Ministry of Higher Education and Scientific Research Scientific Supervision and Scientific Evaluation Apparatus Directorate of Quality Assurance and Academic Accreditation Accreditation Department



# Academic Program and Course Description Guide

# **Introduction:**

The educational program is a well–planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

1

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

### **Concepts and terminology:**

<u>Academic Program Description</u>: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

**Course Description**: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

**<u>Program Vision</u>**: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

**Program Mission:** Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

**<u>Program Objectives</u>**: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

<u>**Curriculum Structure:**</u> All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

**Learning Outcomes:** A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

<u>Teaching and learning strategies</u>: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

3

## **Academic Program Description Form**

University Name: Tikrit University Faculty/Institute: Administration and Economics Scientific Department: Economics Academic or Professional Program Name: Department of Economics Final Certificate Name: Bachelor's degree Academic System: Semesters Description Preparation Date: 28/1/2024 File Completion Date:28/1/2024

Signature: Head of Department Name: Assist. Prof. Dr. Ibrahim Abdullah Jasim Date: Signature: Scientific Associate Name: Assist. Prof. Dr. Ashraf Hashim Faris

Date:

The file is checked by: Department of Quality Assurance and University Performance Director of the Quality Assurance and University Performance Department: Date: Signature:

Assist. Lecturer. Osama Musa Farhan

**Approval of the Dean** 

#### 1. Program Vision

□ Effective contribution to building a developed economy based on sound planning in accordance with economic policies that suit reality and following an advanced scientific approach in preparing economic curricula.

#### 2. Program Mission

□ The objective need of the public and private sectors requires the formulation of economic plans and programs at the micro and macro levels and the development of policies to achieve a set of economic and social goals in accordance with priorities embodied by the necessities and available capabilities. Here, it is necessary to prepare specialized cadres to conduct economic research and studies in a way that contributes to deepening economic awareness and maximizing the economic and social benefits of resources. Available.

#### 3. Program Objectives

1. Graduating specialized cadres in the field of planning and building economic policies capable of integrating into the labor market and economic life.

2. Developing students' skills to enable them to integrate into the labor market.

3. Motivating and supporting the faculty in the department to conduct studies and provide economic consultations to public and private entities in Iraq.

4. Active contribution to the preparation of training and continuing education programs to develop expertise and skills in public and private sector institutions.

#### 4. Program Accreditation

1. Does the program have program accreditation? From which side? both

#### 5. Other external influences

1. Is there a sponsor for the program? Yes, the Ministry of Higher Education and Scientific Research, the Presidency of Tikrit University, and the Deanship of the College of Administration and Economics

| 6. Program Structure     |           |              |            |          |  |  |  |  |
|--------------------------|-----------|--------------|------------|----------|--|--|--|--|
| Program Structure        | Number of | Credit hours | Percentage | Reviews* |  |  |  |  |
|                          | Courses   |              |            |          |  |  |  |  |
| Institution Requirements | 5         | 10           | 6.9%       |          |  |  |  |  |
| College Requirements     | 4         | 11           | 7.5%       |          |  |  |  |  |
| Dept Requirements        | 55        | 125          | 85.6%      |          |  |  |  |  |
| Summer Training          | Qualified |              |            |          |  |  |  |  |
| Other                    |           |              |            |          |  |  |  |  |

| 7. Program Description |             |             |              |           |  |  |  |
|------------------------|-------------|-------------|--------------|-----------|--|--|--|
| Year/Level             | Course Code | Course Name | Credit Hours |           |  |  |  |
|                        |             |             | theoretical  | practical |  |  |  |
|                        |             |             |              |           |  |  |  |

## 7. Program Description

| Hours     |             | Course Name                | <b>Course Code</b> | Year-level |
|-----------|-------------|----------------------------|--------------------|------------|
| Practical | Theoretical |                            |                    |            |
|           | ٣           | Management principles      |                    |            |
|           | ٣           | Principles of economics1   |                    |            |
|           | ۲           | Principles of statistics   |                    |            |
| ۲         | ١           | Computer 1                 |                    |            |
|           | ۲           | Arabic                     |                    |            |
|           | ۲           | Human rights and democracy |                    | $1^{st}$   |
|           | ٣           | Economic Readings1 English |                    |            |
|           | ۲           | Principles of mathematics  |                    |            |
|           | ٣           | Accounting principles      |                    |            |
|           | ۲           | Economic Readings 2English |                    |            |
|           | ٣           | Principles of economics2   |                    |            |

