

٣- توصيف مقررات

الكلية الصحية



Quality Assurance Unit
Pharm. Organic Chem. Department



Assiut University
Faculty of Pharmacy

Course Specification

Course Specification

1-Basic Information

Title: Advanced Medicinal Organic Chemistry

Code:

Level : II special Master degree

Department: Pharm. Organic Chemistry.

Unit: 2/ week

Lecture: 2hr/week

Tutorial/Practical:

Total: 2hr/week

2- Aims of Course

- j) Understand the physical and chemical properties of pharmaceutical molecules and their importance in therapeutic action.
- k) Use information technology programmes in literature survey.

3- Intended Learning Outcomes of Course(ILOs)

a- Knowledge and Understanding:

- a1- Be aware of the basics of sciences related to the field of organic chemistry, drug design and synthesis.
- a2- Be aware of the basics of reactions mechanisms, physico-chemical properties in addition to instrumental analysis and application of quality basics in routine scientific performance.

b- Intellectual Skills:

- b4- Self-evaluation of own research and offer a vision for the development and continuity of dealing with problems.
- b5- Support decisions with documents and references.

c- Professional and practical Skills:

- c4- Write and present research data and reports efficiently.
- c5- Manage time efficiently.

d- General and Transferable Skills:

- d1-Use efficiently information technology techniques in literature survey and computer-aided drug design in the field of the specialization.
- d2- Communicate efficiently with colleagues and coworkers.
- d4-Improve knowledge continuously through self-learning.

d5- Participate in scientific seminars and conferences

4- Course Contents

Topic	No. of hours	Lecture	Tutorial / Practical
Physicochemical properties affecting drug action.	10 h.		
Drug metabolism	8 h.		
Drug design	8 h.		
Isosterism and bioisosterism.	4 h.		
Essay related to thesis.	10 h.		
Total	40 h.		

5- Teaching and Learning Methods

- 4.1- lectures
- 4.2- problem solving
- 4.3- essay
- 4.4- seminar

6- Teaching and learning methods for disables

Provide extra one chance to set exam.
Extra hours.

7- student Assessment

a- Student Assessment methods

- 6.1- written examination to assess 75% of full mark .
- 6.2- essay to assess 25% of full mark.
- 6.3- to assess
- 6.4-to assess

b- Student Assessment Schedule

No.	Assessment	week
1.	written examination	Last week
2.	essay	Last week
3.		
4.		

c- Weighting of Assessments

No.	Exam.	Mark	%
1.	Mid-Term Examination		
2.	Final-Term Examination	75	75%
3.	Oral Examination		
4.	Practical Examination		
5.	Semester Work (essay)	25	25%
6-	<u>Other types of assessment</u>		
	<u>Total</u>	100	100%

8- List of References

a-Course Notes

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b- Essential Books (Text Books)

- a) Andrejus Korolkovas "Essentials of Medicinal chemistry" 2nd edition 1988, Wiley-interscience Publication, New York, USA. J.L.McGuire "pharmaceutical", Classes, Therapeutic agents, Areas of application, 2000, Wiley-VCH Verlag GmbH, Weinheim.
- b) M.E.Wolff Burger's Medicinal Chemistry and Drug Discovery "5th edition (1995-1997), Wiley-interscience Publication, New York.
- c) William O. Foye "Principle of Medicinal Chemistry, 4th edition (2002), William & Wilkins, London.
- d) A. Gennaro (Editor), Remington's pharmaceutical sciences, 20th edition (2000), Lippincott Williams & Wilkins, Maryland; USA.
- e) Wilson and Gisvold's "Textbook of organic, Medicinal and Pharmaceutical chemistry " 10th edition (1998), lippencott-raven Publishers, Philadelphia, New York.

c-Recommended Books

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d- Periodicals, Web Sites, etc

- a) Journal of Medicinal Chemistry.
- b) European journal of medicinal Chemistry.
- c) Bioorganic & Medicinal Chemistry.

