# SOFTWARE DEVELOPER PARTICIPANT HANDBOOK

## COURSE OFFERED BY

# EMPOWER PRAGATI VOCATIONAL & STAFFING PVT LTD

# General Instructions for Participants

Dear Student,

Congratulations for being selected to the skill development programme. Kindly understand that the skill development programmes are to be treated as different from the usual knowledge acquiring class room sessions in schools/colleges. You should not only gain the theoretical knowledge of the concepts, but also acquire the practical know-how and skills to perform through participating in the activities in classes, practical sessions and internship situations. As a participant of the training programme,

1. You are expected to act as an ambassador of the flagship skill development programme. So kindly ensure that you present yourself well and participate whole heartedly in the skill training process ending with a successful achievement of skill competency and employability.

2. You should be regular and attentive in all skill classes. Any loss & subsequent shortage of attendance will result in poor skill development and official obligations to the Government due to breach of agreement.

3. Be present in the class room before the commencement of classes.

4. Please follow healthy habits and care yourself well

5. Kindly stand up for and personify the spirit of sportsmanship and fair play

6. You are requested to be concerned about the conservation of electricity and water. Kindly switch off fans & lights when you leave the class room.

7. Please handle the equipment related to the skill training carefully ensuring maximum and safe utilization of the resources.

8. Mobile phones are not permitted in the skill training centres

9. Always participate in discussions and training activities. Take notes if needed.

10. Always do the preparatory steps if mentioned in the students guide for the sessions and be ready to acquire maximum skill through the activities.

11. Kindly submit the assignments, reports, records etc on time.

12. Do not hesitate to raise doubts and questions during or after the skill sessions so that the Trainer can help you in the best possible way.

13. You are free to contact the Centre Manger of the Skill Development Centre for any clarification or assistance related to the skill training programme.

# Course Details

| Name of Course | SOFTWARE DEVELOPER |
|---|---|
| Qualification Pack & NOS | SSC/ Q 0501 |
| MES Course Code | NA |

## Synopsis of Course

This course help individuals in developing the software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates and involves providing support to custom applications, debugging, maintenance and documentation.

## Further Learning Opportunities

After successful completion of the course Further Learning opportunities open for the students in various marketability courses like Software Analyst, Software Engineer, Systems Engineer, Programmer, and Programmer Analyst. Trainees can also go for" Learn while earn" in professions using specialized knowledge of software programming languages, software integration and delivery platforms to build Software Products and deliver business solutions which also involves application enhancement, debugging, maintenance and documentation.

# Course Duration-Module/Unit/Session wise

| Sl. No. | Module/Unit/Session Name | *ILT | *Classroom Activity | *Practical | *SPL |
|---|---|---|---|---|---|
| 1 | Module 1 – DESIGN OF SOFTWARE PRODUCTS & APPLICATIONS | | | | |
| 1.1 | Unit 1 - Organisation Overview & Process | 60 | 60 | 60 | |
| 1.1.1 | Session 1 –Organisation overview & Process | | | | |
| 1.1.2 | Session 2 – Organisation Policy & Procedure | | | | |
| 1.2 | Unit 2 - Basics Of Software & Guidelines | | | | |
| 1.2.1 | Session 1 – Basics Of Software Development Guidelines | | | | |
| 1.2.2 | Session 2 – How guidelines affect Software Development | | | | |
| 1.2.3 | Session 3 – Guidelines Do's & Don'ts | | | | |
| 1.3 | Unit 3 - Roles & Responsibilities | 90 | | 60 | |
| 1.3.1 | Session 1 – Introduction to Roles & Responsibilities | | | | |
| 1.3.2 | Session 2 – Hidden Roles of Software Architect | | | | |
| 1.4 | Unit-4 –Feedback | | | | |
| 1.4.1 | Session -1- Feedback & Importance of Feedback | | | | |
| 1.4.2 | Session -2- Types & Process Of feedback | | | | |
| 1.5 | Unit-5 -Software Designing Technique-I | | | | |
| 1.5.1 | Session -1- Introduction to Software Designing | 180 | | 60 | |
| 1.5.2 | Session -2- Design Process | | | | |
| 1.6 | Unit-6 -Software Designing Technique-II | 140 | | 100 | |
| 1.6.1 | Session -1-Designing Tools | | | | |
| 1.6.2 | Session -2-Building of Models | | | | |
| 1.6.3 | Session -3-Transferring Design Knowledge | | | | |
| 1.7 | Unit-7-SDLC(Software Development Lifecycle) | 180 | | 60 | |
| 1.7.1 | Session -1Understanding of SDLC | | | | |
| 1.7.2 | Session -2Phases Of SDLC | | | | |
| 1.7.3 | Session -3 SDLC Models | | | | |
| 1.8 | Unit-8 Business Requirement Specifications(BRS) | 120 | | 120 | |
| 1.8.1 | Session -1- Introduction to BRS | | | | |
| 1.8.2 | Session -2 Pre Requisites and Best Practices | | | | |
| 1.9 | Unit-9 User Requirement Specifications | 160 | | 80 | |
| 1.9.1 | Session -1 -Introduction to URS | | | | |
| 1.9.2 | Session -2 -Common Line Interface | | | | |

# Module I – DESIGN OF SOFTWARE PRODUCTS & APPLICATIONS

## Overview:

This module covers the basics of software designing, software development life cycle and high level design and its application.

