Ministry of Higher Education & Scientific Research

Supervision and Scientific Evaluation Directorate

Quality Assurance and Academic Accreditation

Academic Program Specification Form For The

Academic

Universitiy :Northern Technical

The Institute : Institute of Management- Nineveh

Department: Computer Systems Techniques

Date Of Form Completion

Dean ’s Name

Date : / /

Signature

Dean ’s Assistant For Scientific Affairs

Date : / /

Signature

Head of Department

Date : / /

Signature

Quality Assurance And University Performance Manager

Date : / /

Signature

TEMPLATE FOR PROGRAMME SPECIFICATIO

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme .

١. Teaching Institution	Northern Technical University
٢. University Department/Centre	Nineveh Technical Institute
٣. Programme Title	Computer Systems Technologies Department
٤. Title of Final Award	Administrative Technical Diploma
٥. Modes of Attendance offered	Annual
٦. Accreditation	(ABET) Accreditation Board for Engineering and Technology
٧. Other external influences	The department aims to prepare human cadres with technical qualifications that enable them to enter the labor market efficiently, as well as preparing qualified technical cadres in various sciences and disciplines of computer and information technology that meet the requirements of work using modern technical methods to serve the community through communication with official and semi-official departments by focusing on the software in force in Those departments as the curricula are updated accordingly

٨. Date of production/revision of this specification	

٩. Aims of the Programme: There is a set of skills, knowledge and preparations that must be reached to achieve the goals of the academic program, which are:

• Technical knowledge - Providing basic knowledge in the principles of computer systems techniques by learning the basics of programming and how to design websites and connect networks in addition to the methods and methods for maintaining the computer and its accessories.

• Technical skills - Develop the basic skills needed in the implementation and design of laboratory projects in addition to developing the ability to connect networks and address problems that occur using the latest software used at the global level.

• Communication skills - Develop the ability to organize and present information effectively, whether oral or written, or using video and audio means of communication.

Preparing for studies after the diploma - Preparing the graduate to be successful in completing his scientific career by obtaining certificates after the technical diploma.

Career Preparation - Providing broad attention to problems that arise in professional practice, including teamwork, leadership, occupational safety, ethics, service and economics.

Therefore, the objectives of the academic program include:

1- Preparing the technical staff that will be a link between the specialist and the stakeholder.

2- Preparing and preparing the graduate and providing him with theoretical, practical and practical information to be able to carry out the work entrusted to him.

3- Preparing qualified cadres to run all software using the computer.

4- Using computer and internet technologies in education and training.

5- Activating the relationship with the private sector in the areas of training.

6- Follow up the development of training plans curricula and then update the laboratories.

10. Interact with the labor market and society's needs in terms of rehabilitation and training.

١٠. Learning Outcomes, Teaching, Learning and Assessment Methods

A- Cognitive goals

A1- The student's ability to operate and use various ready-made applications.

A2- The student's ability to assemble and maintain a computer and its accessories.

A3- The student's ability to write and maintain programs.

A4- The student's ability to operate network operating systems and use various Internet network applications.

A 5- The student's ability to design and manage websites.

A6 - The student's ability to analyze and design database systems.

B. Subject-specific skills

B1 - The ability to design and update software that serves the community as needed.

B 2 - The ability to identify and correct errors that occur when implementing programs.

B 3 - The ability to use applications and technological tools and modern technology to accomplish the necessary tasks.

Teaching and Learning Methods

- Lecture explanation and clarification (theoretical lectures using illustrations.(
- Laboratory. Practical training in computer laboratories.
- Practical application of the concepts studied in theoretical lectures.
- Conducting practical programs in laboratories.
- Systematic training.
- Summer training.

Assessment methods

١. Daily activities and writing reports for practical programs.
٢. Writing project reports.
٣. Evaluation of practical programs in the laboratory.
٤. Oral exams.
٥. Daily exams.
٦. Semester exams.
٧. Final exams.

C. Thinking Skills

C 1 - That the learner be able to receive and accept knowledge.

C 2 - The learner should be able to work in a team spirit.

C 3 - the ability to understand others and know the requirements of work in laboratories.

C4 - The ability to assume responsibility for running practical programs.

Teaching and Learning Methods

١. Explanation and clarification (theoretical lectures using illustrations(

٢. Work as a team to complete a specific project.

٣. The practical application of the concepts that have been studied in the theoretical lectures.

Assessment methods

1- Daily activities, writing reports for practical programs.

2- Writing project reports.

3- Evaluation of practical programs in the laboratory

D. General and Transferable Skills (other skills relevant to employability and personal development(

D1- Develop the ability to present, pose problems, how to find solutions to them, and identify skills

Program errors when writing them.

D2 - The ability to work in a team and communicate effectively.

D3- Effective influence in society and the labor market through training and development programs related to

competence and at different levels.

D4 - Using modern means to search for new parameters and write reports.

Teaching and Learning Methods

1- Selection of distinguished people in practical projects to participate in scientific conferences.

2- The practical application of maintenance of equipment in work stations through practical materials (maintenance).

3- Writing reports.

Assessment Methods

-١Practical exams and discussion.
-٢Final exams.
-٣Preparing reports.
-٤Discussing small groups.