Program Coordinator: Dr. Samia Galal Ahmed Abdel Moty

Head of Department: Dr. Mostafa A. Hussein

Date: 16/10/2010

University

Course Title

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Matrix of the Intended Learning Outcomes (ILOs) of the Course

Topic	Week	Knowledge and Understanding	Intellectual Skills	Professional and Practical Skills	General and Transferable Skills
Physicochemical properties affecting drug action.	1-4	a1, a2	b4	c4	d1
Drug metabolism	5-8	a2			
Drug design	9-12	a1	b4		d2,d5
Isosterism and bioisosterism.	13-16	a2			
Essay related to thesis.	17-20	a2	b4, b5	c5	d4, d5

Program Coordinator: Dr. Samia Galal Ahmed Abdel Moty

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Quality Assurance Unit
Pharm. Organic Chem. Department



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Faculty of Pharmacy

Course Specification

Course Specification

1-Basic Information

Title: advanced pharm. Organic chemistry Code:

Level : II special Master degree

Department: pharm. Organic chemistry

Unit: 2/week

Lecture: 2hr/week

Tutorial/Practical:

Total: 2hr/week

2- Aims of Course

- l) Understand the different reactions mechanisms that deals with organic compounds and interactions of the molecules.
- m) Define the stereochemistry of compounds.

3- Intended Learning Outcomes of Course(ILOs)

a- Knowledge and Understanding:

- a1- Be aware of the basics of sciences related to the field of organic chemistry, drug design and synthesis.
- a2- Be aware of the basics of reactions mechanisms, physico-chemical properties in addition to instrumental analysis and application of quality basics in routine scientific performance.

b- Intellectual Skills:

- b1- Make a research plan and write scientific methodology for the synthesis of pharmaceutical organic chemistry project.
- b2- Learn the ways to resolve the problems and select the appropriate solutions for them.
- b3- Evaluate risk factors and indicators of success of a suggested study in the field of the synthesis of pharmaceutical organic molecules.

c- Professional and practical Skills:

- c1-
- c2-
- c3-

d- General and Transferable Skills:

- d1- Use efficiently information technology techniques in literature survey and computer-aided drug design in the field of the specialization.

4- Course Contents

Topic	No. of hours	Lecture	Tutorial / Practical
Nomenclature and rearrangement reactions	10 h.		
Carbocations, carbanions, free radicals, carbenes, nitriles and ylides.	10 h.		
Name reactions in organic chemistry.	5 h.		
stereochemistry	15 h.		
Total	40 h.		

5- Teaching and Learning Methods

- 4.1- lectures.
- 4.2- discussion hours
- 4.3-
- 4.4-.....

6- Teaching and learning methods for disables

- Provide extra one chance to set exam.
- Extra hours.

7- student Assessment

a- Student Assessment methods

- 6.1- written examination to assess 100% of full mark.

b- Student Assessment Schedule

No.	Assessment	week
1.	Written examination	Last week
2.		
3.		
4.		

c- Weighting of Assessments

No.	Exam.	Mark	%
1.	Mid-Term Examination		
2.	Final-Term Examination	100	100%
3.	Oral Examination		
4.	Practical Examination		
5.	Semester Work		
6-	Other types of assessment		
	<u>Total</u>		100%

8- List of References

a-Course Notes

b- Essential Books (Text Books)

- a) R. T. Morrison and R. N. Boyd, "Organic Chemistry", 1992, peter sykes
- b) I.L. Finar, Sorell, F.D. Gunston, "Guidebook to stereochemistry.
- c) Organic chemistry textbooks, Jerry March and Jisvold.

c-Recommended Books

d- Periodicals, Web Sites, etc

- d) Journal of Medicinal Chemistry.
- e) European journal of medicinal Chemistry.
- f) Bioorganic & Medicinal Chemistry.

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Matrix of the Intended Learning Outcomes (ILOs) of the Course

Topic	Week	Knowledge and Understanding	Intellectual Skills	Professional and Practical Skills	General and Transferable Skills
Nomenclature and rearrangement reactions	1-5	a1, a2	b2, b3		d1
Carbocations, carbanions, free radicals, carbenes, nitriles and ylides.	6-10	a1, a2	b2, b3		d1
Name reactions in organic chemistry.	11-15	a1, a2	b1, b2, b3		d1
stereochemistry	16-20	a1, a2	b1		d1

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Quality Assurance Unit
Pharm. Organic Chem. Department



Assiut University
Faculty of Pharmacy

Course Specification

Course Specification

1-Basic Information

Title: applied organic chemistry

Code:

Level : II special Master degree

Department: Pharm. Organic Chemistry.

