



## Aavishkaara School for Applied Professional Training



# CREATING **THE** CREATORS



Course Brochure & Competency Matrix





# CREATING THE CREATORS

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## AAVISHKAARA SCHOOL FOR APPLIED PROFESSIONAL TRAINING

We at **AS APT**, recognising the need for practicum that is mandatory for professionals to accrue before stepping into the industry, have made the first move into our academic venture with **AAVISHKAARA SCHOOL FOR APPLIED PROFESSIONAL TRAINING**. We believe our facilities will be beneficial to you, **THE FUTURE PROFESSIONAL**.

An analysis conducted by the Anderson Economic Group (AEG), commissioned by the Project Management Institute (PMI) (a global non-profit professional organisation for project management), Pennsylvania, United States, observed that the project management profession will outperform the total global job growth over the next decade, thereby creating millions of new positions in India and across the world offering highly-competitive pay. As per PMI's report titled "Project Management Job Growth and Talent Gap 2017–2027", by the year 2027, the project management labour force is expected to increase by 33 percent across 11 countries.

The figures predict that nearly 22 million new jobs will be created during the next decade – and by 2027, employers will need nearly 88 million individuals working in project management-oriented roles.

The study expects that within India, over 7 million new project management positions will open up over the next decade in project-oriented industries – the largest growth rate (48 percent) among the 11 nations analysed as part of the study. Additionally, by 2027, India will have the second-largest number of project management-oriented jobs in the world (22 million), only behind China (46 million).



## On Professional and Management Skills

As the project management profession continues to show considerable growth, the global shortage of project talent will present exceptional opportunities for qualified professionals to begin and advance their careers. Executives will face increased financial and human resource risks due to this talent gap. Organisations will find themselves competing for this critical talent; so, it's essential that they implement the best practices, since finding and retaining qualified project personnel can positively impact an organisation's strategy and bottom line.

Mark A Langley, CEO and President,

PMI Courtesy:

<https://proventuresindia.com/blog/pmjobs/>

In the 11 countries analysed, 70 percent of the 22 million new project management jobs from 2017–2027 will emerge from the manufacturing, construction, Information Services, and Publishing industries.

Across the countries analysed, the highest job growth in the next decade is expected in the manufacturing and construction industry, with more than 9.7 million new roles. Information services and publishing will account for the second-largest increase, with nearly 5.5 million new roles; finance and insurance will create more than 4.6 million roles, and management and professional services will see an addition of more than 1.7 million.

Given the implications of these statistics, AS APT is introducing a course curriculum for Civil Engineering graduates to make them professionally competent and technically conversant.

## The questions you may ask !!!

### Qn 1. Why the Aavishkaara School?

Situation demands. All IITs put together graduate barely 500–600 Civil Engineers every year and it is estimated that approximately 10,000 Civil Engineers are created in India every year. Civil Engineers other than those hailing from institutions such as IITs lack the professional skills to cope with the growing industrial needs, not only in construction matters but also in project planning, quantity surveying, project documentation such as tender processes, and contract documents, etc. We seek to provide training aimed at the improvement of these skills.

### Qn 2. What is the right place of duty for a qualified Civil Engineer?

As per a 2016 report by the job skills credentialing establishment Aspire Minds, more than 82 percent of engineering graduates in India are NOT EMPLOYABLE. Most of them are forced to accept jobs in non-engineering fields or remain unemployed. From our survey, we found that just over 30% of the graduated engineers are interested in pursuing Civil Engineering related careers or studies for their future. We seek to mould you into professionals by providing an environment for applying the knowledge that you have acquired throughout your academic journey. Through us, you can master the accurate way of executing a project effectively and efficiently. We aim to provide you the right direction towards career-oriented goals that are at par with your engineering counterparts.