|   | <b>.</b> | English                       |                                  |
|---|----------|-------------------------------|----------------------------------|
|   | ۲        | English                       |                                  |
|   | ۴        | Microeconomic theory1         |                                  |
|   | ۲        | Baath crimes                  |                                  |
|   | ۲        | Economic statistics1          |                                  |
|   | ۲        | National Accounts1            |                                  |
|   | ۲        | History of economic facts     |                                  |
|   | ۲        | Economics of money            |                                  |
|   | ۲        | Human resource economics      |                                  |
|   | ٣        | Computer 1                    |                                  |
|   | ۲        | Mathematics for economists    | 2 <sup>nd</sup>                  |
|   | ٣        | Microeconomic theory 2        |                                  |
|   | ۲        | Economic statistics2          |                                  |
|   | ۲        | English language              |                                  |
|   | ۲        | History of economic thought 2 |                                  |
|   | ۲        | Economics of banking          |                                  |
|   | ۲        | National accounts2            |                                  |
| ۲ | ١        | Computer2                     |                                  |
|   | ۲        | Mathematics for economists 2  |                                  |
|   | ٣        | Mathematical economics 1      |                                  |
|   | ۲        | International economy         |                                  |
|   | ۲        | Economic development          |                                  |
|   | ٣        | Public finance                |                                  |
|   | ٣        | Macroeconomics 1              |                                  |
|   | ۲        | agricultural economy          | <b>3</b> <sup>rd</sup> – General |
|   | ۲        | Environmental economics       |                                  |
|   | ۲        | Industrial economy            | Economics                        |
|   | ۲        | Knowledge economics           |                                  |
|   | ۲        | English language              |                                  |
|   | ۲        | Development policy            |                                  |
|   | ۲        | Financial policy              |                                  |
|   | ۲        | Industrial policy             |                                  |

|   | ۲ | Agricultural policy          |                   |
|---|---|------------------------------|-------------------|
|   | ۲ | International politics       |                   |
|   | ٣ | Mathematical economics2      |                   |
|   | ٣ | Macroeconomics2              |                   |
|   | ۲ | Economic development         |                   |
|   | ٣ | Mathematical economics       |                   |
|   | ٣ | Public finance               |                   |
|   | ۲ | Industrial economy           |                   |
|   | ۲ | Educational guidance         |                   |
|   | ٣ | Macroeconomics 1             |                   |
|   | ۲ | English language             | 3 <sup>rd</sup> - |
|   | ۲ | Educational administration   | Economics         |
|   | ۲ | Development policy           |                   |
|   | ٣ | International economy        | Teachers          |
|   | ٣ | agricultural economy         |                   |
| ۲ | ١ | Computer                     |                   |
|   | ۲ | psychology                   |                   |
|   | ٣ | Macroeconomics2              |                   |
|   | ۲ | Educational foundations      |                   |
|   | ۲ | Financial policy             |                   |
|   | ٣ | Critical theory              |                   |
|   | ٣ | Econometrics 1               |                   |
|   | ٣ | Economic systems             |                   |
|   | ۲ | Research methods             |                   |
|   | ۲ | International finance        |                   |
|   | ۲ | Operations research 1        | 4 <sup>TH</sup>   |
|   | ٣ | Economic feasibility studies |                   |
|   | ۲ | Oil economics                |                   |
|   | ۲ | Economic planning            |                   |
|   | ٣ | Monetary policy              |                   |
|   | ٣ | Econometrics2                |                   |

| ۲ | Computer applications (EV)      |   |
|---|---------------------------------|---|
| ٣ | Evaluation of economic projects |   |
| ۲ | Financial institutions          | ] |
| ۲ | Operations research2            |   |
| ۲ | English language                |   |
| ۲ | Planning policy                 |   |
| ۲ | Energy economics                |   |

