

A. P. Shah Institute of Technology, Thane

Siemens Excellence Centre In Association with IFS Academy, Pune

Background:

The Document outlines the details of the proposed Excellence Centre in association with A. P. Shah Institute of Technology, Thane for providing trainings leading to skills development under the Siemens set of specialized offerings.

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1 The Rationale & Intent

Close to 2.5 Million students graduate from various professional, technical, vocational and general academic streams every year. However, the reality is that only a very small percentage of these students are readily employable.

While these resources may have good education, most lack industry specific skills. In order to bridge this gap between the academia and the industry and to ensure ready deployment in regular work streams, structured industry specific training is necessary. Additionally, the academic curricula and the education methodology too require an overhaul to meet this business challenge. The education system in most countries is rigid with little scope for change without large-scale policy amendments...often a daunting task from a political perspective. It is for the industry to arrive at alternate solutions that will complement the existing education system.

The common goals for industry-sponsored initiatives are to ensure building a workforce that has skills required by the industry and to shorten the time to deploy. One way to achieve this is to build specific courses and proactively train potential candidates on topics developed by the industry and for the industry. However, these require the concurrence of the government and educational authorities and hence ensuring a buy-in from them is mandatory.

A number of organizations from the private sector have embarked on bridging the skills gap. **Siemens** has emerged as a leading inventor, innovator and implementer of leading-edge technology enabled solutions operating in the core business segments of Industry.

IFS in association with Siemens wishes to leverage the opportunity for extending the unique skills building framework to Government Engineering College, Bhavnagar.

The objective of this note is to facilitate further discussions for seeking a go-ahead for setting up Siemens Excellence Centre at A. P. Shah Institute of Technology, Thane and arrive at a strategy & plan for execution.



2 IFS Academy

IFS Academy is Center of Excellence in CAD/CAM/CAE involved in Engineering Design and CAD/CAM/CAE training. We understand that the advance of engineering and technology is a prerequisite for development. Our wide range of domain experience paired with our customized delivery strategy responds to every need by offering individual, tailor-made training and not just packaged products. Our primary focus is on Skill Development Programs for Mechanical & Civil Engineering students by arranging finishing school job oriented training programs for them. We are working on Vocational Training Programs of education through specific training programs and evolution of credit framework.

IFS Academy has signed up strategic MoU's with Product Companies for conducting world class training programs in the area of Engineering Design and CAD/CAM/CAE. IFS Academy is Autodesk Authorised Training & Certification Center for offering courses on AutoCAD Mechanical, AutoCAD Civil, AutoCAD Electrical, Revit, Inventor and 3ds Max. We have been also authorized by DASSAULT SYSTEMES & SIEMENS PLM Software as Authorised Educational Partner for providing training on CATIA V5 and NX CAD (formerly known as Unigraphics) respectively. Our sister concern company In-Finite Solutions is PTC Authorised Training Center for providing training on Creo (formerly known as Proe). We have signed up with Bentley Institute as "Authorised Bentley Institute Academic Training Centre" and "Bentley Institute Academic Service Partner" for West Region of India for providing Bentley Institute Authorised Certification Training Programs in STAAD.Pro, STAAD.Foundation, Microstation, MXROAD, ContextCapture, WaterGEMS and SewerGEMS. IFS Academy is Authorised Training Center of Integrated Environmental Solutions for providing training on IES Software. Association with these Product companies helps our students to experience international work standards. We also provide pre and post-sales technical support on PTC Creo, Dassault Systemes CATIA, Delcam and ANSYS Academic Products to Engineering Institutes.

MoU's have been signed with renowned Engineering Institutes for conducting Certified Training Programs / Courses in CAD/CAM/CAE for Mechanical and Civil Engineering students. We have conducted several certificate training programs / courses on AutoCAD, Creo (ProE), CATIA V5 & CATIA V6, NX CAD (Unigraphics), Hypermesh, ANSYS Mechanical APDL & Workbench, CFD using ANSYS ICFM CFD & Fluent in colleges. We also offer IFS Academy Career Programs and Advanced Diploma Programs in CAD/CAM/CAE to fresh Mechanical / Production / Automobile / Industrial Engineering students. Our instructors are certified by these companies to deliver the training. Recently we have entered into Civil Engineering Course portfolio by signing up with Bentley Institute for arranging Bentley Institute Authorised Certificate Training Programs / Course in STAAD.Pro, STAAD.Foundation, Microstation, MXROAD, ContextCapture, WaterGEMS and SewerGEMS.