### Qn 3. How do you intend to create better Civil Engineers?

Civil Engineering refers to the design and fabrication of structures for improving the way we live and work and for enabling rapid, safe, and high-volume transportation. Examples include building dams, roads, railways, bridges, canals, skyscrapers, and factories. It is the parent of all engineering. Modern Civil Engineering often focuses on aesthetic considerations and environmental impacts. We train you to achieve unique goals and objectives within the given constraints using project management tools such as work breakdown structures and resource allocation.

### Qn 4. How is AS APT different from other institutes?

Apart from the passion and innovation we seek to bring to academics, we believe the following makes us stand out from other colleges and institutions:-

- ▶ Specialist veteran faculties (guides) with a minimum of 30- 40 years of on-field experience to steer you towards a career as future creators.
- ▶ Smart air-conditioned classrooms.
- ▶ Onsite training at live projects such as the construction of metro, roads, buildings, bridges, culverts, dams, etc.
- ▶ Placements support in renowned construction companies in India and abroad.
- ▶ Psychological, Motivational, mind development, mind mastery, and meditation classes for candidates.
- ▶ Industry-Oriented and internationally updated syllabus.
- ▶ STED Council Authorised Training Centre.

### Qn 5. What is your aim?

A square peg in the square hole and a round peg in the round hole (Ensuring the appointment of the right person for the right job).

**Employer Perspective:** Several construction companies in India and abroad hire Civil Engineers according to their requirements, both on-site and off-site. However, such companies face staffing issues with employees not being equipped with the appropriate knowledge regarding the job specifications and its requirements. Furthermore, due to economic and time constraints, the company allows the available unequipped resource to join and continue, thereby compromising the profile requirements. They continue searching for the apt candidate suitable for their profile requirements and consistently invest in their training and upliftment. The engineer working in the wrong profile ends up suffering from immense stress and work pressure, which ultimately disturbs the entire hierarchy of the company and automatically decreases the overall organisational productivity.

**Employee Perspective:** Civil Engineers available in the market currently are those who end up doing a job that they may not be aptly suited for or fully interested in. Engineers with such shortcomings in their work profiles end up working with frustration, immense stress, and work pressure that eventually disturbs the job environment and also the desire to work with zeal and enthusiasm. A qualified person will always enjoy doing work that they are interested in and which, in turn, increases the productivity of the employee as well as the organisation.

**AS APT** aims to promote and allot the right place for the right engineer by providing them extensive training as per their aptitude and interests, which will be beneficial to both the employee and the employer. As our acronym suggests, we intend to research a candidate's aptitude, train and place them in a position that we find **AS APT** (as most suitable) for their future.

### Qn 6. What does your LOGO mean?

Our LOGO contains our acronym **AS APT** and our motto. The silhouette wearing a necktie denotes a graduate emerging from his academics and rising to the sky and shining like a star. The colour blue indicates the academic aspect of our institute and the orange colour indicates a career-oriented future leader and a prospering professional. Our motto "Creating the Creators" is a further testament to our aim to create efficient professionals

Join Aavishkaara, Be an Aavishkaarak, Be the Maestro Creator

# 01. Course Description

Course name: **Civil Employability & Construction Orientation**

Course Code: ASENGC-01

Course Duration: 01 Month (100 Hours)

Course name: **Civil Employability & Construction Orientation(Online)**

Course Code: ASENGC-01-A

Course Duration: 02 Month (100 Hours)

Course name: **Certified Course in Construction Office Management**

Course Code: ASENGC-02

Course Duration: 03 Months (300 Hours)

Course name: **Certified Course in Construction Site Management**

Course Code: ASENGC-03

Course Duration: 03 Months (300 Hours)

Course name: **Diploma in Construction Engineering**

Course Code: ASENGC-04

Course Duration: 06 Months (600 Hours)

# 02. Course Development

The course we offer is designed within the institution and curated to be the most suitable for engineering candidates entering the constantly growing industry of construction. This training ensures that you excel as a professional who possesses the skills and knowledge that are benchmarked within international engineering practices. In achieving our goal of elevating students with merely pedagogical knowledge to professionals with practical experience, we further acknowledge the fact that motivation and inspiration are the primary necessities an engineer requires to flourish and become a success.