| 8. Expected learning outcomes of the program                                                                                                                                                                                 |                                                                                                                                              |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| Knowledge                                                                                                                                                                                                                    | Knowledge                                                                                                                                    |  |  |  |  |  |  |  |
| <ul> <li>Providing graduates capable of<br/>economic analysis and forecasting<br/>economic variables.</li> <li>Disseminating knowledge in<br/>government institutions to achieve<br/>the aspirations of society.</li> </ul>  | - Providing the labor market with the necessary skills from human resources.                                                                 |  |  |  |  |  |  |  |
| Skills                                                                                                                                                                                                                       |                                                                                                                                              |  |  |  |  |  |  |  |
| <ul> <li>The ability to solve economic problems that plague economic activity, such as inflation and recession.</li> <li>Exchanging experiences and data with ministries responsible for economic decision-making</li> </ul> | - The ability of graduates of the Department of Economics to conduct<br>economic feasibility studies and economic analysis.                  |  |  |  |  |  |  |  |
| - Providing economic advice to the public and private sectors                                                                                                                                                                | - Our outputs must be knowledgeable and have acquired the skills on how to accomplish the tasks assigned to them.                            |  |  |  |  |  |  |  |
| Ethics                                                                                                                                                                                                                       |                                                                                                                                              |  |  |  |  |  |  |  |
| <ul> <li>Consolidating social and ethical responsibility.</li> <li>Serving the community and meeting its requirements.</li> </ul>                                                                                            | - Adherence to professional ethics and the ability to demonstrate high professional competence.                                              |  |  |  |  |  |  |  |
| <ul> <li>Integrity and transparency.</li> <li>the quality.</li> </ul>                                                                                                                                                        | - The student must believe in the principles of integrity and<br>transparency, and have the ability to apply quality management<br>concepts. |  |  |  |  |  |  |  |

#### 9. Teaching and Learning Strategies

1. Active learning: Encouraging students' active participation in learning processes, such as discussions, group activities, and problem solving, to enhance their deep understanding of mathematical concepts.

Cooperative learning: Encouraging students to work together in small groups to solve issues related to their studies and share ideas, which contributes to enhancing interaction and exchange of knowledge between them.
 Use of technology: Taking advantage of technology to provide interactive educational tools such as computer programs and online resources to enhance students' understanding and motivation.

4. Problem-based learning: presenting specific problems and motivating students to think critically and use

management skills to solve them.

5. Multiple educational strategies: Providing a variety of educational strategies, such as interactive lectures, practical lessons, and practical exercises, to meet the diverse needs of students.

6. Enhancing managerial thinking: Encouraging students to develop managerial thinking skills such as analysis, planning and deduction, by providing stimulating questions and applied problems.

7. Providing immediate feedback: Providing mechanisms to provide immediate feedback to students regarding their performance and understanding of administrative concepts, whether through periodic evaluations or direct interaction with the teacher.

#### 10. Evaluation methods

1. Classroom performance evaluation: This includes evaluating students' performance during lessons, lectures, and workshops, whether through written tests or continuous evaluation of their participation and understanding of the material.

2. Participation in discussions and activities: The extent to which students participate in class discussions, group activities, and individual projects can be assessed, in order to assess the extent of their understanding and interaction with the materials.

3. Tests and assignments: Students may be given regular tests and assessment assignments to evaluate their skills in solving problems related to their field of specialization and their understanding of the concepts presented.

4. Evaluating participation in research: The extent of students' participation in research activities and scientific projects can be assessed, and an evaluation of their presentation style and analysis of their results and conclusions can be provided.

5. Evaluation of practical performance: Students can be evaluated in practical performance through practical visits and participation in applied activities.

6. Evaluating external participation: It includes evaluating the extent of students' participation in external activities such as conferences, seminars, and sports competitions.

7. Evaluation of Personal and Professional Development: Students' personal, professional, and academic development may be evaluated during their participation in the faculty mentoring program.

| 11. Faculty      |                 |             |                     |   |                              |          |
|------------------|-----------------|-------------|---------------------|---|------------------------------|----------|
| Faculty Members  |                 |             |                     |   |                              |          |
| Academic Rank    | Specialization  |             | Special             |   | Number of the teaching staff |          |
|                  |                 |             | Requirements/Skills |   |                              |          |
|                  |                 |             | (if applicable      | ) |                              |          |
|                  | General         | Special     |                     |   | Staff                        | Lecturer |
| Assist. Lecturer | Translati<br>on | Translation |                     |   | Staff                        |          |

#### **Professional Development**

#### Mentoring new faculty members

1- Determine the needs of the university and the department: The needs of the university and the department are determined in terms of the required educational personnel and preferred specializations.