We offer various customized training programs in the field of Engineering and CAD/CAM/CAE. We have successfully delivered Corporate Training Programs on various Software Tools.

Teaching & Learning process followed is at par with the quality norms and we take dedicated efforts for placement of our students and guide them for their future career.

IFS Academy Authorised Training Center (ATC) or Franchise model is becoming very popular among new Start Up Training Centers who wish to establish themselves in Education Business.

3 Introduction to Siemens and PLM Solution

Siemens brings to India state-of-the-art technology that adds value to customers through a combination of multiple high-end technologies for complete solutions. The Group has the competence and capability to integrate all products, systems and services. It caters to Industry needs across market segments by undertaking complete projects such as Hospitals, Airports and Industrial units.

The Siemens Group in India comprises of 17 companies, providing direct employment to over 18,000 persons. Currently, the group has 21 manufacturing plants, a wide network up of Sales and Service offices across the country as well as over 500 channel partners.

Today, Siemens, with its world-class solutions plays a key role in India's quest for developing modern infrastructure.

About the PLM Solution

Siemens Product Lifecycle Management (PLM) software allows companies to manage the entire lifecycle of a product efficiently and cost-effectively, from ideation, design and manufacture, through service and disposal. Computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided engineering (CAE), product data management (PDM) and digital manufacturing converge through PLM.

PLM is unique from other enterprise software solutions because it drives top-line revenue from repeatable processes. By providing the application depth and breadth needed to digitally author, validate and manage the detailed product and process data, PLM supports continuous innovation.

The PLM market is growing faster than any other enterprise software category. Siemens PLM Software is committed to creating the solutions that customers need to stay ahead of competitors in a PLM-empowered future. The Company devotes approximately 20 percent of its annual revenues to R&D, a high percentage for the industry, because sustained R&D spending is integral to maintaining and growing value in the software.

SIEMENS

Siemens PLM Software Target Industries





Siemens PLM Software in India: Delivering Value Across Industries

SIEMENS

| AEROSPACE / DEFENSE | AUTOMOTIVE | HEAVY MACHINERY | OTHER |
|---------------------|------------|-----------------|-------|
| | | | |

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GO PLM Academic Partners Around the World

SIEMENS

11,023 GO PLM Partners Globally / 1,024,910 Students Trained/Year

| AMERICAS | EMEA | ASIA-PACIFIC |
|----------|------|--------------|
| | | |



Delivering Value Across Industries
70,000 Customers, Operating 6.5 Million Seats Across the Globe

SIEMENS

| AEROSPACE DEFENSE | AUTOMOTIVE TRANSPORT | MACHINERY & INDUSTRIAL PRODUCTS | HIGH TECH ELECTRONICS | Consumer Products. Retail & Life Sciences |
|-------------------|----------------------|---------------------------------|-----------------------|---|
| | | | | |

More than 800 education partners in India

INSTITUTE FOR AUTO PARTS AND HAND TOOLS TECHNOLOGY LUDHIANA (INDIA)
Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad

ANNA UNIVERSITY CHENNAI
PROGRESS THROUGH KNOWLEDGE

VIT UNIVERSITY
(Est. yrs 3 of UGC Act 1956)

Central Institute of Tool Design
(An ISO 9001:2000 Certified Institution)

Industrial Training Institutes

Army Institute of Technology

Aligarh College of Engineering & Technology

BIRLA INSTITUTE OF TECHNOLOGY MESRA, RANCHI

Bharati Vidyapeeth University, Pune
Directorate of Vocational Education & Training
Maharashtra State

BIRLA INSTITUTE OF TECHNOLOGY MESRA, RANCHI
भारतीय प्रौद्योगिकी संस्थान रुड़की
Indian Institute of Technology Roorkee

Bangalore Institute of Technology
Affiliated to: VISHVESHVARAIAH TECHNOLOGICAL UNIVERSITY