Unit: 2/week

Lecture:1.5/week Tutorial /Practical: 0.5/week Total: 2/week

2- Aims of Course

- n) Design experiments to solve problems of drug molecules synthesis.
- o) Use effectively the principles of Scientific research in dealing with the problems of organic compounds synthesis

3- Intended Learning Outcomes of Course(ILOs)

a- Knowledge and Understanding:

- a3- Define basics of good laboratory practice (GLP) in chemistry lab.
- a4- Be aware of concepts and basics of laboratory safety and waste disposal.
- a5- Be aware of basic research ethics.

b- Intellectual Skills:

- b1- Make a research plan and write scientific methodology for the synthesis of pharmaceutical organic chemistry project.
- b2- Learn the ways to resolve the problems and select the appropriate solutions for them.
- b4- Self-evaluation of own research and offer a vision for the development and continuity of dealing with problems.
- b5- Support decisions with documents and references.

c- Professional and practical Skills:

- c 1- Master practical research procedures according to the good laboratory practice (GLP) basics in chemistry labs.
- c2- Perform experiments safely and environmentally hazardless.
- c3- Test equipments and methods used in chemistry research.
- c4- Write and present research data and reports efficiently.
- c5- Manage time efficiently.

d- General and Transferable Skills:

- d1- Use efficiently information technology techniques in literature survey and computer-aided drug design in the field of the specialization.
- d3- Work in a team and offer expertise and advice to others.
- d4- Improve knowledge continuously through self-learning.
- d5- Participate in scientific seminars and conferences

4- Course Contents

Topic	No. of hours	Lecture	Tutorial / Practical
IR	4h.	3	1
NMR (1H, C13, 2D-NMR)	17 h.	15	2
MS	4h.	4	
Purification and drying of organic compounds.	15 h.	8	7
Total	40 h.	30	10

5- Teaching and Learning Methods

- 4.1- lectures.
- 4.2- problem solving.
- 4.3-.....
- 4.4-.....

6- Teaching and learning methods for disables

- Provide extra one chance to set exam.
- Extra hours.

7- student Assessment

a- Student Assessment methods

- 6.1- written examination to assess 100% of full mark.

b- Student Assessment Schedule

No.	Assessment	week
1.	written examination	Last week
2.		
3.		
4.		

c- Weighting of Assessments

No.	Exam.	Mark	%
1.	Mid-Term Examination		
2.	Final-Term Examination	100	100%
3.	Oral Examination		
4.	Practical Examination		
5.	Semester Work		
6-	<u>Other types of assessment</u>		
	Total		100%

8- List of References

a-Course Notes

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b- Essential Books (Text Books)

- a) Silverstein, R, G. bassler, and T. Morrill. Spectrometric Identification of organic compounds. New York, Ny. John Willey and Sons. Inc., 1998.
- b) Hamming, M and N. Foster. Interpretation of Mass spectra of organic compounds, New York, Ny, academic press.

c-Recommended Books

.....

d- Periodicals, Web Sites, etc

- g) Journal of Medicinal Chemistry.
- h) European journal of medicinal Chemistry.
- i) Bioorganic & Medicinal Chemistry.

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Matrix of the Intended Learning Outcomes (ILOs) of the Course

Topic	Week	Knowledge and Understanding	Intellectual Skills	Professional and Piratical Skills	General and Transferable Skills
IR	1-2	a5	b1,b4,	c4	d1,d5,d4
NMR	3-11	a5	b1,b4	c4	d1,d5,d4
MS	12-13	a5	b1,b4	c4	d1, d5,d4
Purification and drying of organic compounds.	14-20	a3, a4	b2, b5	c1, c2, c3, c5	d3,d4

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