



# Course Specifications

Muharram 1437 H

Institution:	College of Education.
Academic Department :	Biology Department
Programme :	Biology Program
Course :	Parasitology (ZOO 412)
Course Coordinator :	Prof. Dr. Hala Ali Abd- El Salam Saleh
Programme Coordinator :	Dr. Mona bdul Latif Makkie
Course Specification Approved Date :	30/ 11 / 1433 H



## A. Course Identification and General Information

1 - Course title :	Parasitology.	Course Code:	ZOO 412
2. Credit hours :	3hrs (2th+1p)		
3 - Program(s) in which the course is offered:	Biology Program		
4 – Course Language :	Arabic language		
5 - Name of faculty member responsible for the course:	Prof. Dr. Hala Ali ABD-El Salam Saleh.		
6 - Level/year at which this course is offered :	Seventh Level		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>ZOO121</li> </ul>		
8 - Co-requisites for this course (if any) :	(-)		
9 - Location if not on main campus :	(-)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	60 %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage?	-
D - e-learning	<input checked="" type="checkbox"/>	What percentage?	10 %
E - Correspondence	<input type="checkbox"/>	What percentage?	-
F - Other	<input checked="" type="checkbox"/>	What percentage?	30 %
Comments :	Other : includes teaching the practical part, which deals with practical lessons and the application the theoretical part.		

## B Objectives

<p><b>What is the main purpose for this course?</b></p> <p>During studying this course, the student recognizes the parasites; parasitism relationship and its effects on the host in the animal world . Furthermore, throw the light on some of the important parasites such as parasitic :protozoa, worms and arthropods that parasitize humans and animals ; their life cycle and how to resist and avoid infection by parasites.</p>
<p><b>Briefly describe any plans for developing and improving the course that are being implemented :</b></p> <p>Updating the course materials based on the latest developments in the field of specialization for example( updating the course presentation, pictures, videos and lab.</p>

## C. Course Description

### 1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
<ul style="list-style-type: none"> <li>Biological study on the environment and the spread of parasites.</li> <li>studying the ways that follow by parasites in parasitism.</li> </ul>	1	4





<ul style="list-style-type: none"> <li>The effects of parasitism on the host</li> </ul>		
Biological, taxonomical, anatomical and pathological study on selected samples of important parasites that infect humans and animals include the following: <b>1-Subkingdom Protozoa:</b> <i>Entamoeba histolytica</i> , <i>Entamoeba coli</i> . <i>Entamoeba dispar</i> <i>Acanthamoeba sp.</i> , <i>Naegleria fowleri</i> \ <i>Giardia lamblia</i> . <i>Trichomonas vaginalis</i> . <i>Trypanosoma sp.</i> <i>Leishmania sp</i> <i>Plasmodium sp.</i> . <i>Balantidium coli</i> . <i>Toxoplasma gondii</i>	5	20
Mid-term 1 + Feed back	1	3
<b>Phylum Platyhelminths :</b> <i>Fasciola gigantica</i> 9 <i>Fasciola hepatica</i> . <i>Schistosoma haematobium</i> 9 <i>Schistosoma manoni</i> . <i>Heterophyes heterophyes</i> <i>Dicrocoelium denariticum</i> <i>saginata</i> , <i>Taenia solium</i> . <i>Hymenolepis nana</i> . <i>Echinococcus granulosus</i> .	3	12
<b>3-Phylum:Nematoda:</b> <i>Nematoda</i> , <i>Ascaris lumbricoides</i> , <i>Entrobious vermicularis</i> , <i>Ancylostoma duodenale</i> .	1	4
Mid-term 2 + Feed back	1	3
<b>4-Phylum:Nematoda:</b> <i>Trichinella spiralis</i> <i>Wchereia bancrofti</i>	2	8
Brief study of the arthropods with medical and veterinary importance and its effect on man and domesticated animals such as : <i>Anopheles</i> . <i>Culex</i> . <i>Musca domestica</i> , <i>Phlebotomus</i> , <i>Fleas</i> , <i>Lice</i> , <i>Hard ticks</i> , <i>Soft ticks</i> . <i>Sarcoptes scabi</i>	1	4

