



DOEACC CENTRE CALICUT  
COURSE PROSPECTUS

CDS/CA/7.5.1/F 40/R0

**Name of the Group:** *IT Group*

**Name of the Course:** *Advanced Diploma in Mobile Application Development using J2ME*

**Course Code:** *SW303*

**Starting Date:** *22<sup>nd</sup> Sep 2010*

**Duration:** *Three Months*

**Preamble:** *Our course aims to bring delegates who need to learn to utilize the features of J2ME in order to develop scalable, good-looking enterprise-class applications for mobile handsets, set-top boxes and other small footprint devices. This Hands-On training course provides delegates with intensive practical tuition using Sun's J2ME. The topics covered will focus on the tools and environments which exist to help develop Java applications that run on mobile and wireless devices. This course has been developed for real-world, commercial scenarios based on industry requirement.*

**Objective of the Course:** *This 3 month's intensive training course has been specifically designed to address the requirements of developers who want to become experts in Mobile Application development using J2ME environment. There is no need for the participants to come to the Centre and attend the classes to obtain the certificate. Few classes (On-Demand) would be conducted using WebEx Cloud. They can pursue the course online.*

**Outcome of the Course:** *On completion of the Course, the Participants shall get,*

- a. Exposure in OOPs concepts and Java programming fundamentals.*
- b. Exposure in usage of java in mobile applications.*
- c. Expertise in designing and developing different mobile applications using Java and J2ME.*
- d. Hands on experience in Core Java with networking concepts.*
- e. Hands on experience in development of Mobile applications using J2ME, like SMS, MMS, Gaming, Multimedia and JavaFX.*

**Course Structure:**

<b>Seq.</b>	<b>Modules</b>	<b>Duration</b>
1	Core Java	3 Weeks
2	J2ME Basics in MIDP	4 Weeks
3	Advanced J2ME	3 Weeks
4	Project	3 Weeks

*The students can pursue this online course parallel to their study/work from their home/office. The course is delivered in eLearning mode using Moodle Learning Management System. The efficient evaluation methods used in this course ensures the quality of the training. The total marks for the course and the grading strategy are announced at the beginning of the course. After every week the result of that week activities will be published.*

**Other Contents**

- a. Course Fees: Rs 6500/- + 250 (Admission Fee) + Service Tax (Present rate of service tax is 10.3%).*

b. **Eligibility:** *BE/B.Tech, M.Sc (IT/Computer Science/Electronics), MCA, BCA or equivalent of any of these. Degree holders with PGDCA, DOEACC A or B level, Diploma in Computer Science, Electronics, or others with relevant experience).*

c. **Number of Seats:** 40

d. **How to Apply :**

*Students are advised to apply in the prescribed **Application Form** available with the course brochure/course prospectus or downloaded from our website. Filled in application forms along with a Demand Draft towards advance fee of Rs.1000/- drawn in favour of **Director, DOEACC Centre, Calicut**, Payable at State Bank of India, CREC Branch, Chathamangalam should be sent to the **Training Officer, DOEACC Centre Calicut, P. B. No. 5, NIT Campus Post, CALICUT – 673 601, Kerala**. The **Name of the Course** Applied for should be super scribed on the top of the cover in which the application form is forwarded.*

e. **Selection of candidates:**

*Selection of candidates who have passed in the qualifying examination will be based on their marks in the qualifying examination subject to eligibility and availability of seats.*

*The admission to the course shall be based on the following criteria:*

- 1. Should have passed the eligibility criteria as mentioned above.*
- 2. The list of selected students shall be published in our web site. Individual call letters by email alone will be sent to the candidates.*
- 3. The admission for the selected students shall be confirmed only after verifying their original certificates. The verification of certificates for such candidates shall be on the date of commencement of examination. Fee shall be refunded for those whose credentials are found to be incorrect.*

f. **Test/Interview:** *Not Applicable*

g. **Counseling/Admission:** *Not Applicable*

h. **Admission Procedure:** *The list of selected students shall be published in our web site on **14-Sep-2010**. The selected candidates should send the following documents to the Training Officer on or before **21-Sep-2010** in the below address.*

i. **Mode of Payments:**

1. Demand Draft to be drawn in favor of **Director, DOEACC Center Calicut**, Payable at **State Bank of India, Calicut NIT Branch (2207)**. The DD should reach here before the last date to apply.

2. Using the pay in slip available in our web site (Pay in slip), through any branch of SBI (where this format is accepted). The original counterfoil should reach here before the last date to apply.

3. The fees can be paid directly into our account from any bank where core banking facility is available. The details required for direct payment are as given below.

**Current Account No:** 10401158037  
**Bank Name:** SBI, NIT Chathamangalam  
**Bank Code:** 2207  
**IFSC No:** SBIN0002207

The depositor should obtain the UTR Number/Journal No from the branch while depositing cash directly into our account. Depositor should also obtain the counterfoil duly filled up and signed by the staff with seal of the bank through which the amount was deposited. The following details should reach here before the last date to apply.