Government of India
Department of Atomic Energy
Raja Ramanna Centre for Advanced Technology, Indore

Indian Institute of Astrophysics

Indian Institute of Technology Madras

भारतीय प्रौद्योगिकी संस्थान दिल्ली
Indian Institute of Technology Delhi

IIT Bombay
भारतीय प्रौद्योगिकी संस्थान खडगपुर
Indian Institute of Technology Kharagpur

PEC
EXPLORE INNOVATE EXCEL

CTC
Bhubaneswar

HINDUSTAN GROUP OF INSTITUTIONS

GIPET

IIGJ
Indian Institute of Gems & Jewellery

National Institute of Technical Teachers' Training and Research (NITTR), Chandigarh

AMRITA VISHWA VIDYAPEETHAM UNIVERSITY
Established u/s 3 of UGC Act 1956



4 Products of Siemens Industry Software

- i) **Femap:** Femap is an advanced engineering simulation software program that creates finite element analysis models of complex engineering products and systems, and displays solution results. Femap can virtually model components, assemblies or systems and determine the behavioral response for a given operating environment. Using Femap's digital simulation capabilities you can Predict and improve product performance and reliability, reduce time-consuming and costly physical prototyping and testing, Evaluate different designs and materials and Optimize your designs and reduce material usage.
Femap a simulation tool, it can help to demonstrate the concepts of thermodynamics, fluid mechanics, machine and structure design. Concepts like properties of surfaces, moment of inertia can be very beautifully depicted through demonstrations to students.
- ii) **NX CAM:** Industries need software applications that offer power and capability with a low total cost of ownership. The system must be easy to deploy, learn and use, with the industry's best practices pre-configured and built in to standard processes so that less experienced users can become fully productive with less training and experienced users can maximize efficiency. Siemens has prepared NX CAM to address these issues and offers all of this in for a low total cost of ownership specifically for manufacturing engineers.
All types of machining concepts can be demonstrated. 2, 3, & 5 axis milling can be shown with the help of this software. Several suppliers to big manufacturing companies solely operate on this CAM software. It can extensively used for the project work done by the students.
- iii) **NX:** NX is a next-generation digital product development system that helps companies transform the product lifecycle. With the industry's broadest suite of integrated, fully associative CAD/CAM/CAE applications.

NX touches the full range of development processes in product design, manufacturing and simulation. NX provides a complete suite of integrated process automation tools to enable companies to capture and reuse product and process knowledge encouraging the use of corporate best practice.

NX complete suite can address each and every aspect of mechanical engineering. Design and modeling aspects incorporating intricacies of all types from large assemblies as well as smaller components. Governor, CAM, shafts, kinematics can be well explained using this software.



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- iv) **Tecnomatix – Manufacturing:** Tecnomatix Manufacturing Process Management capabilities are built on the Teamcenter foundation and provide viewing and linking between product, process, plant and resource information. Data can be managed and applied with revisions, versions, configuration, change management, and workflow throughout the enterprise. It is highly useful analysis software which can widely help in the final year of technical education. Plant design, product throughput analysis etc. can be done using this software.
- v) **Tecnomatix – Robotics:** Tecnomatix Robotics & Automation Planning provides the next generation of simulation and commissioning capabilities for complete system level engineering and validation. Every concept of robotics can be taught using this software; it can be integrated with machines. It is futuristic software addressing the automation need of today's industry. Training students the will affect the acceptance of the students in the industry.
- vi) **Teamcenter:** Teamcenter gives you a rich environment for the associative development of mechanical, electronic, software and control (electrical-interconnect) technologies, within a single source of product and process knowledge that spans all four domains. With a common data model across engineering domains and a PLM platform to work with, your development teams can retain their mechanical, electronic, software, or electrical-interconnect focus, while working together in-context to meet overall development goals.

