem Development (IFSPD)



Total Duration:
• 4 months

Months (16 Weeks)

• Live sessions	• Documentation	• Professional
• Guided labs & labs	• Sustainability	• Global collaboration
• Mentor-led project work	• And 24x7 support	• Overseas

Attendance & Participation:  - 60% attendance

- Mandatory attendance & active engagement
- Experts surveillance for project evaluation, evaluation



Batch Management & Quality Assurance

Batch Allocation

- Domain selection
- Enrollment timelines
- Capacity availability's availability
- Exceptional evaluation allows
- Faculty approval.

GRIP & Tie-OPP
Digital Platforms for Global Visibility

Week Overview

- Online-Hybrid
- Complete assignments
- Mentoring collation
- Final assessment conclusion
- Instant notifications

Tutorial document highlights severe:
• Optimal assignments for development

- Decentralized distribution
- Deteriorate community
- Faculty availability

PORT - Global Digital Portfolio

Document projects, certifications/exclusions, awards/achievements leadership to patient GRIP notifications

Allocation → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

Supervision → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

GRIP Supervision → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

Global Visibility → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

GRIP → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

Global Training → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

Social Innovation → Analyze strengths & address skill-gaps
→ Gain clarity for program outlined

PORT & Tie-OPP: Digital Platforms for Global Visibility

PORT - Global Digital Portfolio

- Document projects, certifications, GRIP milestones
- Summaries, and initiative with types
- Gain, quality-cutter, censurated, to 100% of industry.

Achieve Excellence: Outcomes & Impact

- ✓ Real-world problem solving and industry exposure
- ✓ Document thy professions thy visible ot printngies.
- ✓ Leadership competence ethical, cps-leadeest, cae moed.
- ✓ Global recognitiere, social leadership credentials & phace inoraneies with credi; rote expositate intetoriats and erose

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Soft Skills, Communication & Domain Training

Purpose

This section details the structured framework for soft skills, communication training, and domain-specific technical curriculum. It ensures transparency in hour-wise allocation, academic rigor, and alignment with professional and placement expectations. This curriculum-level clarity complements the core internship program without altering its overarching structure.

Soft Skills & Communication Framework

Total Hours: 20–25 (Integrated Across Program)

Designed to prepare interns for professional environments, collaborative projects, and interviews, the module covers:

1. Professional Communication & Business English

- Workplace etiquette, technical presentations, and email professionalism
- Client and stakeholder communication
- Documentation and reporting standards

2. Interview & Workplace Readiness

- Resume preparation and profile communication
- Behavioural interview techniques and team conduct
- Professional workplace interactions

3. Aptitude & Logical Reasoning (Support Module)

- Quantitative aptitude fundamentals
- Logical reasoning and problem interpretation
- Time management for assessments

Delivery Model:

- Live interactive sessions, practical exercises, and role plays
- Integration with project presentations and reviews

Expected Outcomes:

- Clear articulation of technical ideas
- Professional project presentation
- Confidence in interviews and evaluations

Domain-Wise Technical Curriculum

Full Stack Development & Testing (~60 Hours)

- Front-end (HTML, CSS, JavaScript, React), Back-end (Node.js/Express)
- Database systems (SQL/NoSQL), API design, security fundamentals
- Version control (Git), software testing, manual & automation testing
- Industry exposure: application architecture, deployment, debugging

Data Science (~60 Hours)

- Python, data cleaning, exploratory data analysis, statistics, visualization
- Applied analytics and reporting
- Industry exposure: real-world datasets, data storytelling

Artificial Intelligence & Machine Learning (~60 Hours)

- AI/ML fundamentals, supervised/unsupervised learning, model evaluation
- Feature engineering, neural networks, applied workflows
- Industry exposure: cross-industry applications, responsible AI ethics

IoT & Embedded Systems (~60 Hours)

- IoT architecture, sensors & actuators, microcontrollers, embedded programming
- Communication protocols, data acquisition & monitoring
- Industry exposure: smart systems, automation, industrial IoT

Integration with Internship Projects

- Domain training feeds into weekly mini-projects, main industry projects, and IFSPD problem-solving initiatives
- Soft skills reinforced through presentations, evaluations, and documentation exercises

Flexibility & Updates

- Curriculum refined periodically to reflect industry trends, academic recommendations, and toolchain updates
- Core learning outcomes remain unaffected by updates

Visual Linking with Previous Sections:

- The **diagram from the “Introductory Note” section** now visually extends to show:
 - Soft Skills module integrated with weekly engagements
 - Domain-specific modules feeding directly into GRIP corporate immersion and IFSPD projects
 - Feedback loops from PORT and Tie-OPP platforms for skill tracking and global visibility

Dalmatic Presentation of Soft Skills, Domain Modules, Project Integration, And Outcome Mapping,

Soft Skills, Communication & Domain Training

Structured Framework for Holistic Professional Readiness

This section outlines the framework for soft skills **development** and **domain-specific technical training**. The diagram above links our internship strategy with detailed hour-wise curriculum planning, ensuring transparency, academic rigor, and alignment with professional expectations &ctions and placement criteria.