2- Preparing orientation programs: Customized orientation programs are designed targeting new, visiting, full-time and part-time members based on their needs and specializations.

3- Introduction to the university environment: A comprehensive introduction to the university and the Department of Public Administration is provided, including an overview of the department, vision, mission, goals, and available services.

4- Providing supportive resources: The necessary resources and support are provided to new members, including training courses, practical workshops, and technical assistance.

5- Academic orientation: New members are oriented regarding the curricula, research areas, and teaching methods used in the department.

6- Administrative orientation: New members are oriented on administrative procedures, responsibilities, university policies, and codes of conduct.

7- Ongoing support: Ongoing support is provided to new, visiting, full-time and part-time faculty members through advisory sessions, workshops, and periodic evaluations.

#### Professional development of faculty members

1. Identifying needs and setting goals: The needs of faculty members are determined through opinion surveys and performance evaluations, and then specific goals that must be achieved within the program are determined.

2. Designing the development program: Based on the specific needs and objectives, a comprehensive development program is designed that includes a set of activities, training courses, workshops, and educational resources.

Program implementation: The development program is implemented on a regular and organized basis, and this includes organizing workshops, conducting training courses, and providing appropriate educational resources.
 Using effective teaching strategies: Faculty members learn to use and apply modern and effective teaching

strategies, such as cooperative learning, active learning, and educational technology.

5. Evaluation of learning outcomes: The effectiveness of the development program is evaluated by evaluating the learning outcomes of faculty members, such as increasing the level of knowledge, teaching skills, and interaction with students.

6. Continuous development: Continuous feedback and support are provided to faculty members to enhance ongoing professional and academic development.

7. Participation in scientific research and publishing: Faculty members are encouraged to participate in scientific research and publish the results in prestigious academic journals, which enhances their academic standing and contributes to the development of knowledge in their fields.

#### 12. Acceptance Criterion

#### 1- Central admission.

2- Accepting exceptions (families of martyrs, children of faculty, distinguished employees, first in institutes, and international students).

3- Private government education

4- Acceptance of evening studies.

#### 13. The most important sources of information about the program

1- The university, college and department website.

2- Priorities for creating the department.

3- A project to develop and modernize the curricula of colleges of administration and economics in Iraqi universities for the year 2017.

#### 14. Program Development Plan

1- Developing the curriculum for each subject by the teacher.

2- Opening a branch of the third stage (economic teachers) and opening postgraduate studies with a high diploma equivalent to a master's and a doctorate.

3- Developing teaching and administrative staff through courses, seminars and workshops in areas of specialization.

4- Supporting scientific research efforts by encouraging faculty members to publish, especially in international publications.

5- Establishing training programs to develop students' capabilities in the technical and information technology fields.

6- Organizing field visits and scientific trips for students to government institutions.

|            | Program Skills Outline |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|------------|------------------------|----------------|----------|--------------|------------------------------------|--------------|--------------|-------|--------------|--------------|--------------|--------|--------------|--------------|--------------|
|            |                        |                |          |              | Required program Learning outcomes |              |              |       |              |              |              |        |              |              |              |
| Year/Level | Course<br>Code         | Course<br>Name | Basic or | Know         | wledge                             |              |              | Skill | s            |              |              | Ethics |              |              |              |
|            |                        | ор             | optional | A1           | A2                                 | A3           | A4           | B1    | B2           | <b>B3</b>    | <b>B4</b>    | C1     | C2           | <b>C</b> 3   | <b>C4</b>    |
| 2023-2024  |                        | English        |          | $\checkmark$ | $\checkmark$                       | $\checkmark$ | $\checkmark$ | ✓     | $\checkmark$ | $\checkmark$ | $\checkmark$ | ✓      | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |
|            |                        |                |          |              |                                    |              |              |       |              |              |              |        |              |              |              |

• Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

# **Course Description Form**

| 1. Cour       | se Name:                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                    |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| English       |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| 2. Cour       | se Code:                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                    |
|               |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| 3. Seme       | ester / Year:                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |
| 2023-2024     |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| 4. Desc       | ription Preparation Date:                                                                                                                                        |                                                                                                                                                                                                                                                                                                                    |
| 28/1/2024     |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| 5. Availa     | able Attendance Forms:                                                                                                                                           |                                                                                                                                                                                                                                                                                                                    |
| Attendance Sh | eet                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                    |
| 6. Numb       | per of Credit Hours (Total) / Num                                                                                                                                | nber of Units (Total)                                                                                                                                                                                                                                                                                              |
| 2             |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| 7. Cour       | se administrator's name (mer                                                                                                                                     | ntion all, if more than one name)                                                                                                                                                                                                                                                                                  |
| Osama Mo      | ohammed Abdullah                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                    |
| 8. Cours      | e Objectives                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                    |
| Course Objec  | tives                                                                                                                                                            | lIncreasing students' experience and knowledge in the field of<br>operations research and its importance to English<br>Introducing the student to how to use the operations research material<br>and apply it to address English problems<br>Introducing the student to the most important features of the English |
| 9. Teach      | ning and Learning Strategies                                                                                                                                     |                                                                                                                                                                                                                                                                                                                    |
| Strategy      | <ul> <li>Giving in-person and electroni</li> <li>Discussions with students</li> <li>Oral questions for students</li> <li>Blended learning (classroom)</li> </ul> | c lectures                                                                                                                                                                                                                                                                                                         |
| 10. Course    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
| Course Struc  | eture                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                    |
|               |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |

| Week       | Hours | ILOs     | Unit/Module orTopic Title              | Teaching Method | Assessment Method        |
|------------|-------|----------|----------------------------------------|-----------------|--------------------------|
| the first  |       | <u> </u> | Discussing basics of<br>English        | theory          | Follow up on<br>homework |
| the second | 1     |          | Explaining different types of articles | practical       | Follow up on<br>homework |
| the third  | 1     | Tenses   | Presenting the types of                | theory          | Follow up on             |

11.

|            |   |                    | tenses                                                |                       | homework                 |
|------------|---|--------------------|-------------------------------------------------------|-----------------------|--------------------------|
| the fourth | 1 | Pronouns           | Practicing the addressing of pronouns                 | practical             | Follow up on<br>homework |
| Fifth      | 1 | WH Questions       | Explaining the methods of making questions            | theory                | Follow up on<br>homework |
| VI         | 1 | Prepositions       | Detecting the<br>prepositions in<br>sentences         | practical             | Follow up on<br>homework |
| VII        | 1 | Making questions   | Introducing different<br>types of making<br>questions | theory                | Follow up on<br>homework |
| VIII       | 1 | Missing letters    | Detecting the missing letters                         | practical             | Follow up on<br>homework |
| ninth      | 1 | Test               | Test                                                  | Test                  | Follow up on<br>homework |
| The tenth  | 1 | Short Story        | Brain storming<br>questions                           | practical             | Follow up on<br>homework |
| eleventh   | 1 | Short Story        | Brain storming<br>questions                           | theory                | Follow up on<br>homework |
| twelfth    | 1 | Conversation       | Making conversations between students                 | practical             | Follow up on<br>homework |
| Thirteenth | 1 | Questions articles | test methods                                          | practical             | Follow up on<br>homework |
| fourteenth | 1 | Between and Among  | Differentiating between two methods                   | practical             | Follow up on<br>homework |
| Fifteenth  | 1 | Test               | Theoretical + practical test                          | theory +<br>practical | Final exam results       |

| 12. Infrastructure                                                                                     |                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required reading:<br>· CORE TEXTS<br>· COURSE MATERIALS<br>· OTHER                                     | <ol> <li>New Headway Student's book, Liz and John<br/>Soars</li> </ol>                                                                                                                                                                                                                                                          |
| Special requirements (include for<br>example workshops, periodicals,<br>IT software, websites)         | 1) New Headway Student's book, Liz and John<br>Soars                                                                                                                                                                                                                                                                            |
| Community-based facilities<br>(include for example, guest<br>Lectures , internship , field<br>studies) | <ol> <li>Encourage writing research and reports on<br/>English.</li> <li>Urging students to visit the college library<br/>and the central library at Tikrit University<br/>and other universities.</li> <li>Adopting modern technology in searching for<br/>documents and sources in revealing scientific<br/>facts.</li> </ol> |