## 2. Course components (total contact hours and credits per semester):

System	Credit	Contact Hours			Self-Study	Others	Total
		Lecture	Laboratory	Practical			
NCAAA	3 ch	28	30	-	-	-	58
ECTS	4.8 cp	28	30	-	65	20	134

## 3. Additional private study/learning hours expected for students per week.

3hours

## 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
<b>1.1.1</b>	Recognize taxonomy, environments and hosts of parasites	Lectures,	-Homework -Written Exams
<b>1.2.1</b>	Determine the effects of parasitism on the host and disease caused by various parasites to hosts.	-Lectures - E learning -Discussion	-Written Exams
<b>2.0</b>	<b>Cognitive Skills</b>		





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
2.1.1	compare between the different types of parasites and hosts	-Lectures -Brain storm - E learning	-Written Exams --Homework
2.2.1	Illustrate the life cycle of different parasites.	-Lectures -- E learning	-Written Exams --Homework
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.2.1	Work effectively in team	Cooperative learning	Research papers
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.2.1	Demonstrate the Preparation of research papers and presentations by using technology in good manner	Self-education	Research papers
<b>5.0</b>	<b>Psychomotor</b>		
5.2.1	Diagram life cycles of parasites through examination of exposed microscopic specimens	Lab strategy	-Practical Exam -lab reports.

### 5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	1st Mid-term exam	5 <sup>th</sup> week	10%
2	2nd Mid-term exam	12 <sup>th</sup> week	10%
3	Activities (assignment, homework, reports, continuous evaluation in lab.and others)	During the semester.	10%
4	Practical exam	16 <sup>th</sup> week	20%
5	Final theoretical exam	17-19 <sup>th</sup> week	50%

### D. Student Academic Counseling and Support

- Email : hala.ali2010@yahoo; h.saleh.mu.edu.sa
- There will be a schedule for office hours of each staff declared to the students.
- Private electronic gate teaching university site staff

### E. Learning Resources

#### 1. List Required Textbooks :

- Shihawi, Mohammed Sadiq Arafa(1924H): Medical parasites and disease vectors,
- . Attiyvi, Yahya Zakaria Veterinary Parasitology(1998)





## 2. List Essential References Materials :

- Practical book:  
Husseini, Ahmed Hammad and tend Shenouda Demian: practical animal biology
- Shihawi, Mohammed Sadiq Arafa(1424H): Medical parasites and disease vectors.

## 3. List Recommended Textbooks and Reference Material :

- Ruppert,Edward,E. and Robert,D., Barnes, 1994: Invertebrates zoology, 6<sup>th</sup>ed. Stunders College publishing.
- Dawit Assafa, Ephrem Kibru, S. Nagesh, Solomon Gebreselassie, Fetene Deribe, Jemal Ali (2004): Medical Parasitology..
- Lynne S. Garcia (2006): Diagnostic Medical Parasitology.
- Lynne S. Garcia (2006): Diagnostic Medical Parasitology.

## 4. List Electronic Materials :

- <http://en.wikipedia.org/wiki/parasitology>
- <http://en.wikipedia.org/wiki/invertbrates>
- Encycopedia(parasitology)

## 5. Other learning material :

- computer-based programs/CD, professional standards or regulations and software





## **F. Facilities Required**

### **1. Accommodation**

- The number of seats in classrooms and lab. is suitable and no need for extra seats.
- classrooms be equipped with with smart board and e-podium and laboratories provided with smart board
- Saving devices such as microscopes in the lab, microscopic specimens and other laboratory requirements

### **2. Computing resources**

- The classrooms provided with smart board and e-podium and laboratories provided with smart board.

### **3. Other resources**

- The lab. is in need to complete set of parasites

## **G- Course Evaluation and Improvement Processes**

### **1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:**

- Questionnaire to measure student achievement in decision
- Questionnaire to measure the quality of scientific references
- Analyze the grades of students in the tests statistically and interpreted.