Domain-Wise Technical Training Syllabus



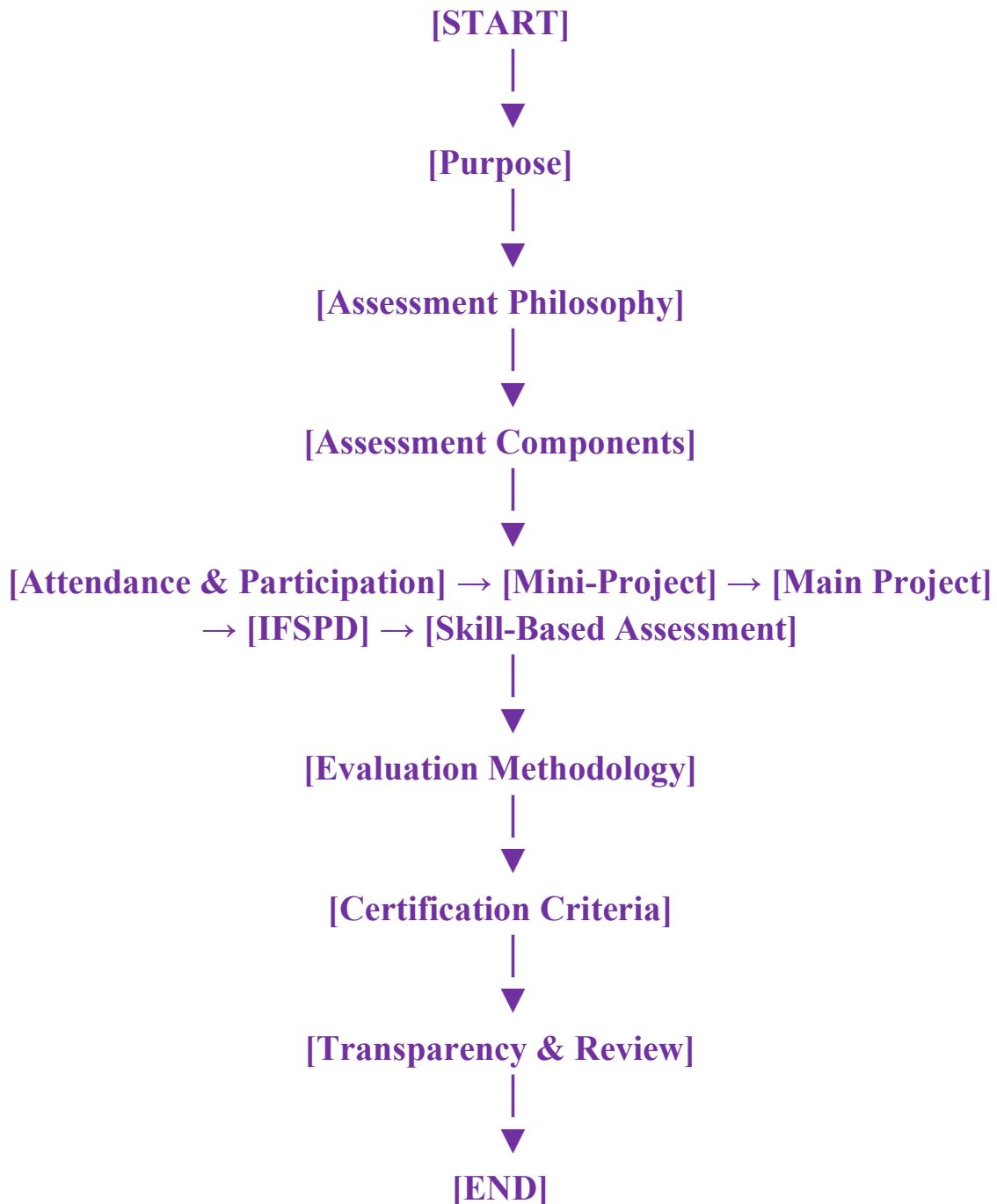
IFSPAD Internship's Soft Skills and Domain Training integrate professional readiness with technical expertise. Interns engage in live interactive sessions, practical exercises, and role plays to develop communication, interview, and workplace skills. Domain modules—Full Stack Development, Data Science, AI/ML, and IoT & Embedded Systems—provide 60 hours of focused technical training, reinforced through weekly mini-projects, main industry projects, and IFSPD problem-solving. Soft skills are applied during project presentations, evaluations, and documentation exercises. The program ensures holistic development, linking learning to real-world application, career preparation, and global visibility through PORT and Tie-OPP platforms.

IIMSTC Internship Assessment Matrix

Particulars	Content
START	Internship Program
Purpose	<ul style="list-style-type: none"> • Transparent & measurable evaluation • Academic rigor • Fair & industry-aligned • Continuous & outcome-oriented
Assessment Philosophy	<ul style="list-style-type: none"> • Practical skills • Problem-solving • Professional conduct • Attendance & Participation
Assessment Components	<ul style="list-style-type: none"> • Mini-Project • Main Project • IFSPD • Professional Skills • Track sessions & reviews
Attendance & Participation	<ul style="list-style-type: none"> • Active engagement • Timely submissions • Weekly (1–7) • Concept grasp • Functionality • Documentation
Mini-Project	<ul style="list-style-type: none"> • Months 2–4 • Team/Individual
Main Project	<ul style="list-style-type: none"> • Months 2–4 • Team/Individual

Particulars	Content
IFSPD	<ul style="list-style-type: none"> • Innovation & Execution • Testing & Documentation <ul style="list-style-type: none"> • Real-world problem • Research & Analysis • Proposed Solution • Presentation & Documentation <ul style="list-style-type: none"> • DSA / Analytical Skills • Problem sets & exercises • Reasoning & Approach • Faculty Reviews
Skill-Based Assessment	<ul style="list-style-type: none"> • Periodic Progress Checks • Final Project Evaluation • Qualitative Feedback • Attendance & Participation
Evaluation Methodology	<ul style="list-style-type: none"> • Complete Mini & Main Projects <ul style="list-style-type: none"> • IFSPD Completion • Professional Conduct • Record Maintenance • Institutional Oversight • Periodic Review
Certification Criteria	<p>Program Completed / Certification Awarded</p>
Transparency & Review	
END	

Flow Chart (Top-to-Bottom, Arrows)



Technology Stack, Tools & Platforms (Indicative)

E1. Purpose

This annexure provides an overview of the key technologies, software tools, and platforms utilized across different internship domains in the **IIMSTC Industry-Aligned Internship Program 2026**.

The goals are to:

- Showcase alignment with industry practices
- Ensure clarity on the technical exposure students receive
- Maintain flexibility to accommodate evolving frameworks and tools

The technologies listed are **indicative and non-exhaustive**, subject to periodic updates to reflect industry trends and academic guidance.

E2. Common Tools & Platforms :Cross-Domain

To facilitate collaboration, development, and assessment across all domains, the program leverages:

- **Version control systems** (e.g., Git workflows)
- **Code repositories and collaboration platforms**
- **Documentation tools** for project and technical notes
- **Online meeting and collaboration tools**
- **Learning management and assessment platforms**

These tools ensure structured teamwork, progress tracking, and disciplined documentation practices.

E3. Domain-Specific Technology Stack

E3.1 Full Stack Design & Development

Programming & Markup Languages:

- HTML, CSS, JavaScript
- Backend scripting languages as relevant

Frameworks & Libraries:

- Frontend component-based UI frameworks
- Backend frameworks for API development

Databases:

- Relational (SQL-based)
- NoSQL (document-oriented systems)

Development & Deployment Concepts:

- RESTful API design
- Basic authentication and authorization
- Application architecture patterns
- Introductory deployment concepts

E3.2 Data Science

Languages & Libraries:

- Python for data analysis
- Libraries for data manipulation and numerical computing
- Visualization libraries for analytical reporting

Tools & Platforms:

- Interactive notebooks
- Dataset management and preprocessing tools

Conceptual Exposure:

- Data pipelines
- Statistical analysis
- Reporting and insights generation

E3.2.2 Artificial Intelligence & Machine Learning

Languages & Libraries:

- Python-based ML workflows
- Libraries for model building and evaluation

Core Concepts:

- Supervised and unsupervised learning
- Feature engineering
- Model evaluation techniques
- Introductory neural network concepts

Ethics & Responsible AI:

- Responsible AI principles
- Bias detection and interpretability awareness

E3.3 IoT & Embedded Systems

Hardware & Platforms:

- Introductory microcontroller platforms

- Sensors and actuators

Programming & Communication:

- Basics of embedded programming
- Communication protocols

Systems & Applications:

- Data acquisition and monitoring
- Smart systems and automation concepts

E4. DSA & Analytical Training Tools

For Data Structures & Algorithms (DSA) development, students engage with:

- Online coding and problem-solving platforms
- Practice environments for algorithmic exercises
- Structured problem sets emphasizing analytical reasoning

The focus remains on **methodology, approach, and problem-solving skills**, not on specific tools.