- A. Name of the Depositor
  - B. Name of the Student
  - C. Date of Payment
  - D. Amount Deposited
  - E. Name of Bank/branch through which amount deposited
  - F. Purpose – Course ID – Advance Fee/Hostel Rent/Installment Fee etc.
  - G. Proof of Deposit (counterfoil/acknowledgement in original) UTR Number
- j. **Discontinuing the course:** No fees under any circumstances shall be refunded in the event of a student discontinuing the course. A student can however, be eligible for module certificates (applicable only for courses which provide for modular admission) which he has successfully completed provided he has paid the entire course fees.
- k. **Course Timings:** *e-Learning (Distance Mode)*
- l. **Course enquiries:**  
 Students can enquire about the various courses either on telephone or by personal contact between 9.15 A.M. to 5.15 P.M. (Lunch time 1.00 pm to 1.30 pm).
- m. **Important Dates:**

Last date to submit application form	<b>14/09/2010</b>
Selection intimation in website	<b>14/09/2010</b>
Last date of Payment of course fees and receipt of Attested copy of Certificates from Students	<b>21/09/2010</b>
Commencement of classes	<b>22/09/2010</b>

- n. **Placement:** *Placement support will be provided.*
- o. **Hostel facilities:** *Not Applicable*
- p. **Canteen facilities:** *Not Applicable*
- q. **Lab Facilities:** *Not Applicable*

r. **Course Contents:**

**1. Core Java**

Week 1:

- i. Java Fundamentals [1 Day]
  - a. Getting Started with Introduction to Java and OOP's,
  - b. JVM, Structure of Java Program with simple examples,
- ii. Java Comments [1 Day]
- iii. Data Types and Variables [1 Day]
- iv. Command Line Arguments [1 Day]
- v. Operators [1 Day]

*First Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

Week 2:

- i. Conditional Statement [1 Day]
- ii. Loops (while, do-while and for loops) [1 Day]
- iii. Expressions [1 Day]
- iv. Methods and Arrays [1 Day]
- v. Classes and Objects [1 Day]

*Second Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

Week 3:

- i. Interfaces [1 Day]
- ii. Catching Exceptions [1 Day]
- iii. File I/O and Streams [1 Day]
- iv. Collections [1 Day]
- v. Thread and Multithreading [1 Day]

*Third Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

**2. J2ME Basics in MIDP**

Week 4:

- i. Introduction to J2ME and MIDP [2 days]
  - a. Basics
  - b. Lifecycle
  - c. Building, Packaging and Deploying MIDlets
  - d. Application Descriptor
  - e. MIDP Packages
  - f. MIDP in Context
- ii. High Level UI API [3 Days]
  - a. Presenting UI in a MIDlet
  - b. Organizing a UI by Screens

- c. Forms and Items
- d. Layout Control
- e. TextField Class
- f. DateField Class
- g. ChoiceGroup Class
- h. Other Item Classes
- i. Alerts
- j. Tickers

*Fourth Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

Week 5:

- i. Low Level UI API [3 Days]
  - a. Canvas Class
  - b. 2D Graphics
  - c. Fonts
  - d. Drawing Text
  - e. Repainting
- ii. Event handling Part I [2 Days]
  - a. Event Architecture
  - b. High-Level event handling
  - c. Commands
  - d. Item state changes

*Fifth Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

Week 6:

- i. Event Handling Part II [2 Days]
  - a. Low Level event handling
  - b. Key board input
  - c. Pointer input
  - d. MVC Pattern and in application Design
  - e. Model events
- ii. Threads and Timers [3 days]
  - a. CLDC Threading model
  - b. Thread and Runnable
  - c. Timer Class
  - d. TimerTask Class
  - e. Scheduling TimerTasks

*Sixth Week Assignments (5 Programs [each carry 10 marks]) and Quiz (25 Marks)*

Week 7:

- i. Java Database Connectivity (JDBC) [2 Days]
- ii. Record Management System (RMS) - Data Base Programming [1 Day]
- iii. Network Programming [2 Days]
  - a. CLDC Stream models
  - b. Supporting packages
  - c. Creating connections
  - d. Making an HTTP request
  - e. TCP and UDP

*Seventh Week Assignments (5 Programs [each carry 10 marks]) or Mini Application Development (for 50 marks) and Quiz (25 Marks)*

### **3. Advanced J2ME**

Week 8:

- i. Best Practices [2 Days]
  - a. Exception Handling
  - b. Cleaning up resources
  - c. UI design Considerations
  - d. Portability Considerations
  - e. Cross-Platform development
- ii. Developing Short Message Service (SMS) [3 Days]

*Eight Week Assignments (5 Programs [each carry 10 marks]) or Mini Application Development (for 50 marks) and Quiz (25 Marks)*

Week 9:

- i. Developing application for Audio and Video [2 Days]
- ii. Developing MMS [2 days]
- iii. Java Games [1 Day]

*Ninth Week Assignments (5 Programs [each carry 10 marks]) or Mini Application Development (for 50 marks) and Quiz (25 Marks)*

Week 10:

- i. JavaFX Overview [2 Days]
- ii. MIDP2.0 Security [1 Day]
- iii. Overview of Securing SMS and MMS [2 Days]

*Tenth Week Assignments (5 Programs [each carry 10 marks]) or Mini Application Development (for 50 marks) and Quiz (25 Marks)*

**Project:** *During the 3 weeks project period (Week 10<sup>th</sup> itself students should start the project work and complete the analysis phase before starting the project period), students are required to develop software in any of the areas covered in the course, under the guidance of the faculty. Students can also take up relevant projects from the industry.*

<b>No.</b>	<b>Project Phases</b>	<b>Duration</b>	<b>Marks</b>
1	Analysis	Along with Week 10 <sup>th</sup>	50 Marks
2	Design	One Week (Week 11)	50 Marks
3	Coding	One Week (Week 12)	50 Marks
4	Testing and Implementation	One Week (Week 13)	50 Marks
5	External Evaluation		50 Marks
	Total		250 Marks

**The following texts do not form part of the prospectus:**

Signature of the Course Coordinator:

Signature of Training Officer:

Approved/Not Approved  
Director

Guidelines:

1. All Text in Italics are to entered by the course coordinator
2. The Course Prospectus to be put to Director for approval through Training Officer before issue.