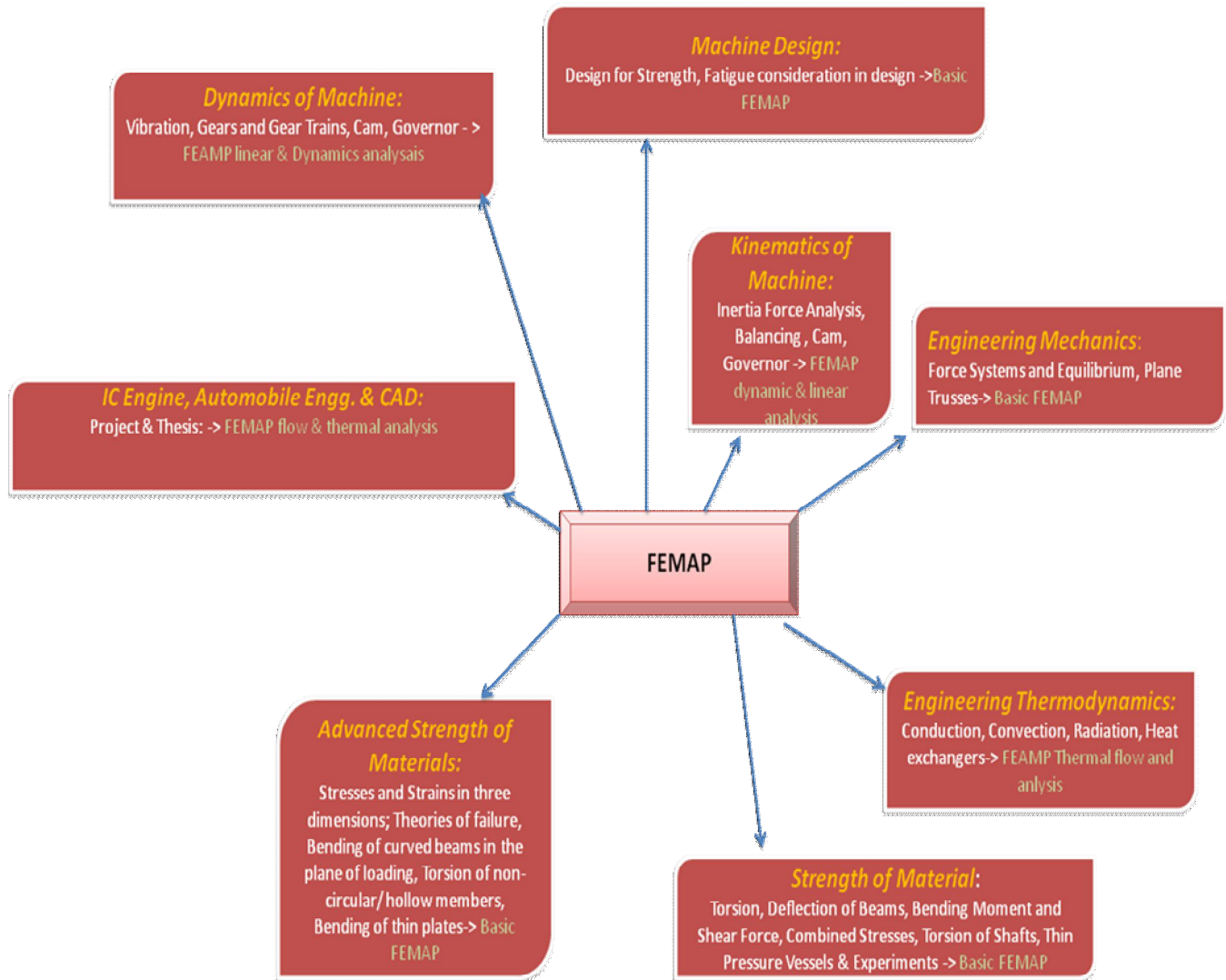
Learning of the environment Teamcenter provides would enable the students to integrate all aspects of engineering to produce results of products whatever is required by the users.