E5. Software Licensing & Access

- All tools are **open-source** or provided via **educational/free-tier licenses** (e.g., Hacker Rank)
- Use of proprietary or restricted software is **not mandatory**

E6. Flexibility & Updates

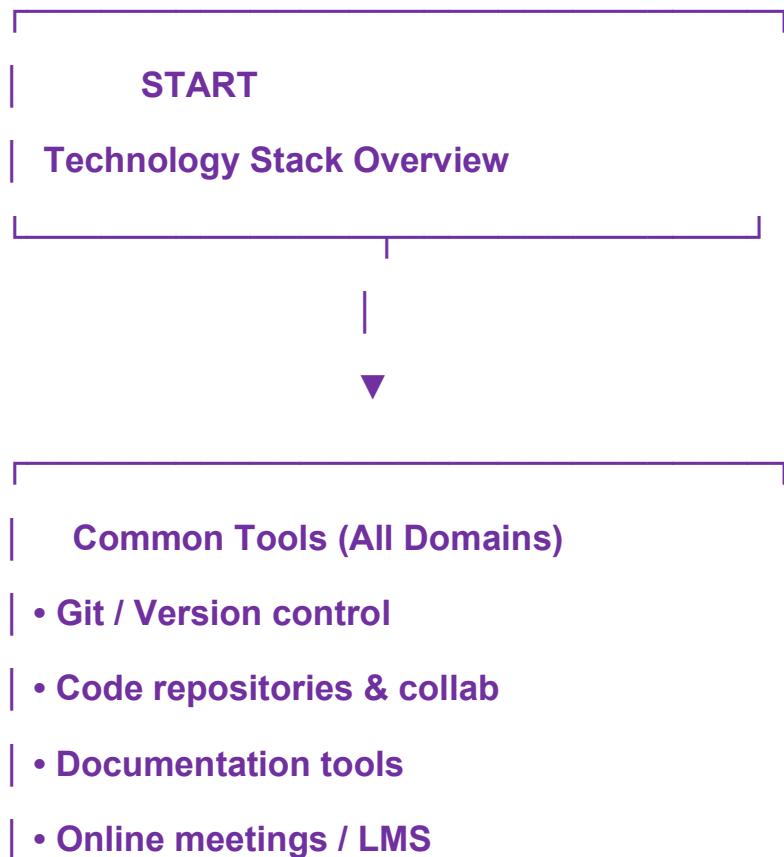
- The technology stack is **reviewed periodically** to reflect evolving industry practices, maintain academic alignment, and ensure relevance
- Updates are introduced **without impacting core learning outcomes or certification criteria**

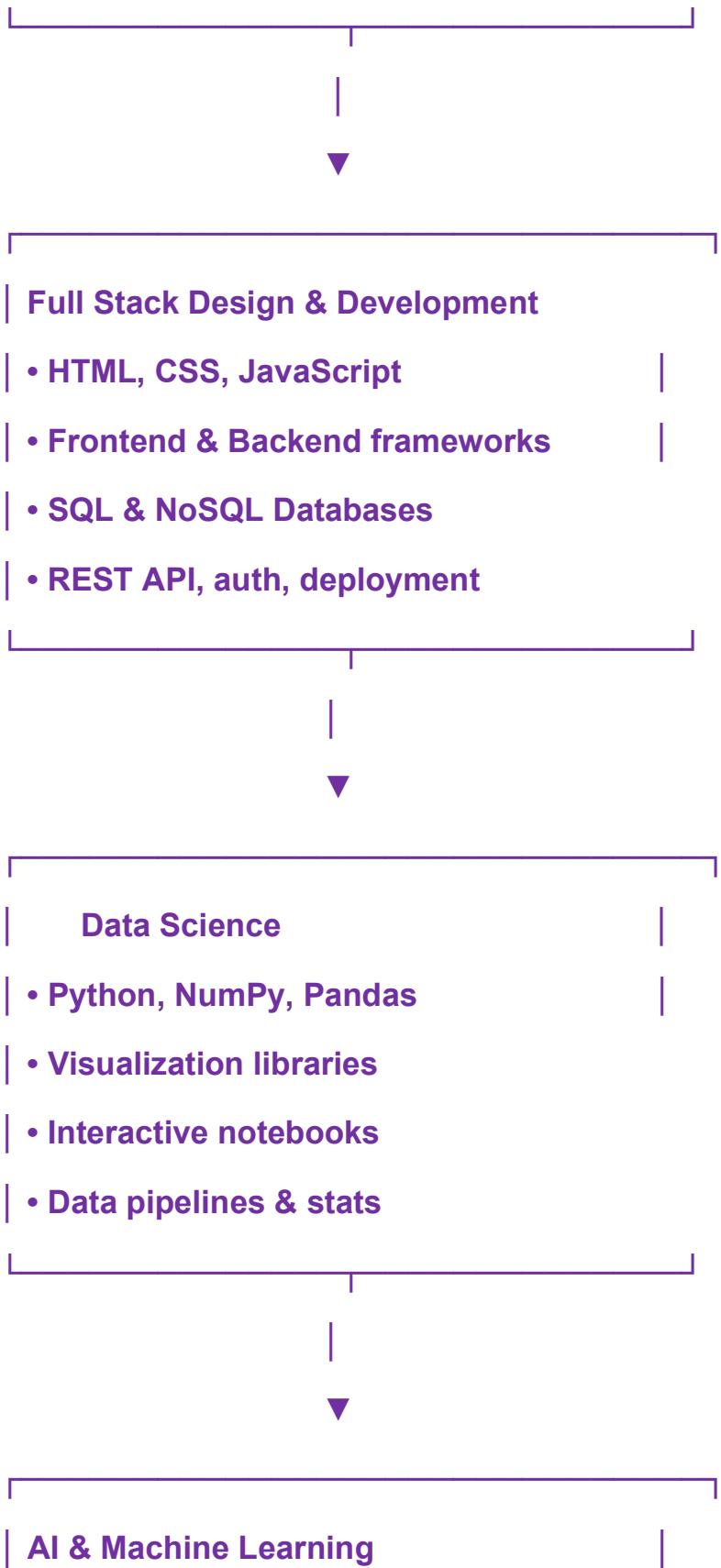
HIMSTC Internship Program 2026 – Technology Stack & Tools Matrix