## Objectives:

At the end of the module, the participant will know or be able to perform the following:

- ✓ Organization Overview & Process
- ✓ Basics Of Software & Guidelines
- ✓ Roles & Responsibilities
- ✓ Software Designing Technique
- ✓ SDLC(Software Development Lifecycle)
- ✓ Business Requirement Specifications(BRS)
- ✓ User Requirement Specifications
- ✓ System Design Specifications(SDS)
- ✓ High Level Design(HLD)
- ✓ Introduction to Program and types

## Module 1 – DESIGN OF SOFTWARE PRODUCTS & APPLICATIONS

**Unit 1 - Organization Overview & Process**
**Session 1: Organization overview & Process**
**Session 2 – Organization Policy & Procedure**

## Objectives

At the end of the session, the participant will be able to perform the following:

- ✓ Organization overview
- ✓ Goals of the Organization
- ✓ SOP of Organization
- ✓ What are organization Policy and the importance of it.

**Develop your overview to include:**

a. Name, slogan and logo
b. Industry analysis
c. Product, service and markets
d. Legal structure
e. Business goals
f. Location
g. Sacred teachings, where appropriate.

Your **business name** should describe your idea and get people's attention. The best names are short with a pinch of creativity. It should also say something about your most important selling points.

**Be clear:** You can have a lot of fun choosing your business name. But try not to pick one that is too complicated or confusing. For example, if I run a service to edit business plans, should I call my company "Cree Re-Design?"

If you were really going into business, you would have to search to make sure your business name doesn't already exist. You would also register your business name to make sure no one else uses it. It might take a few name changes before you found one that was available. **For the E-Spirit competition, just be creative and choose a name the whole team agrees on.**

**Quick, tell me who I am:**

- "Can you hear me now?"
- "Drivers wanted"
- "Just do it"
- "Image is nothing, thirst is everything"
- "Finger-lick in' good!"
- "Reach out and touch someone."

These **slogans** bring something to mind, don't they? I bet you can even picture the company's logo and colors. Think about Nike: I don't have to tell you what their logo looks like, or what they make. You know because you have seen their logo and their advertising many times.

This is known as **visual identity**. It includes the brand colors, logo or a catch phrase that are repeated over and over so that the name or brand becomes instantly recognizable.

**b. Industry Analysis**

Who will play key roles in your business and why? Include some background information:

- Are you involved in manufacturing, production, service or construction?
- What product or service are you offering?

**Example:**

**Hero Bicycle Retail and Repair**

In this time of healthy living and fitness, the bicycle retail and repair industry is stronger than ever.

Key players in this industry are:

- Bicycle manufacturers
- Assemblers and part suppliers
- Bicycle gear and outfitters.

Andersons will provide sales and repair service for everyone from professional Tour de France riders to leisure bikers.

**c. Product, service & markets**

Describe the **trends in the market for your industry**. This includes answering questions like:

- Who are your customers?
- What do buyers buy?
- What do they want?
- Will there be a demand for your product or service?
- Can you supply that demand?

To gather **demographic information** about your target market, check:

- Local business organizations, business services and community centers
- Economic development advisors
- Education counselors
- And remember to keep your mentors involved!

Here are some examples of **target markets and target groups**:

- Families: low to upper income
- Youth consumers
- Married or single retired Elders
- Single parents
- Couples with children
- Double income couples with no kids
- Older couples with grandchildren.

In your working document, give information about the production of your **product or service** to show potential investors that you are committed to providing a **high quality product and customer service**. Investors want to know how you plan to keep your

customers coming back. Is your establishment caring, clean, honest and state of the art? Speak the language of your customer.

You should also show the **benefits** that your product or service will give

- Your customers
- The community
- The environment.

For example: Supporting healthy communities: we sell organic products!

**d. Legal structure**

Is this a **sole proprietorship, partnership or corporation**?

**e. Business goals**

What are your plans for future growth? How will you reach this goal? How are you going to give back to the community? Will new jobs be created because of your business?

**f. Location**

Indicate the **location** you select for your business, and **explain why** you chose it. Remember to consider how your location affects the environment and surrounding communities.

## Domain Knowledge (Policies and Procedures)

**What are Policies & Procedures?**

A Policy is a statement of agreed intent that clearly and unequivocally sets out an organisation's views with respect to a particular matter
- It is a set of principles or rules that provide a definite direction for an organisation
- Policies assist in defining what must be done

A Procedure/Practice is a clear step-by-step method for implementing an organisation's policy or responsibility.
- Procedures describe a logical sequence of activities or processes that are to be followed to complete a task or function in a correct and consistent manner
- Procedures can be produced in the form of:
  - ✓ flowcharts
  - ✓ checklists
  - ✓ written steps of the process

Note: For every policy you establish, you will need to look at creating supporting procedures

**Why have Policy?**

So people working in an organisation can have a framework for actionsthat help them get on with the job they need to do

➢ So people in the organisation don't have to keep on discussing andrediscussing the same issues every time they arise – one thought outdecision can be applied to many similar cases – efficiency

➢ So legal and other requirements can be me

➢ A tool in quality improvement

➢ Procedures might just be a few bullet points or instructions. Sometimes they work well as forms, checklists, instructions or flowcharts.

Policies and their accompanying procedures will vary between workplaces because they reflect the values, approaches and commitments of a specific organization and its culture. But they share the same role in guiding your organization.


# Directions for conducting practical sessions

Specify the instructions to be given to students to conduct the practical sessions.

## Session Notes

Blank sheet with a table that enables Participants to jot down their points from the session

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Session Notes

**Points to remember**

Summary of the points to be remembered by the student as a take away of the session.

1. A – List points here
2. B
3. C