### **2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :**

- Evaluating faculty member by students through the questionnaire.
- Evaluation of the course by students through the distribution of questionnaires at the end of the semester
- Periodic review of a course specification

### **3 Processes for Improvement of Teaching :**

- The provision of modern scientific references and scientific journals the library.
- Provide access to the Internet for students Library.
- Programs and training sessions for faculty members outside official working hours.
- Ensuring Saving facilities and laboratory supplies required for the course

### **4. Processes for Verifying Standards of Student Achievement**

- Check marking by an independent member
- Forming exam committee from the department members to review the course exam

### **5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :**

- Regular meetings between students for the positive and negative aspects
- Determine the strengths and weaknesses to overcome disadvantages
- Review and study plans
- The opinions of students and accept constructive criticism.

**Course Specification Approved**





**Department Official Meeting No (6) Date 30 / 11 / 1433 H**

**Course's Coordinator**

**Name :** Hala Ali Saleh  
**Signature :** Hala Ali.  
**Date :** 12/ 4 / 1437 H

**Department Head**

**Name :** Mona Makkie  
**Signature :** Mona Makkie.  
**Date :** 12/ 4 / 1437 H



Institution:	Education Collage
Academic Department :	Biology
Programme :	Biology
Course :	Embryology
Course Coordinator :	Dr. Zeinab Mohammed Saleh Abdelmoein
Programme Coordinator :	Dr. Mona Makkie
Course Specification Approved Date :	30/ 11 / 1433 H





## A. Course Identification and General Information

1 - Course title :	Embryology	Course Code:	ZOO 411
2. Credit hours :	(3)		
3 - Program(s) in which the course is offered:	Biology		
4 – Course Language :	Arabic		
5 - Name of faculty member responsible for the course:	Dr. Zeinab Mohammed Saleh Abdelmoein		
6 - Level/year at which this course is offered :	seventh		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>..Comparative Animal Anatomy ZOO 322</li> </ul>		
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>No</li> </ul>		
9 - Location if not on main campus :	No		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	yes	What percentage?	50. %
B - Blended (traditional and online)	Home work	What percentage?	5. %
D - e-learning	D2I	What percentage?	15 %
E - Correspondence		What percentage?	..... %
F - Other	Other- lab	What percentage?	30 %
Comments :	<p>.....</p>		

## B Objectives

<p>What is the main purpose for this course?</p> <p>The expected purpose after the course study is the student is able to differentiate between the phases of fetal development (cleavage - gastrulation- organization) in each of the Amphioxus ,frog, chicken and mammals and described histological structure of different types of placenta and communicate effectively in group and individual discussions and take responsibility for her education</p>
<p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <p>1. Increase the number of credit hours of the course in to Study some of the topics in detail</p> <p>2. course study in two semesters instead of one semester</p>





**3. The application of D2L**

**C. Course Description**

**1. Topics to be Covered(Theoretical+ Practical)**

List of Topics	No. of Weeks	Contact Hours
1- Introduction to Embryology, development of the embryonic gonads and histological structure of mature gonads in each of the frog, bird and mammals.	2	8
2- gametogenesis (spermatogenesis and oogenesis) in addition to fertilization steps	2	8
3- Types of ova in deferent chordates -cleavage and blastocyst formation in a Amphioxus	1	4
Midterm 1+ feedback	1	3
4- cleavage and blastocyst formation in frog, chicken – and placental mammals	2	8
5- Gastrulation and formation of the three embryonic layers (ectoderm- mesoderm and endoderm) , the neural tube , notochord in each of the following, Amphioxus ,frog,	2	8
Midterm 2+ feedback	1	3
6- Further development of blastocyst in chicken and placental mammals to form trilaminar embryonic disk, neural tube and notochord	2	8
7- Structure and functions of extra embryonic membranes in both birds and mammals - formation and types of the placenta in placental mammals.	2	8