Domain / Area	Key Technologies , Tools & Techniques
Common Tools (All Domains)	<ul style="list-style-type: none"> • Version control (Git) • Code repositories & collaboration platforms • Documentation tools • Online meetings & collaboration • LMS & assessment platforms
Full Stack Design & Development	<p>Languages: HTML, CSS, JavaScript, backend scripting</p> <p>Frameworks: Frontend UI libraries, backend frameworks for APIs</p> <p>Databases: SQL & NoSQL</p> <p>Concepts: REST APIs, authentication, architecture patterns, deployment basics</p>

Domain / Area	Key Technologies , Tools & Techniques
Data Science	<p>Languages & Libraries: Python, NumPy, Pandas, visualization libraries</p> <p>Tools: Interactive notebooks, dataset preprocessing</p> <p>Concepts: Data pipelines, statistical analysis, reporting & insights</p>
AI & Machine Learning	<p>Languages & Libraries: Python-based ML workflows, model evaluation libraries</p> <p>Concepts: Supervised/unsupervised learning, feature engineering, model evaluation, intro neural networks</p> <p>Ethics: Responsible AI, bias & interpretability awareness</p>
IoT & Embedded Systems	<p>Hardware: Microcontrollers, sensors, actuators</p> <p>Programming: Embedded programming basics, communication protocols</p> <p>Applications: Data acquisition, monitoring, smart systems, automation</p>
DSA & Analytical Skills	Online coding & problem-solving platforms, practice environments, structured problem sets emphasizing methodology and analytical reasoning
Software Access & Licensing	Open-source or free-tier licensed t

Flow Chart





- Python ML workflows
- Supervised / unsupervised
- Feature engineering & eval

- Responsible AI / ethics

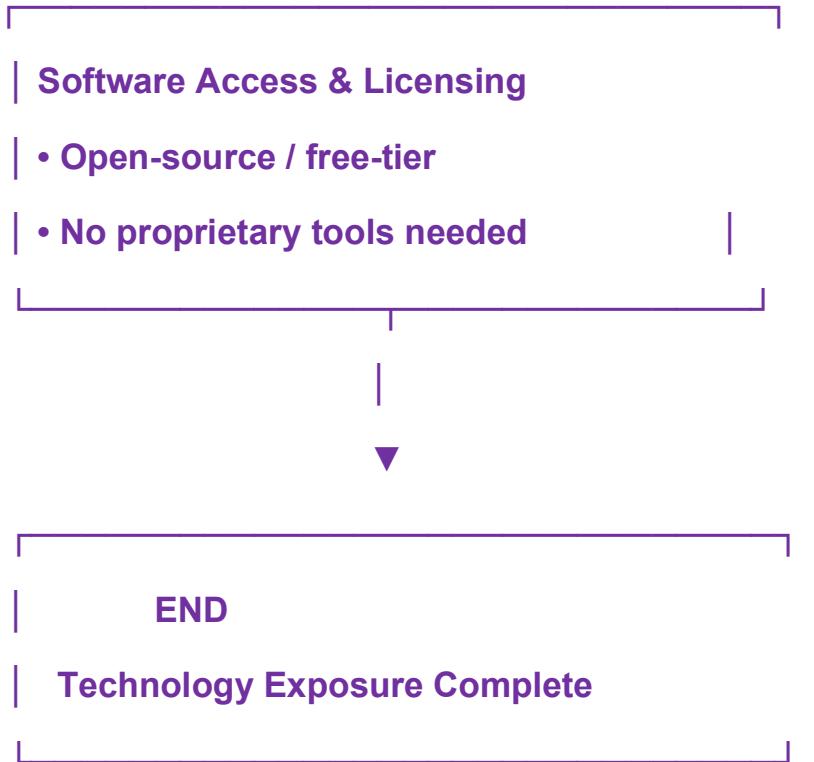


- IoT & Embedded Systems
 - Microcontrollers & sensors
 - Embedded programming
 - Communication protocols
 - Smart systems & automation



- DSA & Analytical Skills
 - Online coding & exercises
 - Structured problem sets
 - Analytical reasoning focus





Project Hour Justification & Workload Allocation

Purpose

This annexure provides a **comprehensive justification and quantitative breakdown** of the academic and practical workload for the **IIMSTC Industry-Aligned Internship Program 2026**.

The objectives are to:

- Demonstrate **academic rigor and time commitment**
- Ensure **clarity and transparency** in workload distribution
- Align internship hours with **expected learning outcomes**
- Support **institutional and regulatory review**

Workload Matrix

Component	Approximate Hours
Domain-Specific Technical Training	60 hrs
Data Structures & Algorithms (DSA)	50 hrs
Weekly Mini-Projects	100 hrs
Main Industry Project	200 hrs
Soft Skills & Communication Training	20–25 hrs
IFSPD (Social Innovation Component)	20–30 hrs
Total Program Effort	~450–465 hrs
Average Weekly Engagement	~20–22 hrs over 16 weeks

Note: The distribution ensures students maintain a balanced weekly effort while achieving all learning outcomes effectively.

Weekly Mini-Project Workload

Duration: Weeks 1–7 (Phase 1)

Structure:

- One mini-project per week
- Each mini-project focuses on **applying weekly domain concepts**

Hour Allocation per Mini-Project: Matrix

Activity	Hours (Approx.)
Understanding problem statement	2
Design / Planning	3
Implementation / Execution	6
Testing & Validation	2
Documentation & Submission	2
Total per Mini-Project	15

Total Mini-Project Effort:

- $7 \text{ mini-projects} \times 15 \text{ hours} = \sim 105 \text{ hours}$
- Rounded to **~100 hours** for reporting consistency

Main Industry Project Workload

Duration: Months 2–4 (Weeks 5–16)

Nature:

- Team-based or individual project

- Domain-aligned, **industry-oriented or applied research problem**

Hour Allocation Breakdown Matrix

Activity	Hours
Problem Understanding & Requirement Analysis	20
System / Solution Design	25
Core Implementation / Development	80
Testing, Validation & Optimization	25
Documentation & Reporting	25
Final Presentation / Evaluation	25
Total Main Project Effort	~200

Justification:

- ~25–35 hours/week over 12 weeks
- Aligns with **industry internship standards** and **academic credit equivalence**

START



Overall Program Workload



Phase 1 – Training + Weekly Mini-Projects



Phase 2 – Main Industry Project



[Parallel Layer across Phase 1 & 2]

- **Soft Skills & Communication**
- **IFSPD Component**



END – Total ~450–465 Hours

IFSPD -Integrated Faculty Supervised Problem Development

Parallel Academic Component: Students identify, analyse, and propose solutions for **real-world societal or industry problems** relevant to their domain.