5 Delivering Value across the entire product lifecycle

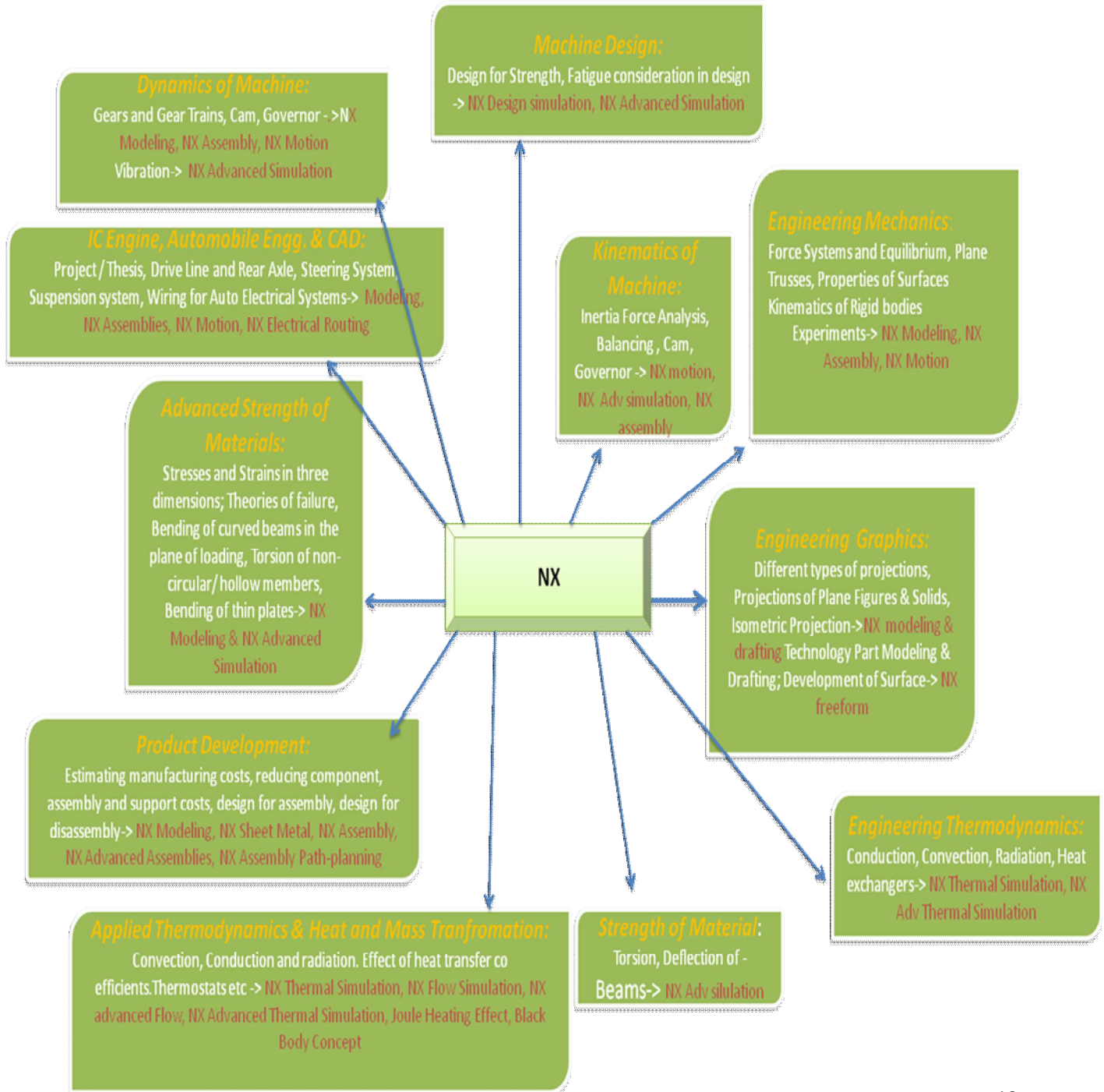


Mapping of engineering curriculum to FEMAP (Finite Element Analysis):





Mapping of engineering curriculum to NX (CAD,CAM,CAE):





7 Proposed Model Engagement

The proposed centre of excellence will be unique in the following ways

- IFS Academy to conduct skills development training for the candidates in the Siemens Tools such as NX CAM, NX CAD, TCUA areas
- Establish Collaboration with the industry and Siemens customers worldwide for providing placement assistance to the candidates upon successful completion of the training*
- Branding & industry visibility for the college in the education arena through seminars and industry expert sessions.