Each course **AS APT** offers will upgrade the knowledge of the candidates, enhance their skills, sharpen their aptitude, and brighten their future. On the successful completion of the course, the candidates will be placed before a certifying agency for examining their skill and awarding the credential certificates

## 03. Certifications offered by Professional Bodies

### Certificate Issued by the Scientific and Technical Development Council (STED Council)

The STED Council is an autonomous body and a national-level educational organisation registered since 2005 under the Government of Kerala and an Indian NGO under District Central, National Capital Territory (Govt. of N.C.T), New Delhi. It is certified by the Government of India and registered under the department of labour, Delhi, and recognised by the Ministry of MSME, Government of India, New Delhi. Registered under the NGO Partnership System, Planning Commission (Govt. of India). Regd. under TM Act-1999 Section 23(2) Rule 62(1) Class 41 by the Ministry of Commerce & Industry Department of Industrial Policy and Promotion Controller General Patents Designs and TM No. 1491711 dated 2006 under Govt. of India and also accredited as Facilitation Centre under NIELIT (formerly DOEACC) Dept. of Electronics and Information Technology (DeitY) Ministry of Communications and Information Technology, Government of India



### STED CERTIFICATION

Students who pass the final examination with 40% marks and over will be eligible to receive ISO 9001: 2015 certified course completion merit certificates with a mark list that is internationally designed with the high-security press by using imported papers and containing several security features such as a unique identification number to check the authentication, dynamic QR bar code, guilloche pattern/void pantograph, and a special kind of hologram with a punched stamp golden foil to avoid duplication and tampering.

The merit certificates issued by the STED COUNCIL are accredited and recognised by globally renowned consultants, institutions and quality management, and international accreditation organisations, thus making our certificate valid across the world and creating extensive opportunities for every graduate from our institute in the global job market. Our course/merit certificate is registered under the C.R Act 1957, MHRD, Department of Higher Education, Government of India, and under the TM Registry, Chennai. Employment exchange registration all over India on behalf of the STED COUNCIL certificate.

The certificate holder can apply for public or private sector jobs in India and abroad. Such certification will boost the chances of an already qualified/employed person and improve their candidature for better private/government jobs and skill-based jobs. Our certificates have received high credibility among employers in India and abroad, especially in the Middle East and other parts of the world. All certificates issued by the STED COUNCIL can be attested by the Ministry of External Affairs, Government of India, and by the embassies of almost all countries.

## 04. Eligibility Requirements

- ▶ Civil Engineering graduates (B Tech/ BE) under any recognised University.
- ▶ 3 year Civil Engineering diploma under any recognised institute

## 05. Course Syllabus

<b>OFFICE ENGINEERING MODULES</b>	
<b>MODULE 1</b>	Quantity Surveying
<b>MODULE 2</b>	Planning and Coordination
<b>MODULE 3</b>	Contracts Management
<b>MODULE 4</b>	Cost Control and Budget
<b>MODULE 5</b>	Estimation, Rate Analysis, BOQ & Tendering
<b>MODULE 6</b>	Resource Management and Inventory Control
<b>MODULE 7</b>	Statutory & Regulatory Compliance
<b>SITE ENGINEERING MODULES</b>	
<b>MODULE 8</b>	Design Coordination and Document Control
<b>MODULE 9</b>	Quality Assurance and Quality Control
<b>MODULE 10</b>	Land Survey
<b>MODULE 11</b>	Safety, Health, and Environment Management
<b>MODULE 12</b>	Work Execution and Project Management
<b>MODULE 13</b>	Work Payment Methodology - Billing
<b>MODULE 14</b>	Disputes Management
<b>SUPPORT MODULES</b>	
<b>MODULE 15</b>	Book Keeping and Accountancy
<b>MODULE 16</b>	Asset Valuation
<b>PLANNING &amp; SCHEDULING SOFTWARE MODULES</b>	
<b>MODULE 17</b>	MS Excel
<b>MODULE 18</b>	MS Project
<b>MODULE 19</b>	Primavera
<b>MODULE 20</b>	Candy
<b>ARCHITECTURAL SOFTWARE MODULES</b>	
<b>MODULE 21</b>	Orientation in Auto CADD, Revit, 3Ds Max, ETABS, etc
<b>SUBSIDIARY MODULES</b>	
<b>MODULE 22</b>	Tax Compliance including GST
<b>MODULE 23</b>	Life Skill/ Soft Skill/ Personality Development Classes
<b>MODULE 24</b>	Group Discussions and Mock Interviews