Workload Allocation Matrix

Activity	Hours
Problem Identification & Domain Mapping	5
Literature Survey & Background Study	8
Analysis & Solution Conceptualization	10
Documentation & Presentation	5
Total IFSPD Effort	~28

Illustrative Weekly Workload Distribution Matrix

Phase	Weekly Hours
Phase 1 – Training + Mini-Projects	18–22
Phase 2 – Main Project + IFSPD	20–24

Notes:

- Distribution ensures **manageable workload** alongside academic coursework
- Promotes **continuous engagement** without overloading students

Academic Rationale

The workload allocation supports:

- **Immediate application of training hours** through weekly projects
- Projects accounting for the **majority of hands-on learning**
- Development of **sustained problem-solving ability**
- Alignment of **learning outcomes** with both **industry standards** and **academic expectations**

START



Phase 1 – Training + Weekly Mini-Projects



Phase 2 – Main Industry Project

↳ IFSPD (Parallel Academic Component)



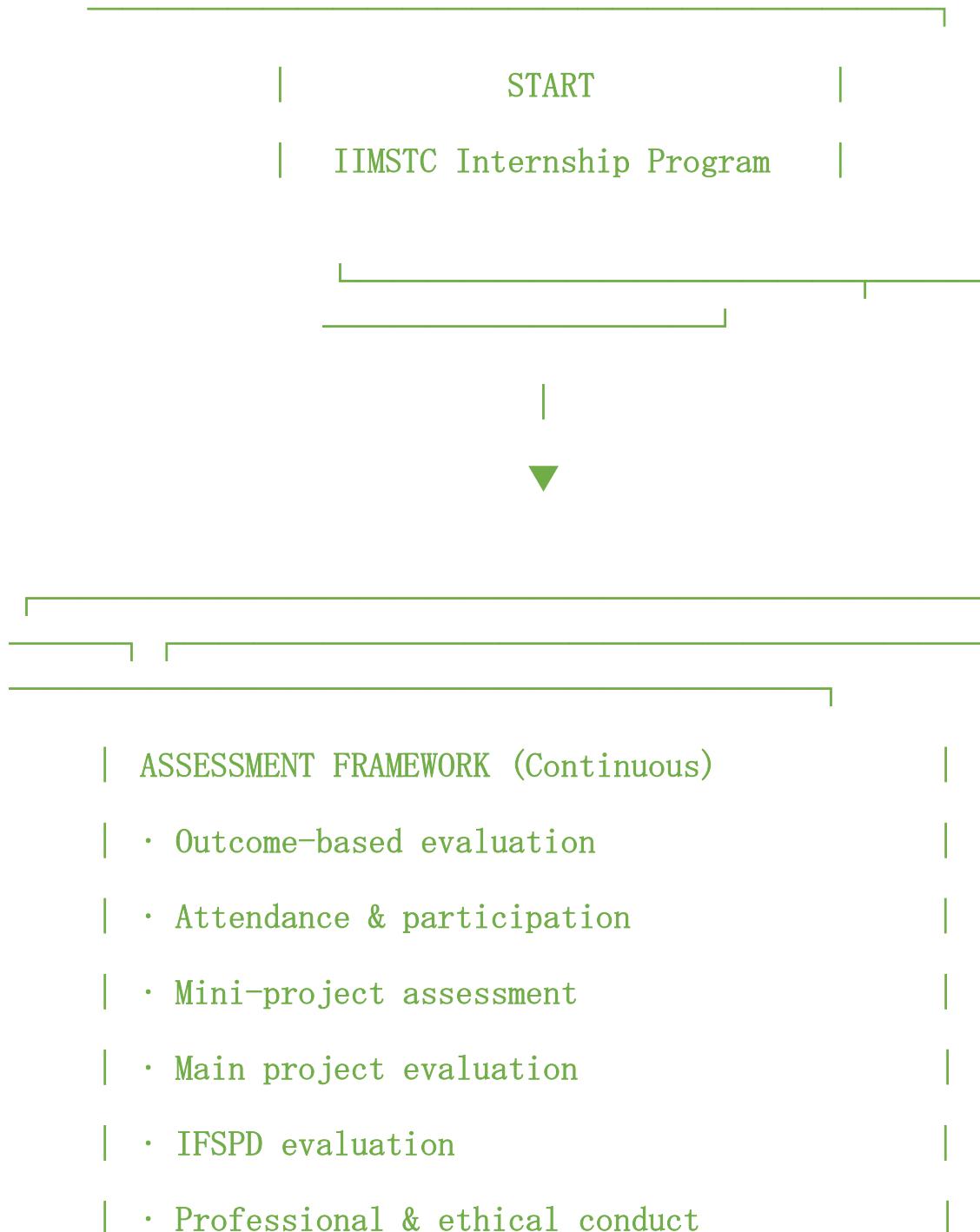
Weekly Hours Distribution: 18–24 hrs

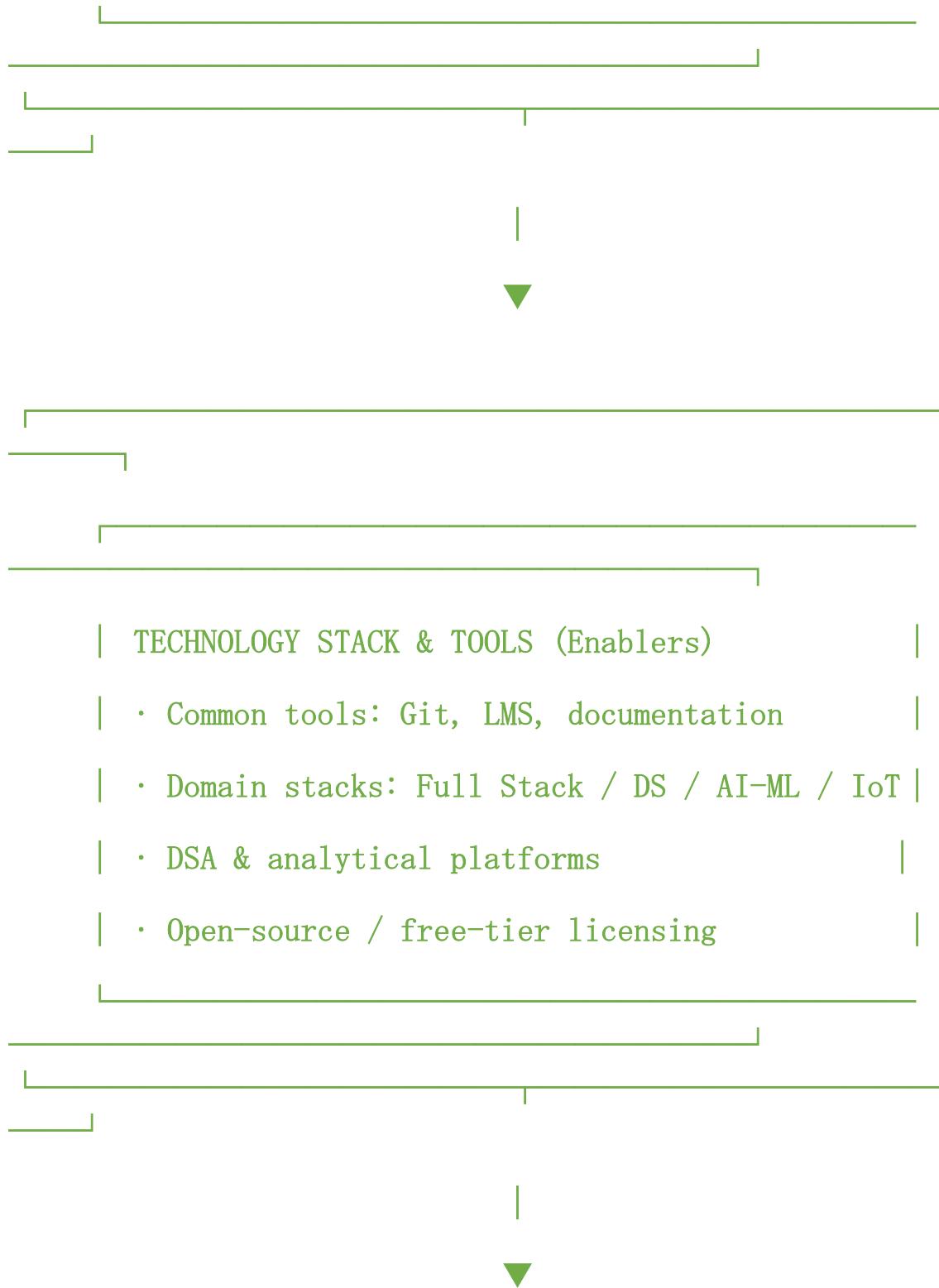


END – Total Program Effort

Complete and Integrated Flow Chart

Below's a **complete and integrated flow Chart** for the **IIMSTC Industry-Aligned Internship Program 2026**, combining all sections: **Assessment, Technology Stack, Project Workload, Certification & Compliance**.





WORKLOAD ALLOCATION FRAMEWORK