Following is the Implementation Plan:

a. Setting up of the Excellence Centre:

IFS Academy will setup the Siemens Excellence Centre for imparting training to the Engineering students on PLM curriculum coordinate the PLM Training Program, course material, software support and Siemens certified faculty as per course requirements. IFS will also provide Certificate of Merit from SIEMENS on completion of the required training program to every eligible student.

b. Training to be conducted

Training to be conducted at Siemens lab located at college premises. It will be a blend of theory and practical through face to face delivery mode.

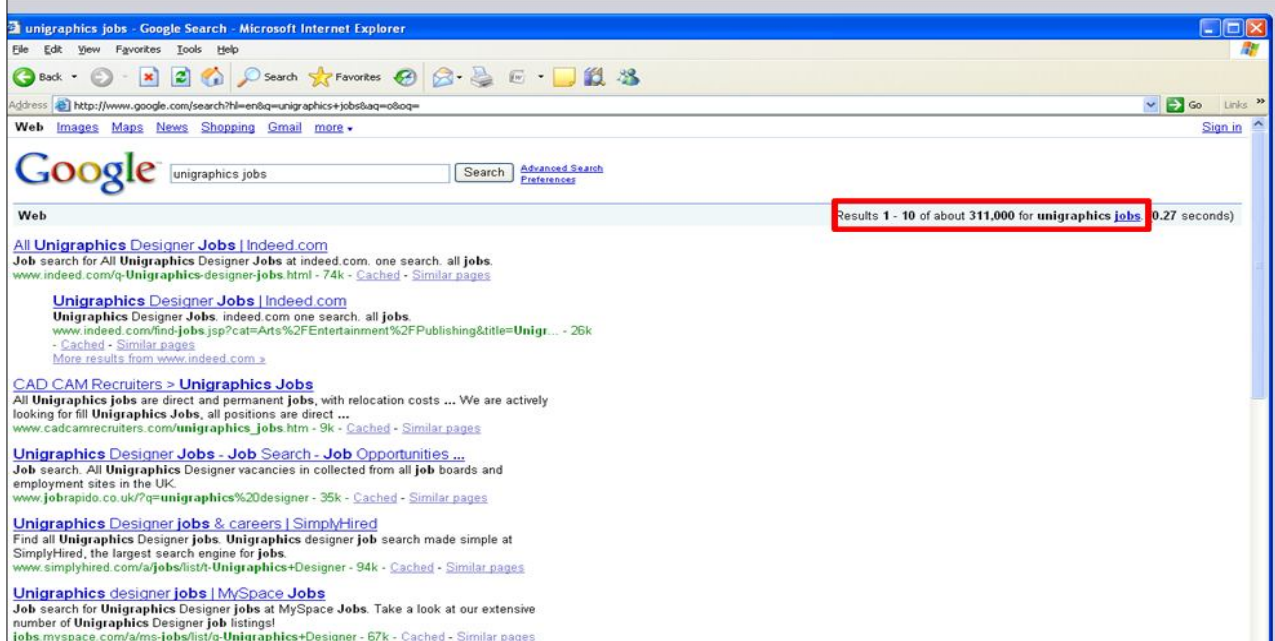
c. Certified students/Skill Development

Students on successful completion of Siemens training program will get a certificate of Merit from Siemens which will ultimately enhance their scope of employability.

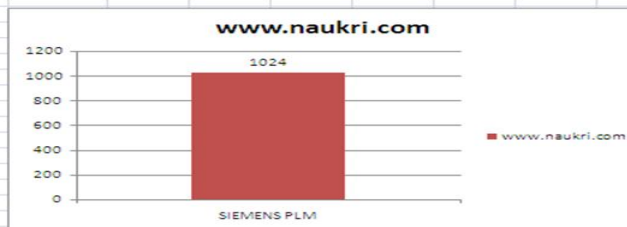
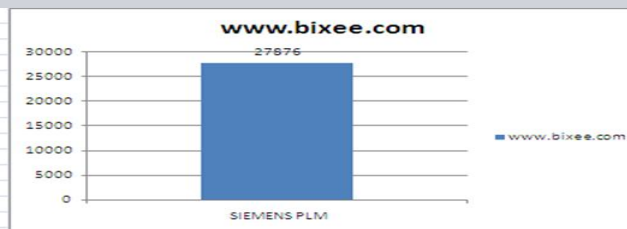


8 Potential Industry Opportunities for Students

Short Glance on Job Opportunities Available to Students Trained on SPLM Solutions (As available on leading web portals)



Short Glance on Job Opportunities Available to Students Trained on SPLM Solutions (As available on leading web portals)





9 Benefits Envisaged

While the student numbers increase year on year, the number of academic staff does not increase adequately. Changing business needs does not quickly percolate into the academic system and majority of the faculty requires skills upgrade to keep pace. The industry intervention thus provides an alternative solution while preserving the existing education structure.