## 06. Competency Matrix

### Module 1                      Quantity Surveying

**End State Vision:** This module is designed to develop the ability of the learner to understand the requirements of construction projects, work breakdown, and comparative designing of structures, bill of quantities, units and measurements, brief and detailed specifications, standard data and observed data, standards and accepted practices of QS and evaluation, preparation of measurement sheet/ book, quantity take-off from drawings, collection of market-rate, collection of resources, turnouts, rate analysis, estimates, charts, value engineering, etc.

### Module 2                      Planning and Coordination

**End State Vision:** This module is designed to develop the ability of the learner to understand the requirements of construction planning, schedule preparation such as WBS, calendars, working time, types and properties of activities, fixing durations based on their outputs, relations, and linking, resource data, resource properties, resource assignment, resource levelling, milestones, PERT and Critical Path Method, network diagrams, updating progress, decision making, etc.

### Module 3                      Contracts Management

**End State Vision:** This module is designed to develop the ability of the learner to comprehend the fundamentals of contracts management, such as understanding the various types of construction contracts, concepts, and conditions of contracts, strategies to be adopted to benefits best from the contracts, contractual procedures such as serving notices, particulars, claims, follow-ups, correspondences, and documentation to ensure that contractual entitlements such as the extension of time, prolongation costs, variations such as extra items, added/alterer/allier/substituted items, excess work change of scope, price adjustments and price escalations, eligible payments, additional claims, and interests.

### Module 4                      Cost Control and Budget

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of cost control of construction projects, including BOQ, rate analysis, unit costs, preparation of budgets constituted by variable costs such as materials, machinery, and manpower along with time-related/fixed costs such as overheads, salaries, infrastructure, taxes, finance charges, etc. and monitoring the day to day costs incurred to understand the cost overruns on a real-time basis to adopt corrective actions and ensure the completion of the project within the limits of the budget.

### Module 5                      Estimation, Rate Analysis, BOQ & Tendering

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of making and quoting a tender for construction projects, different types of tenders and contracts, prequalification and eligibility, earnest money deposit and performance security, instruction to tenderers, general conditions of contract, special conditions of contract, international standards, pre-bid meetings, standards and accepted practices, tender drawings, bill of quantities, site visits and market-rate collection of resources, resource mapping, construction methodology, equipment costing, overhead calculation, and profits and taxes, etc.

### **Module 6 Resource Management and Inventory Control**

**End State Vision:** : This module is designed to develop the ability of the learner to understand the fundamentals of budget provisions, procurement, purchase, rental, hiring, lead time, loading, unloading and transportation, quality specifications, inviting bids, making comparative statements, Weightages and track record, prequalification, client feedbacks, negotiations, revised comparative statements, decision making and fixing, preparation and issue of work order, preparation and issue of purchase order, preparation of agreements, insurance, scope of work, liquidity damages, warranty, guarantee, defects liability period, coding, inventory analysis, inventory turnover, installation of inventory control, tracking and management systems, storage of resources, warehouse layout and operation, Requisition for Resources, Transportation and Distribution, Minimum stock, Perishable Goods, Checking the Quantity & Quality of Goods, Goods Receipt Note, Damages, Return of Goods, Stocking, Stock updating & Stock checking etc.