- Total program effort: ~450-465 hours
- Average weekly engagement: 20-24 hrs
- Balanced academic + project workload

PHASE 1: TRAINING + MINI-PROJECTS

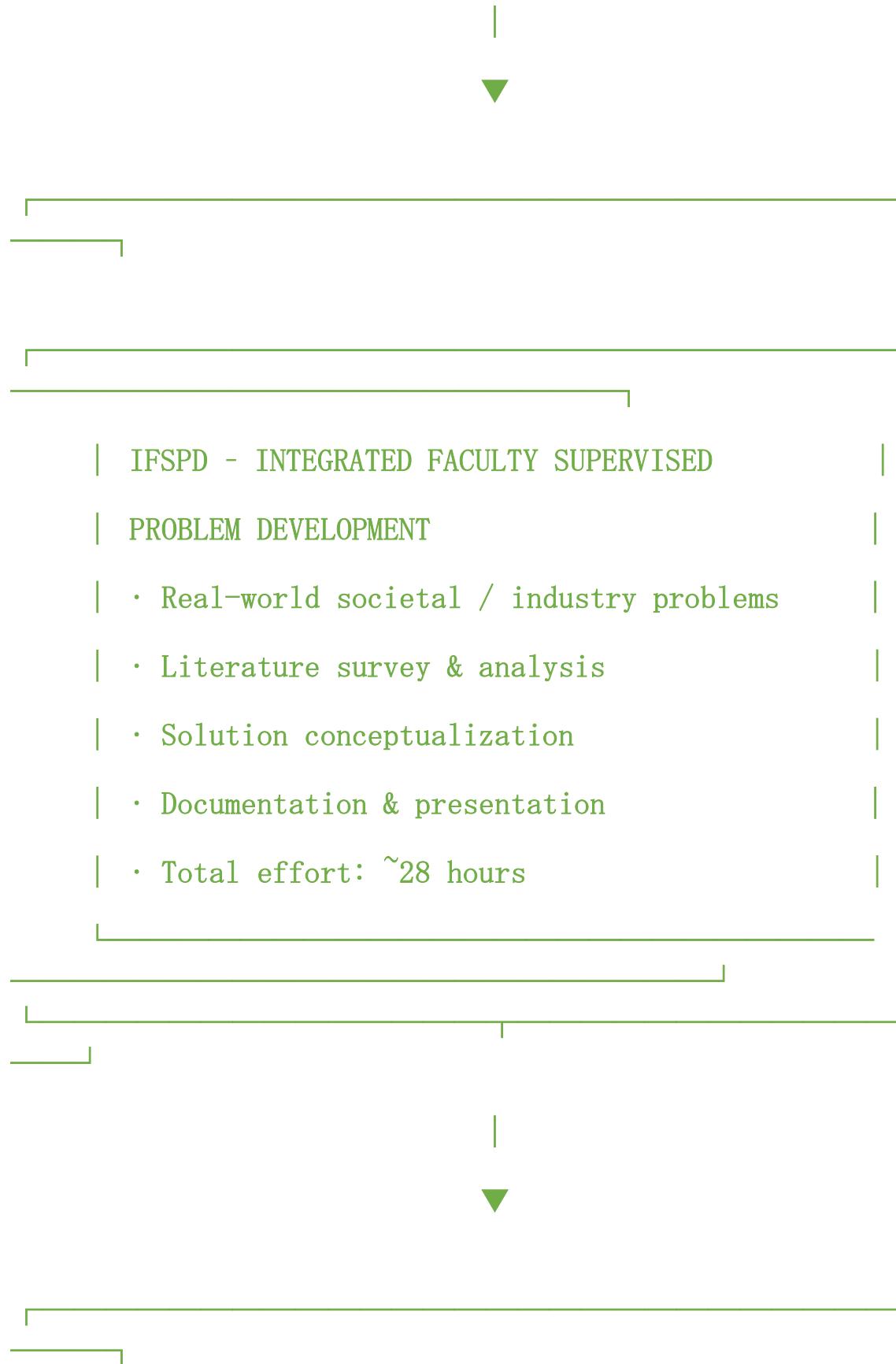
- Domain training + DSA

- 1 mini-project per week
- ~15 hours per mini-project
- Applied learning + documentation



PHASE 2: MAIN INDUSTRY PROJECT

- Domain-aligned industry / research problem
- Problem analysis & system design
- Core implementation & testing
- Documentation & final evaluation
- Total effort: ~200 hours



WEEKLY WORKLOAD DISTRIBUTION

- Phase 1: 18-22 hrs/week
- Phase 2: 20-24 hrs/week
- Continuous engagement monitoring



CERTIFICATION & COMPLIANCE

- Attendance & participation criteria
- Completion of mini & main projects
- IFSPD completion
- Institutional endorsement
- Academic & regulatory compliance



Student Conduct, Attendance & Reporting Guidelines

Student Access & Session Parameters

- Attendance must be recorded **daily** for all sessions, including **skill training and industry training**.
- Mandatory criteria for each session include:
 - **Punctuality**
 - **Attentiveness & active participation**
 - **Formal dress code**
 - **Well-mannered behavior**
- **Latecomers** will not be allowed to attend sessions.
- **Absences** require **written prior permission** from the Director of Academics.
 - The Director's decision is **final**.
 - **Only the Chairman** may oversee these decisions.