The proposed Excellence Centre will address these factors by providing an industry recognized platform for focused training that is aligned to the present day business needs. In addition, the CE will help position the university as a leading Institution with focus to align academia with requirements of the dynamic industry and the trends.

To summarize, the following are the key benefits of the model

- Enhancement of the scope employment for the students
- Opportunity to get specialized skills alongside their graduation thereby bridging the gap
- Certificate of Merit from Siemens upon completion of the training
- Globally recognized and industry aligned curriculum
- Siemens "Official Curriculum" for all Siemens PLM Products
- Training Conducted by Siemens PLM "Certified Trainers"
- Certified student details uploaded on the Siemens PLM Database
- Promote and develop an environment for R&D at the establishment



**10 SIEMENS PLM Authorised
Certificate of Merit**

Certificate of Completion

This is certify that

Joe Condon

has successfully completed

Introduction to NX for Experienced Users

Jeff Dmytro

Instructor

Sep 8-12, 2014

Date

www.siemens.com/plm/training

SIEMENS

Enrollment ID: 36889

**11 Commercial Proposal**

Quotation Reference: IFSA/2019-2020/SIEMENS/01

Date: 24/05/2019

Commercial Proposal for SIEMENS Excellence Centre

To,
The Principal,
A. P. Shah Institute of Technology,
Survey No. 12, Opp. Hypercity Mall, Ghodbunder Rd,
Kasarvadavali, Thane West, Thane, Maharashtra 400615
Kind Attn.: Dr. Sameer Naniwadekar: Dean Administration

| Sr. No. | Description | Price |
|---------|--|-----------------------------------|
| 1 | SIEMENS Excellence Centre for A. P. Shah Institute of Technology, Thane. <ul style="list-style-type: none"> • Period = 2 Years from the date of receipt of PO & 100% advance payment • Minimum No of Students to be trained in 2 Years = 300. Same no of SIEMENS PLM Authorised Certificate of Merit shall be issued (Per Course per Student). Students above 300 shall be charged extra at a rate of Rs. 5,000/- (GST Extra) per course per student. • Free SIEMENS PLM Software Licenses for the training duration (Licenses shall be issued on a 6 M basis and renewed on a 6 M basis) • SIEMENS PLM Software Authorised Certificate of Merit to all the Students who will be participating in the training. • Access to SIEMENS PLM Software Learning Advantage • SIEMENS PLM Software Authorised Course Catalogue and Curriculum • Authorised to use SIEMENS Excellence Centre logo in association with IFS Academy | Rs. 1500000 /- for 2 years |
| | GST (18%) | Rs. 270000/- |
| | TOTAL: Rupees Seventeen Lakhs Seventy Thousand only | Rs. 1770000/- |



Terms and Conditions:

- **Taxes and Duties:** As mentioned above.
- **Validity:** This offer is valid for 30 days from the date of proposal.
- **MoU: SIEMENS Excellence Centre MoU signed between IFS Academy & A. P. Shah Institute of Technology, Thane for 2 Years.**
- **Payment Terms: 100% advance along with the PO**
- All the expenses towards accommodation of our Faculty shall be borne by APSIT.
- Minimum number of Students / Batch = 25
- Training Duration = 2 to 5 Days (8 Hrs / Day) depending upon Course Selection
- **Order to be placed on:**
IFS Academy
Flat No. 11, Vishal Heights, 4th Floor, Above Morya Gym,
Next to The Kalyan Janta Sahkari Bank Ltd., Walhekarwadi Road,
Chaphekar Chowk, Chinchwad, Pune. 411 033. India.

Thanking you,

Yours truly,

Sameer Latkar

Director

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E: sameer@ifsacademy.org