FIELD OF STUDY : INDUSTRIAL

OPTION : SOFTWARE ENGINEERING

SPECIALTY : SOFTWARE ENGINEERING

1- OBJECTIVES OF TRAINING

This specialty trains senior technicians who, with the help of their capability to study the needs of the society, can analyse (MERISE, UML), design and implement computer applications in various fields.

2- EXPECTED SKILLS

❖ General skills

- Self-employed, work together as a team ;
- Analyse, synthesise a professional document (French, English) ;
- Oral and written business communication (French, English) ;
- Participate in /conduct an approach to the management of a project ;
- Know and exploit professional and institutional networks in the computer sectors.

❖ Specific skills

- Design and develop computer applications ;
- Implement and ensure the maintenance of computer programs ;
- Develop software or systems based on software by following professional standards adequately ;
- Put in place and customise distributed applications ;
- Diagnose the main faults affecting the computer system and replace defective parts ;
- Plan, monitor and control a computer project.

3- CAREER OPPORTUNITIES

- Head of IT project ;
- Software Consultant ;
- Developer of applications ;
- System Administrator.

4- PROGRAM DURATION

For a period of two years, a set of theoretical and practical courses is administered to students with a view to obtaining a Higher National Diploma (HND) sanctioned by MINESUP.

5- CONDITION FOR ADMISSION

Direct registration on file study :

- A hand written application adressed to the Director of SOUTH POLYTECH ;
- A complete registration form available on campus ;
- A photocopy of birth certificate ;
- A photocopy of A/L certificate ;
- Registration fees: 35,000 FCFA ;
- File study fees: free of charge ;
- Annual medical coverage: 5000 F CFA.

6- PEDAGOGICAL APPROACH

- Lectures ;
- Practical work and personal work ;
- Immersion courses in the professions accompanied by a teaching body and company executives.

7- EVALUATION TECHNIQUES

- Continuous monitoring for each lecture ;
- An exam session (oral or written) at the end of each semester organised according to the subjects registered for the semester ;
- Writing of an internship report defended in front of a jury at the end of the cycle ;
- National HND exam.

8- ORGANISATION OF TEACHINGS

• FIRST SEMESTER

Code	Course titles	Number of credits
SWE111	Engineering Maths 1	5
SWE112	Basic environment 1	4
SWE113	Digital electronics	3
SWE114	Introduction to algorithms	5
SWE115	Introduction to software engineering	7
SWE116	Multi-media data Processing	3
SWE117	English and general accounting	3
Total		**30**

• SECOND SEMESTER

Code	Course titles	Number of credits
SWE121	Engineering maths II	4
SWE122	Basic environment II	5
SWE123	Architecture	4
SWE124	Database and MERISE 1	5
SWE125	Programming 1	5
SWE126	Maintenance and legal regulations	4
SWE127	Economies and Enterprise Organisation (EEO) and French	3
Total		**30**

• THIRD SEMESTER

Code	Course titles	Number of credits
SWE231	Engineering Maths III	5
SWE232	Basic environment III	4
SWE233	OOM UML	4
SWE234	Data structure and SQL language	5
SWE235	Programming II	5
SWE236	Systems and Networks	4
SWE237	Enterprise creation and civics and moral education	3
Total		**30**

• FOURTH SEMESTER

Code	Course titles	Number of credits
SWE241	Mobile terminals and application security	5
SWE242	Project management	4
SWE243	Network and System administration	4
SWE244	OOP and advanced database	4
SWE245	Data structure and HCI	4
SWE246	Internship	6
SWE247	General economies and Law	3
Total		**30**