Coordination & Class Setup

- **Tech/Admin Coordinator** manages scheduling of **soft skills, communication skills, and other sessions**.
- A **common timetable** is prepared in consultation with resource persons.
- Topics for all sessions are **issued by the respective resource persons**.

Communication Protocols

- Students or parents **cannot directly contact trainers or council officers** via personal calls or emails without prior approval from the Tech/Admin Coordinator.
- **Tech/Admin Coordinator** must seek prior permission from trainers/mentors for any official communication.
- Students are permitted:
 - **Up to 4 phone calls/week** to the Tech/Admin Coordinator
 - **Up to 2 emails/week** to examination@iimstc.com
- **Personal emails or WhatsApp** are **strictly prohibited** for official communication.

Post-Session Reporting

- After each session, **Tech/Admin Coordinator** prepares a **session summary** and emails it to:
 - directoracademic@iimstc.com
 - coordinator@iimstc.com
 - chairman@iimstc.com
- The **Quality Assurance Department** monitors compliance internally.

Student Independence & NDA Compliance

- Students must **perform tasks independently**, without external expert help (technical personnel, professors, relatives, senior students, etc.).
- Use of **outside assistance** violates NDA terms.
- Tech/Admin Coordinator ensures **vigilance against any external aid**.
- All project or administrative information must be communicated **in writing**, with **CC to all relevant officials**.

Monthly Reporting & Feedback

- Students submit **Format-7 AICTE feedback forms** monthly to:
 - Dr. Mukharjee – principal@iimstc.com
 - Chairman – chairman@iimstc.com
- Strictly **confidential**, no other email IDs are permitted.
- Monthly reporting ensures **quality monitoring** throughout the internship.

Student Takeaways & Program Benefits

Students will gain:

- **High-level understanding** of the program structure and benefits
- Exposure to **communication, soft skills, and aptitude development**
- Alignment with **AICTE guidelines**

- Knowledge of **phased learning approach**
- **Project experience** relevant to industry and applied research
- **Outcomes:**
 - Valid certification by IIMSTC, ECI, and Skill India
 - Membership in **ECI** and associated benefits
 - Scholarship opportunities for Indian students (IFSPD component)

Communication & Reporting Standards

- Students are included in **private batch pool WhatsApp groups** for official announcements only.
- Messages must maintain **formal and professional language**; avoid colloquial phrases such as "Hi Guys".
- Students must maintain **daily activity logs** via VTU Portal (Internship Journey) for all work hours.

Flow Chart



[Daily Reporting via VTU Portal]

Format 6: Supervisor Evaluation of Intern's Performance

Student Name: _____ **Date:** _____
Work Supervisor: _____ **Title:** _____
Company/Organization: _____
Internship Address: _____
Dates of Internship: From _____ To _____

Evaluation Parameters Matrix

Parameters / Behaviors	Needs Improvement	Satisfactory	Good	Excellent
Performs in a dependable manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooperates with co-workers and supervisors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shows interest in work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learns quickly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shows initiative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Produces high-quality work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accepts responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accepts criticism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates organizational skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses technical knowledge and expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shows good judgment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates creativity/originality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyzes problems effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is self-reliant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicates well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Writes effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has a professional attitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gives a professional appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is punctual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameters / Behaviors	Needs Improvement	Satisfactory	Good	Excellent
Uses time effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IIMSTC Student Training & Internship Guidelines

1. Attendance and Punctuality

- Attendance must be maintained for all sessions, including skill training and industry training.
- Mandatory requirements for students:
 - Punctuality
 - Attentiveness
 - Active participation
 - Proper dress code
 - Well-mannered behavior
- Documentation of attendance and behavior is required daily.
- Latecomers are not allowed to attend the session.
- Absence Procedure:
 - Students must obtain written leave permission in advance from the Director of Academics.
 - The Director of Academics' decision on leave matters is final.
- Only the Chairman is permitted to oversee decisions of the Director of Academics.

2. Class Coordination

- Coordinate setup of new classes for soft skills and communication skills.
- Timetables are to be prepared in consultation with resource persons.
- Sessions are common for all students across projects; topics are issued by resource persons.

3. Communication Protocol

- Students and parents cannot contact trainers or officers directly via personal phone or email.
- All communications must go through the Tech/Admin Coordinator, who will seek prior permission if needed.
- Students may:
 - Speak to Tech/Admin Coordinator via phone up to 4 times per week
 - Send emails to examination@iimstc.com, max 2 emails per week
- Official communication must use official IIMSTC emails; personal emails or WhatsApp are not permitted.

4. Training Documentation

- After every session, the Tech/Admin Coordinator must prepare a summary report.
- Email the report to:
 - directoracademic@iimstc.com
 - coordinator@iimstc.com

- CC: chairman@iimstc.com
- Quality Assurance Department will handle internal follow-ups.

5. Technical Support and NDA Compliance

- Students must use their own knowledge and skills; Tech/Admin Coordinator may only provide guidance.
- Use of external experts (professors, professionals, relatives, senior students, etc.) is prohibited per NDA.
- Tech/Admin Coordinator must ensure vigilance regarding unauthorized external assistance.

6. Administrative Reporting

- All project administration and academic details must be communicated in writing with CC to all officials.
- WhatsApp messages are not allowed for official communication.

7. Monthly Reporting

- Students must submit Format-7 (AICTE Student Feedback on Internship) monthly to:
 - principal@iimstc.com
 - CC: chairman@iimstc.com
- This is highly confidential and only sent to the above two email addresses.
- Monthly quality checks are required, despite Format-7 being designed for end-of-internship reporting.