.١١Programme Structure

Seeking to develop, refine and master the necessary skills to be able to rise to the top through the use of capabilities, qualifications and information acquired during theoretical, practical and applied studies, and this is done through:

1 - Continuous learning by searching for developments using the library and the Internet.

2 - Attending seminars and specialized scientific seminars.

3 - Participation in scientific conferences.

Accordingly, the faculty members must be within the established staff and according to the ratio of students to the number of faculty members. Efficiency must have a role to cover all curricula, and there must be an ability to manage the institute sufficiently to accommodate levels of interaction, student guidance, counseling and university service activities Professional and developmental interaction with practitioners and professionals as well as employers.

Level/Year	Course or Module Code	Course or Module Title	Credit rating	
Second	Cst 100	data structures		Bachelor Degree Requires (x) credits
	Cst 105	Databases		

	Cst 210	Operating systems		
	Cst 107	Systems analysis		
	Cst204	Programming in V.Basic		
	Cst205	networks		

Review of higher education failure ((academic program review))	
1. Educational institution	Northern Technical University / Technical Institute - Nineveh
University Department	Center Computer Systems Technologies
Name/	code of the course Programming in C++/course code CST100
Programs that include a multi-purpose	support object-oriented programming and object-

programming language,	oriented programming, and are distinguished by the speed of executing commands and the ability to deal with memory directly
Available forms of attendance.	Education is in-person
Semester/year	2022-2023
The total number of study	120 huors
Course objectives:	To familiarize the student with programming languages and their types,

he C++ language, the general structure of the program and its sections, the types of data used in this language, writing the code for programs, functions, procedures, and data files, and using the ability to draw in them.	

Vocabulary details	week
Abstract of programming languages • What's a program language • The date and development of programming languages • Levels of programming languages • C++ language : beginning, development, its location within Levels of programming languages	1
Basic essentials for C++ language/ C++ language concepts • What's C++ program contains? • What are the basic files? Simple explanation for basic files, that C++ program include	2
Basic element and tools of C++ language • Language symbols • Definitions name	3

• keywords • Constant represent • Variables represent	
• Data types in C++, and the represent methods in memory • char type • integer type • real type • Boolean (logical) type • Converting between deferent data types	4
• Expressions types in C++ language, how formulate expression: • Arithmetic expression /deferent arithmetic operation and its priorities / conversion manner of arithmetic expression to Arithmetic expression in C++ language/deferent examples	5
• Relational expression/ relational operations and its priorities/ formulate Relational expression • Logical expression/ logical operation and its priorities/ formulate Logical expression • Compound expression/ priorities table of public operations/ deferent examples	6
• Give the primary values of constants and variables • Spaces and brackets • Type of comments • Special tools	7
• minim tools	8
• Assignment statement, its types/ with explanation examples • Arithmetic expression (equation) • counters, counter types • deferent images for equations belong to C++ language	9
• Formatted Input and output functions • output text • Output numeric values • Output Arithmetic expression • un Formatted Input and output functions	10-11

• Colors functions • Draw pixels functions • Draw lines functions • Draw rectangle functions • Draw Circle functions • Draw pattern functions • Types of screens	
Build workable integral system, include arrays and above mentioned functions	28-30

١٢. Awards and Credits
1. The admission is centralized through the Ministry of Higher Education and Scientific Research, based on the student's grades in the sixth scientific after preparing the online form for that. 2. The average for graduates of the preparatory school / scientific stream. 3. Parallel Admission Channel 4. Distinguished employees who hold a preparatory certificate
١٣. Personal Development Planning
.Daily activities and writing reports for practical programs. .٢Writing project reports. .٣Evaluation of practical programs in the laboratory. .٤Oral exams. .٥Daily exams. .٦Semester exams. .٧Final exams

١٤. Admission criteria
barmajiat al Code lilbaramij walduwal wa'iilujara'at wamilafaat albayanat waistikhdam 'iimkaniat alrasm fiha. bi-2 kayfiat tamthil althawabit walmutaghayirat aleadadiat waaladawat almustakhdamat fi kitabat alshafarat albarmajia fi lughat ++C. bi3- tariqat tamthil albayanat wannwaeiha almustakhdamat fi kitabat alshafarat albarmajiat watanfidh albaramij fi lughat ++C. ba-4 tatbiq asalyb aaldikhal wa'ilikhiraj waistikhdamiha fi kitabat alshafarat albarmajiat w tanfidh baramij watibaeat almuetayat almukhtalifat fi lughat ++C. bi5 - tatbiq halaqat altakrar alshurtiat waghayr alshurtiat fi kitabat wabarmajat mukhtalif albaramij fi lugha .C++ ba-6 tamthil almutaghayirat almuraqamat walmasfufat walsaalsul alhirafiat fi lughat al ++C wakayfiat kitabatiha fi alshafarat albarmajiat fi lughat ++C. ba-7 tutaba
15. Key sources of information about the programme
Demographic support capabilities in the Scientific Advisory Council for State Laboratories. 9. Providing a long-term classroom environment that enables diversification of the education strategy. 10. Providing information technology in the campus library. 11. Hosting experts from outside the institute or from the work environment for which they are preparing to benefit from them Their experience in developing courses according to the needs of the labor market