### **Module 7 Statutory & Regulatory Compliance**

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of Rules of Land viz., NBC, KMBR, KPBR, KSPCB, KSEB, Aviation, etc.

### **Module 8 Design Coordination and Document Control**

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of document control, controlled processes and practices for the creation, reviewing, modification, issuance, distribution, and accessibility of documents, ISO 9001:2015, various domain interactions involved in the construction management viz., architectural, structural, electrical, mechanical, plumbing, fire, and rescue, etc.

### **Module 9 Quality Assurance and Quality Control**

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of QA/QC, the combination of quality assurance, the process or set of processes used to measure and assure the quality of a product, and quality controls. Furthermore, this module also extensively discusses the process of ensuring products and services meet consumer expectations, industry standards, Indian and international codes, field and laboratory tests and frequency of testing, and non-destructible testing, etc.

### **Module 10 Land Survey**

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of the technique, profession, and science of accurately determining the terrestrial or three-dimensional position of points and the distances and angles between them that is commonly practiced by licensed surveyors and members of various building professions. These points are usually on the surface of the Earth, and they are often used to establish land maps and boundaries for ownership, locations (building corners and the surface location of subsurface features), or other government-mandated or civil law purposes (property sales).

### **Module 11 Safety, Health, and Environment Management**

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of the coordination of all health and safety aspects of construction projects, draft health and safety plans, verify any existing or proposed plans, comply with the relevant HSE construction regulations and requirements, ensure the health and safety of workers, decrease accident risks, improve onsite productivity, gain expert advice and recommendations for future safety maintenance, create a long-term safety culture, and ensure full compliance.

## Module 12 Work Execution and Project Management

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of the coordination of resources, equipment, meetings, and information and to enhance their knowledge regarding organising projects to ensure their completion in a punctual, within budget, and quality-constraints adhering manner.

## Module 13 Work Payment Methodology – Billing

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of creating progress bills or interim payment certificates for the work undertaken.

## Module 14 Disputes Management

**End State Vision:** This module is designed to develop the ability of the learner to understand the fundamentals of different types of contracts and disputes that are a common feature of the construction sector and can potentially have far-reaching impacts on the project in the form of costs, delayed completion, and opportunity costs. It will also shed light on dispute resolution techniques such as negotiation, non-adjudicatory third party intervention, adjudicatory dispute resolution, arbitration, dispute boards, expert determination, litigation, etc.

## Module 15-16 Support Modules

**End State Vision:** On research about the requirement of the current construction industry, it has been found that some additional modules other than the above-mentioned main modules are to be taught to qualified future engineers to make them industry-ready in every aspect. **Book Keeping and Accounting & Asset Valuation** are necessary for construction to know about the documentation and other financial management systems in vogue.

## Module 17- 21 Software Knowledge

**End State Vision:** Though the management holds a major part in a construction project, the use of standard software and support systems is also necessary. Both have to go hand in hand so that the construction will go smoothly as per plan and schedule. No abiding of the timelines will end up in overspending and failures. **Architectural Software** is not given much importance in the designed course as the ITI Civil Draughtsman is the actual person who has to work on designing.

## Module 22- 24 Other Subsidiary Modules

**End State Vision:** After the course, the student has to enter a new world where he/she will be facing various types of socio-intelligence issues. They have never been into a working atmosphere where excuses are seldom heard and peer pressure will be more than what they plan. So our experts have seen many incidents where the engineer can't stand the pressure of the industry and exit. So we plan **Personality Development & Soft Skill** Classes as a part of the overall development of the Engineer. **Mock Interviews and Group Discussions** are also conducted

**Our Vision: Creating the Creators**

**Our Mission: Experience the Experienced**



**Aavishkaara School for Applied Professional Training**



**LOCATION**