8. Student Learning Outcomes

Students should gain:

- High-level understanding of the program and its benefits.
- Knowledge about:
 - Program structure and phases
 - Communication skills, soft skills, and aptitude training
 - AICTE alignment
 - Projects and outcomes
- Benefits include:
 - Certification by IIMSTC, ECI, and Skill India
 - Membership of ECI
 - Scholarships for Indian students (IFSPD)

9. Special Notes

- Students are included in the private batch pool WhatsApp group for official broadcasts only.
- All messages must maintain formal and professional language; avoid casual greetings like “Hi” or “Guys.”
- Students are required to maintain daily reporting of activities via VTU portal (Internship Journey

Board of Governors, Educators and Internship Delivery

The **Board of Governors, Internship Delivery Management, and Educators** at IIMSTC ensure academic integrity, institutional accountability, and operational efficiency. The Board provides strategic oversight, coordinators manage daily internship operations, and faculty mentors deliver domain-specific training and project guidance. This integrated framework guarantees quality mentorship, adherence to program guidelines, and measurable student learning outcomes aligned with industry standards. The following is a bird's eye view of the profile of the **Board of Governors, Educators and Internship Delivery Management of IIMSTC**

Board of Governors, Educators & Internship Management Delivery Profile Matrix

Name	Role / Designation	Domain / Area	Qualifications & Certifications	Responsibilities	Accountability / Reporting
Prof. Dr. Sreedhar Saraswathy	Hon'ble Chairman	Academic & Institutional Oversight	Neuroscientist, - MBA(IIM-A), MS, PhD, Edinburgh	Strategic guidance, governance oversight, academic integrity, institutional accountability	Reports to IIMSTC board; oversight of all programs
Prof. Dr. D. Mukherjee	Principal Secretary to Chairman	Program Operations Liaison	M.Com., M. A. (Eco), MFM, MBA, LL.B, FCMA(India), FCS(India), FA(MD), CPFA(UK), FCMA(NG), FAIA(UK), FCFA(Canada), CMA(USA), Post ACMA/FCMA Adv, Dip, MACC(ICMAI) ACIM(UK)FIPA(Aus), FCMI(UK) ,PhD (Finance), D. Litt.((Mngmt), PhD (Law), LL.D(Human Trafficking & Human Rights Laws & CSR Modelling) Former Registrar & Vice Chancellor and Independent	Align daily operations among stakeholders	Reports to Chairman

Name	Role / Designation	Domain / Area	Qualifications & Certifications	Responsibilities	Accountability / Reporting
Dr. Deepak Palaksha	Sr. Mentor & Head, Technology Division	AI / Technical Supervision	Director, Simplex Infrastructure Ltd	Daily student stand-ups, technical guidance	Reports to Director & Chairman
Dr. Padma	Academic Director	Internship Academic Coordination	MS, PhD (AI) MEd, MPhil, PhD	Coordination of senior members for internship programs	Reports to Chairman
Dr. Sangheeth Vargheese	President, IFSPD Europe	IFSPD Programs	-	Oversight of IFSPD program execution	Reports to Chairman
Mr. Pavan	Head, Technical Training	Technical Curriculum	MBA	Oversight of technical training delivery	Reports to Chairman
Ms. Hithaishi	Admin Coordinator	Discipline & Reporting	-	General discipline, daily reporting, student compliance	Reports to Program Director
Ms. Disha	Coordinator	Attendance & Compliance	-	Daily attendance, tracking of student compliance	Reports to Admin Coordinator
Sumukh Jadhav	Faculty Mentor	Full Stack Dev, Software Testing, DSA	BE (IS), Certifications in Software QA, DevOps, SRE, Hackerrank RTPS	Training delivery, DSA sessions, mentoring mini & main projects, project reviews	Reports to Program Coordinators
Suhas Gajanana	Faculty Mentor	AI, ML & Data Science	BE (AI/ML), IBM, Stanford, Duke, Google, DeepLearning.AI certifications	AI/ML & Data Science training, analytical modeling guidance,	Reports to Program Coordinators

Name	Role / Designation	Domain / Area	Qualifications & Certifications	Responsibilities	Accountability / Reporting
Akash DS	Program Coordinator	Internship Program Operations	BE (CSE), Experience in Training & Academic Ops	project mentorship Batch management, scheduling, onboarding, documentation, compliance	Reports to Director & Chairman
Dhruthi D M	Program Coordinator	Internship Program Operations	BE (Engineering), Academic Operations	Batch management, student coordination, reporting	Reports to Director & Chairman
Manu Krishna	Substitute / Continuity Coordinator	Backup Operations	-	Support during primary coordinator absence, continuity of program execution	Reports to Program Coordinators
Dr. Benny	Mentor	IFSPD	PhD (Pharmacy)	Guidance & mentoring for IFSPD research projects	Reports to Program Director
Dr. Nalini	Mentor	IFSPD	PhD (Biotechnology)	Guidance & mentoring for IFSPD projects	Reports to Program Director
Dr. Raghavendra	Chairman, Bio Pharma	IFSPD Mentor	MBBS, MS	Mentoring IFSPD projects	Reports to Program Director
Dr. Bhandari	Mentor	IFSPD	Pro-Chancellor, NITTE	Mentoring IFSPD projects	Reports to Program Director
Dr. Vijayakumar	Mentor	IFSPD	Pro-Chancellor, Yenepoya	Mentoring IFSPD projects	Reports to Program Director
Mr. Kuben	Mentor	IFSPD	MBA, CEO IIMSTC South Africa	Mentoring IFSPD projects	Reports to Program Director
Mr. Aswath & Dr. Jerry	Mentor	Technical	MTech	Technical mentorship for projects	Reports to Program Director

Name	Role / Designation	Domain / Area	Qualifications & Certifications	Responsibilities	Accountability / Reporting
Mr. Juno	Mentor	Technical (South Korea)	-	Technical mentorship	Reports to Program Director
Mr. Marcus	Mentor	Technical (Norway)	CTO	Technical mentorship	Reports to Program Director
Dr. Venkitaramana	Mentor	Technical	Chairman, Goyange Group	Technical guidance	Reports to Program Director
Dr. Giri	Mentor	University Affairs	MTech, PhD	Mentorship & academic coordination	Reports to Program Director
Mr. Sajin K Jose	Mentor	Technical	MTech	Mentorship & project guidance	Reports to Program Director
Ms. Teena Mathew	Mentor	Technical	MTech	Mentorship & project guidance	Reports to Program Director
Mr. Cherian Vargheese	Mentor	Technical	CTO, DELL	Technical mentorship	Reports to Program Director

Mentorship & Supervision Model

- **Each batch** supervised by **2 faculty mentors** with domain expertise.
- Program coordinators ensure **daily operational continuity**.
- Faculty-to-student ratio maintained for **effective guidance**.
- Regular **reviews & evaluations** conducted to track progress and quality.

Accountability & Quality Assurance

- All faculty, mentors, and coordinators operate **under approved program guidelines**.
- Mentorship and delivery are **subject to periodic review**.
- **Institutional governance ensures transparency, consistency, and credibility**.

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