

Summary of A guide to scientific and cognitive control of study plans

Prepared by the College of Engineering

This is a summary of
"A guide to scientific and cognitive control of study plans"

ملخص

"دليل التحكم العلمي والمعرفي للخطط الدراسية"



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Introduction:

Study Plan: It is an 'intellectual journey' for students, which includes a planned sequence of experiences that will lead to the targeted learning levels.

Course Description: It can be considered as a contract between the instructor and the student, as it aims to guide students to the objectives of the course, the activities that are required to achieve these goals, and how they will be evaluated with them.

Stages of building a new study plan:

General design of the plan:

It includes determining the goal of the plan, the set of skills that the graduate must possess to achieve this goal, followed by defining the set of academic courses that will build these skills for the student. Appropriate teaching strategies are also identified to build these skills.

Create a detailed course map for the plan:

It includes determining the teaching hours for each course, the previous requirement or accompanying it, and the position of the course in the plan. Here, the sequencing, balance and complementarity between the different levels should be considered, as well as the courses of each level.

Detailed description of each course:

The course description aims to guide students to the objectives of the course, what activities are required of them to achieve these goals, and how they will be assessed. The course description includes specifying the course content, its objectives, and its educational outcomes and so on.

The stages of scientific and knowledge arbitration for the study plans

The scientific and cognitive judging process for the study plans goes through three stages:

First: Planning the main elements of the plan:

- The clarity of the general objective of the plan
- The existence of a clear identification of the different skill sets that the graduate is supposed to acquire
- The fulfillment of these outputs for some basic conditions
- A suitable balance for the specialized groups of the curricula of the study plan
- An appropriate distribution of the role of each course in achieving the targeted educational outcomes
- A clear identification of appropriate teaching strategies to achieve the targeted educational outcomes
- A clear identification of appropriate evaluation methods to measure the extent of achievement

Second: Arbitration of the scientific structure of the plan

Fulfill all the items of the plan and the availability of all structural requirements

- Reviewing the suitability of the parts of the plan.
- Examine the extent of the integration of the parts of the plan.
- Examine the extent of the balance of the targeted education outcomes.

Third: Comprehensive course description

- Review the main data; Name and code of the course, credit hours, contact hours, etc.
- Evaluating the calculation of credit hours; so that one credit hour is counted for a course if the minimum expected time for studying this course is between 48 to 54 hours per semester.
- Review course content.
- Evaluating how to formulate the objectives of the course.
- Assessment of the educational outcomes of the course.
- Ensure that the time distribution of the course contents on the academic weeks is appropriate
- Course grades distribution
- Textbook data and suggested references.

Stages of building a new study plan

No.	Clause	Explanatory statement	Used form
1	Description of the study program related to the plan subject to arbitration	According to the work mechanisms specified by the study plans and programs unit in the administration	The set of models specified in the unit's working manual
2	The general objective of the study plans	Example: Preparing the student to work as a civil engineer in the field of construction	001
3	The learning outcomes of the program	An example of the student's acquisition of a set of cognitive and behavioral skills, etc.	001
4	Statement of study plan decisions	A list of all the courses showing the code for each course, the credit hours for it, the scientific content and the previous or accompanying course	002
5	Courses Matrix	Distributing the courses across academic levels in a matrix form for each level	003
6	Matrix of education outcomes versus courses	A map to determine the role of each course of the study plan in achieving some or all of the program's targeted educational outcomes	004
7	Learning Outcomes Matrix versus Teaching Strategies	A map to define the role of each of the proposed education strategies in achieving some or all of the program's targeted learning outcomes	005
8	Matrix of learning outcomes versus evaluation methods	A map to define the role of each of the proposed measurement and evaluation methods in measuring the achievement of some or all of the targeted educational outcomes of the program	006
9	Course Index	A list of all courses for each course includes the following: Course name - course code - credit hours communication hours - prerequisite accompanying requirement - course content	007
10	Course description	A separate detailed description for each course that includes: Course name - course code - credit hours - Course content Course objectives - Course learning outcomes - Time distribution of	According to the forms specified by the study plans and programs unit in the administration

		contents over academic weeks - Course grades distribution -Textbook data and suggested references	
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Scientific and knowledge arbitration procedures for study plans:

The course requires that the completion of the procedural steps for the formation of the committees for the study plans in the section submitting the plan, as well as of all the procedures for the approval and graduation of the course, study programs and so on.

