Finishing School programme for Engineering Graduates by
National Institutes of Technology - Calicut, Durgapur, Jaipur, Kurushetra, Surathkal, Tiruchirappalli, Warangal & IIT-Roorkee

The Programme:

With a view to meet the immediate trained human resource requirements of the IT & ITES industries, it is proposed to set up a chain of finishing school programmes for engineering graduates. As per the directives of MHRD, Government of India, NITs in Calicut, Durgapur, Jaipur, Kurushetra, Surathkal, Tiruchirappalli and Warangal and IIT-Roorkee are conducting the finishing school programmes during May–June 2007 on a pilot basis. Each of these institutes will train 100 graduates. This pilot effort has twin objectives of (i) offering suitable candidates to IT industry and (ii) helping young graduates to find jobs through appropriate training. Therefore, the purpose of the programme is to enhance and sharpen the required skills among the engineering graduates and make them employable in the IT & ITES industry. The duration of the program will be 8 weeks (5 days per week) from 7th May 2007.

The programme will be delivered by the faculty of respective NITs with additional support from practicing executives from the IT & ITES industry.

FINISHING SCHOOL TRAINING PROGRAM
AT NIT-TIRUCHIRAPPALLI

Eligibility:

Engineering graduates of any disciplines from recognized Institutes/Colleges from Tamil Nadu who have completed their course in 2006 or 2005 and not got any job are eligible to apply for the programme. Such candidates have to declare that they have not obtained a full-time job while applying for this special programme.

Selection:

Selection of candidates will be carried out based on the academic performance (percentage of marks or CGPA) in the engineering degree. Reservations as per Government of India norms will be followed.

Fee:

The Programme fee will be Rs. 5000/- (Rs 2500/- for OBC/SC/ST/PH candidates). Boarding and Lodging facilities can be provided in the campus at an additional cost (Rs 4800/- approx.) to the candidates for the entire program of 8 weeks.

Application:

Interested candidates may visit the website of the NIT-Tiruchirappalli and download the application form and registration details. The last date to submit the application along with the application fee of Rs. 100/- (Rs 50/- for OBC/SC/ST/PH candidates) is **20th April, 2007**.

The completed application is to be sent to:

The Director

NIT-Tiruchirappalli

Tiruchirappalli – 620015

For any further details, write to: finschool@nitt.edu

Finishing School programme for Engineering Graduates: May-June 2007

Application form

Name of the Candidate :

Contact address :

Telephone & email :

Degree and Branch :

Name of the College and its address :

Year of completion :

Class obtained and Percentage of marks :
(attach attested copies of relevant certificates)

Community : OC / OBC / SC / ST
(Attach attested copy of certificate)

Registration Fee details : Amount of Rs. 100*/- (or Rs. 50/- for BC/SC/ST/PH)

DD No._____

Bank_____

Declaration

I hereby declare that I have not yet been employed

Date:_____ SIGNATURE

* DD to be drawn on Director, NIT, Trichy-payable at Trichy

FINISHING SCHOOL FOR ENGINEERING GRADUATES

SYLLABUS

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Note : An overview of these topics will be given. Course material for each topic will be given to the student participants.

MATHEMATICS - I

Syllabus

(Total Hours: 14)

Sets - Relations – Maps - Functions – Sequences.

Truth Tables - Boolean Algebra.

Permutations & Combinations.

Modulo Arithmetic – Euclids Algorithm – Fermat's Theorem – Euler Totient Function – Primality Test.

Mean, Mode, Median, Variance, Standard deviation.

Probability – Binomial and Normal Distributions – Correlation & Regression.

Numerical Solution of Linear System by Gauss Elimination and Gauss Seidel Method.

Exercises on Analytical Ability and Logical Reasoning.

MATHEMATICS - II

Syllabus

(Total Hours: 16)

Mathematical structures – Trees, Graphs – Recursion – Graph Traversal – Minimum Path.

Propositional & predicate logic – Fuzzy logic – Time valued logic - Proof systems - induction – refuting allegations.

Eigen values – distance norm in vector spaces - Application of differential & integral calculus.

Conditional probability - Least squares curve fitting – Maximum likelihood methods.

Linear programming – Simplex method – Non-linear programming – Gradient search method.

Applications to IT.

BASICS OF BUSINESS, PROJECT APPRAISAL AND COST ACCOUNTANCY

Syllabus

(Total Hours: 10)

Introduction to Micro and Macro economics.

Introduction to Marketing Services.

Operations Management – Procurement process – Vendor evaluation – Quality Systems and Standards.

Financial Management – Introduction to basic accounting – Introduction to costing – Management accounting – Time value of money – Project appraisal.

HR Systems – Introduction to functional areas – Recruitment – Training.

INFORMATION SYSTEMS

Syllabus

(Total Hours: 40)

Overview of Information Systems:
Introduction to Information system
Understanding system from business view point
Business processes
Types & Levels of Information Systems
An overview of SCM, KM, CRM, ERP .
Technology support for IS:
Data warehousing concepts-
Data pre-processing-
Concept of data cube, Comparison of OLAP with OLTP systems
Overview data mining for knowledge discovery
Mini project or by means of programming

OVERVIEW OF TECHNOLOGY ELEMENTS & INFORMATION SECURITY

Syllabus

(Total Hours: 60)

Digital electronics & Microprocessors-8085/8086, Interfacing
Computer Organization & Architecture-Parallel and Distributed environment
Programming Language Concepts-Programming paradigms
Data Structures & Programming-Searching & Sorting-C/C++
Database Management Systems-Relational database-design
Computer Networks-Protocols-OSI Reference model
User Interface design-GUI design
Mini project (as per the student interest and problems specified by industry)
Information Security-DoS, Cryptography, Ciphers

SOFTWARE ENGINEERING AND PROJECT MANAGEMENT

Syllabus

(Total: 50 hrs)

Need of Software Engineering - Software Development Life Cycle Models
Requirements Engineering
Information modeling - Data flow diagrams - Entity Relationship
Basic concepts of software design
Software Construction - Use of Standards in construction – Structured programming practice.
Software metrics – Metrics for complexity.
Software Quality Assurance
Software Testing
Software Configuration Management and Version Control
Software Maintenance - Reengineering - Reverse Engineering.
A mini project in software reengineering – Support of IT Industry needed.

Components of Software Project Management
SPM - Activities and Tools.

Case study.

EMBEDDED SYSTEMS

Syllabus

(Total: 10 hrs)

Hardware design of circuits – Design using microcontrollers, Selection of components, Schematic entry using tools, Timing analysis, PCB design tools, Design, testing and verification using oscilloscopes and logic analyzer, Documentation.

Overview of the latest technologies – Trends, Application areas, New directions.

Embedded Software – Ideas regarding device drivers, RTOs, Protocols, Names of popular RTOs and Protocols.

Ideas of signal processing and filters.

Hardware-Software interface – Examples of application – FPGA, CPLD, VHDL.

SOFT SKILLS

Syllabus

(Total: 40 hrs)

Communication Skills – Oral and Written communication, Presentation skills, Interview skills, Group discussion, Telephone strategies.

Team Work – Interpersonal skills, Behavioural attitude, People management – Intrapersonal skills, Personality development, Clean and healthy living tips.

Organizational Behaviour – Goal setting, Individual goal, Organizational goal.

Time Management – Planning, Scheduling.

Ethics, Values, Attitudes.

Indian Culture and Heritage.
