



**Mansoura University
Faculty of Engineering**

Production and Mechanical Design Engineering Department

**Postgraduate Program Specifications
Diploma: Managerial Systems Engineering**



Production and Mechanical Design Engineering Department
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1 Basic Information

Department Offering the Program: **Production and Mechanical Design Engineering**

Program Title: **Management Systems Engineering**

Field of Program: **Industrial Engineering**

Program Type: **Diploma**

Date of Curriculum Approval: **1984**

Language: English

Program Duration: 30 Weeks/Year

Program Systems: Two Years (12 hrs/Week)/One Year (24 hrs/Week)

Number of Courses: 8

Total Hours: 90×8

Coordinator: Prof. Dr. Hassan Ali Mohamed Soltan

Internal Evaluator:

External Evaluator:

2. Professional Information

2.1 Program Vision, Mission and Aims

2.1.1 Program Vision

The program restrains a wide range of contemporary and innovative management practices that hold enough capability and flexibility to manage organizations and make decisions at micro and macro levels. Thus, the program becomes efficient and effective enough to accommodate different types of organizations facing large varieties of strategic, technical, and operational incidences.

2.1.2 Program Mission

The program provides the graduates with all tools to produce creative solutions for inherent managerial problems of industrial and service organizations in addition to design and analyze management systems, and provide plans give the strategic direction of the whole organization.

2.1.3 Program Aims

The program has several explicit and implicit aims. The main program aims, as correlated to its attributes (Table 1), are

1. Design and analyze management systems.
2. Set the best management practices and models.
3. Introduce and implement robust solutions for the managerial problems using creative information systems, decision making systems, and synergistic management paradigms.

2.2. Attributes

The graduate of the postgraduate diploma programs must be able to

1. Apply knowledge of specialized engineering concepts that gained through the professional practice.
2. Identify and solve engineering problems.
3. Master some professional skills and use of appropriate technological means to serve the professional practice.
4. Communicate and lead team works effectively through professional system.

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Department Head: **Prof. Dr. Hassan Ali Soltan**



5. Make decisions in light of available information.
6. Employ available resources efficiently.
7. Consider the detrimental impact of the engineer role on society and environment.
8. Display professional responsibilities and ethical, societal and cultural concerns.
9. Recognize the need to develop itself and engage in continuous learning.

Table 1. Aims/Attributes matrix.

At. Ai.	01	02	03	04	05	06	07	08	09
1									
2									
3									

Attributes 4 and 9 is the most correlated and critical.

2.3. ILOS

2.3.1. (a) Knowledge and Understanding

With the completion of the postgraduate diploma program, the graduate will be able to understand

1. Theories, concepts and specialized knowledge of the learning area and also sciences appropriate to the professional practice.
2. Moral and legal ethics of the professional practice in the area of specialization.
3. Concepts and principles of quality of the professional practice in the area of specialization.
4. The impact of the professional practice in the environment and its preservation.

2.3.2. (b) Intellectual Skills

With the completion of the postgraduate diploma program, the graduate will be able to

1. Specify and analyze problems in the area of specialization with arrangement according to their priority.
2. Solve specific problems in the area of specialization.
3. Demonstrate a high level of competence in the analysis of researches and subjects related to the specialization.
4. Risk assessment in the professional practices.
5. Take technical decisions based upon available information.

2.3.3. (c) Professional and Practical Skills

With the completion of the post graduate diploma program, the graduate will be able to

1. Apply professional skills in the area of specialization.
2. Write technical reports.

2.3.4. (d) General and Transferable Skills

With the completion of the post graduate diploma program, the graduate will be able to

1. Communicate effectively in different aspects.
2. Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice.



3. Adopt self-assessment and specify his personal learning needs.
4. Use different resources for information and knowledge.
5. Collaborate effectively within multidisciplinary team with good time management.
6. Lead a team in familiar professional contexts.
7. Continuous self-learning.

2.4. Curriculum Contents

2.4.1. Program Contents

No.		Course	Code	Lecture
1	First Year	Assessment of Current and Proposed Projects	PRE4531	3hrs/week
2		Processing of Managerial Problems	PRE4532	3hrs/week
3		Methods of Decision Making	PRE4533	3hrs/week
4		Design of Scientific Management Systems	PRE4534	3hrs/week
5	Second Year	Design of Management Information Systems	PRE4635	3hrs/week
6		Design and Analysis of Computer Systems	PRE4636	3hrs/week
7		Computer Applications	PRE4637	3hrs/week
8		Independent Research	PRE4638	3hrs/week

2.4.2. Teaching and Learning Methods

No.	Teaching Method
1	Lectures
2	Discussion meetings
3	Textbooks and periodical search

2.4.3. Student Assessment

No.	Assessment Method	Weight	Weeks	ILOs
1	Quizzes	10%	6,12,18,24,30	a, b, c
2	Verbal Examination	5%	6,12,18,24	a, b, c
3	Mid Year Examination	10	14	a, b,
4	Reports	5%	6,12,18,24	c, d
5	Final Examination	70%	32	a, b, c
Total Weight		100		



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2.4.4. Program Matrix

No.	Course	Code	Aims	ILOS			
				Knowledge & Understanding	Intellectual Skills	Professional & Practical Skills	General & Transferable Skills
1	Assessment of Current and Proposed Projects	PRE4531	1,3	01,03,05	01,03,06	01,03	04,07
2	Processing of Managerial Problems	PRE4532	1,2	01,04,05	02,03,07	01,03	02,04
3	Methods of Decision Making	PRE4533	1,3	01,03	01,07	01,03	01,04
4	Design of Scientific Management Systems	PRE4534	1,2	04,05	01,03	01,03	02,05
5	Design of Management Information Systems	PRE4635	1,3	01,03	01,02	02,03	01,02
6	Design and Analysis of Computer Systems	PRE4636	1,2	01,05	01,06	01,03	02,04
7	Computer Applications	PRE4637	1,3	01,03	01,02,03	01,03	02,04,08
8	Independent Research	PRE4638	1,2,3	01,05	01,06	01,03	02,04

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Appendixes

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