The arbitration procedures shall take place as follows:

1. The Scientific and Knowledge Studies Unit in the administration reviews the incoming data to ensure the extent of the plan's readiness for scientific arbitration, which includes:
 - Reviewing the fulfillment of all required forms
 - Ensuring that all fields of these forms are complete
 - Ensuring that all course descriptions are completed and homogeneously between them
2. After making sure that the plan is ready for arbitration, the unit sends it completely to the advisory committee to obey the directive in relation to:
 - Internal arbitration of the plan
 - If there are specialists at the university with sufficient experience in the same field
 - Local arbitration
 - Regional arbitration
 - International arbitration
 - What the committee deems otherwise
3. The plan is sent for arbitration where the arbitrators arbitrate the study plan according to the main elements of the plan and its general construction, as well as detailed arbitration to describe the courses.
4. After receiving the evaluation reports from the arbitrators, the plan is sent again to the section that owns the plan to make the amendments mentioned in the arbitrators' report.
5. The Scientific Studies Unit at the Plans Department reviews the amendments according to the judges' reports, and after making sure that the plan matches the requirement.

The proposed timetable for the evaluation phases

No.	Stage	Responsible for implementation	Suggested time period
1	Review the plan to ensure its readiness for arbitration.	Scientific Studies Unit, Department of Plans.	Three working days
2	Review the plan to determine the arbitration body.	Advisory committees	Five working days
3	Plan arbitration	Arbitrators	Ten working days
4	Making the necessary infringements according to the arbitrators' report.	The department with the plan	Ten working days
5	Final review of the plan	Scientific Studies Unit, Department of Plans	Five working days
	Total		33 working days

Forms for the data required to arbitrate the study plan:

- Model 1: data on the elements of the study plan
- Model 2: Specialized Courses Groups
- Model 3: Course Statement of the Study Plan (Courses Catalog)
- Model 4: Courses matrix distributed over semesters
- Model 5: Distribution of Education Outcomes to Academic Courses
- Model 6: Distribution of educational strategies and methods to the targeted education outcomes
- Model 7: Distribution of evaluation methods on the targeted education outcomes

Model 1 Data on the elements of the study plan Version 1

First: The general objectives of the study plan:

These are the reasons for which the student is pursuing this scientific journey.

Second: The targeted educational outcomes:

A set of skills that the student who passes this academic program will acquire

Third: Suggested Education Strategies:

A set of educational methods by which the study plan will be implemented to achieve the intended outcomes.

Fourth: Suggested Evaluation Methods:

Giving students feedback on his performance on continuous basis to assess the level of his achievement.

Model 2 Specialized Courses Groups Version 2

Distribution of hours: the number of accredited units (theoretical hours - exercise hours - scientific hours)

University Courses

Course Code	Course Name	Dependency	Level	Hours	Name of the pre-requisite / ancillary	Course Code2
101 Arabs	Language skills	University	3	2	.	.
103 Arabs	Arabic editing	University	8	2	.	.

College Courses

- Department decisions from outside the department
- Department Courses and Tracks 0.
- General Subject Group 1.
- Manufacturing Engineering Group 2.
- Design Group 3.
- Practical training - laboratories - graduation project




Model 3 Course Statement of the Study Plan Version 1

E 201: Introduction to Engineering Design I: 3 (3-1-2) Engineering design and engineering approaches to solve problems, design of processes and products and so on.

Previous course: Language 102 The accompanying course: None

Model 4 Courses matrix distributed over semesters Version 1

Distribution of hours (theoretical hours - exercise hours - scientific hours)

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