**2. Course components (total contact hours and credits per semester):**

	Credit	Contact Hours			Self-Study	Other	Total
		Lecture	Laboratory	Practical			
<b>NCAAA</b>	3 ch	28	30	-	-	-	58
<b>ECTS</b>	4.7 cp	28	30	-	70	10	138

**3. Additional private study/learning hours expected for students per week.**

4 hrs.
--------

**4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy**

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		





	<b>NQF Learning Domains And Course Learning Outcomes</b>	<b>Course Teaching Strategies</b>	<b>Course Assessment Methods</b>
<b>1.1.1</b>	Illustrate the histological structure of the gonads and gametogenesis (spermatogenesis – oogenesis) in some vertebrates	Lecture	exam
<b>2.0</b>	<b>Cognitive Skills</b>		
<b>2.1.1</b>	Explain the stages of embryonic development (cleavage - gastrulation - and organization) in each of the Amphioxus, frog, chicken and mammals.	Lecture Stir mind	exam
<b>2.3.1</b>	Compare the structure blastula –gastrula and neurula of each Amphioxus, frog, chicken, mammals explaining the reasons of the difference	Lecture Stir mind	exam
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
<b>3.4.1</b>	Perfects the skill of self-learning and take responsibility and participate in group discussions and accept the opinions of others	Discussion and dialogue	Assessment of students at forum course on the D2L
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
<b>4.2.1</b>	Perfects the skill of using modern technology to increase the knowledge and preparation of research paper	Research and survey D2L activation	Assessment of research paper and drop box of D2l
<b>5.0</b>	<b>Psychomotor</b>		
<b>5.1.1</b>	Mastered examination of various sectors and models of the embryonic stages for each of the Amphioxus frog, chicken	Lab Strategy	Assessment of lab reports Practical exam
<b>5.2.1</b>	Draw sections in deferent embryonic stages of before mentioned animals with writing a correct conclusion		

## 5. Schedule of Assessment Tasks for Students During the Semester:

	<b>Assessment task</b>	<b>Week Due</b>	<b>Proportion of Total Assessment</b>
<b>1</b>	Activities	1 <sup>st</sup> - 13 <sup>th</sup> week	10%
<b>2</b>	First and second midterm	6 <sup>th</sup> , 11 <sup>th</sup> week	20%
<b>3</b>	Final practical exam	16 <sup>th</sup> week	20%
<b>4</b>	Final theoretical exam	17 <sup>th</sup> -19 <sup>th</sup> week	50%

## D. Student Academic Counseling and Support

E mail: [zm.saleh@hotmail.com](mailto:zm.saleh@hotmail.com) [z.abdelmoein@mu.edu.sa](mailto:z.abdelmoein@mu.edu.sa)

Mobile: 0506627479

Library hours 2 hours

Academic Counseling 3 hours



## E. Learning Resources

### 1. List Required Textbooks :

- Web sites related to the subjects of course
- .....

### 2. List Essential References Materials :

- ١- مقدمة في علم الأجنة للفقاريات- إبراهيم، ماهر محمد عمادة شؤون المكتبات جامعة الملك سعود - الرياض (١٩٨٧م)
- ٢- الأساسيات في عملي أجنة الفقاريات الوصفي و التجريبي -الحميدي، احمد راشد عثمان عبد الله الدوخى و محمد حامد الغندور - جامعة الملك سعود - الرياض (١٩٩٨م).
- ٣- التكاثر في الثدييات الخلايا التناسلية و الإخصاب - أوستن، س.ر.ر. ف شورت ترجمة احمد بن راشد الحميدي و فيصل محمد أبو طربوش -جامعة الملك سعود (١٩٩٧م)
- ٤- بيولوجية الحيوان العملية الجزء الأول الحسيني ، احمد حماد و إميل شنودة دميان أخر طبعة دار المعارف - القاهرة (٢٠٠٢م)
- ٥- المدخل إلي علم الأجنة الوصفي و التجريبي -كريم، صالح عبد العزيز - دار المجتمع - جدة (١٩٩٠م)

### 3. List Recommended Textbooks and Reference Material :

- ١- مقدمة في علم الأجنة للفقاريات- إبراهيم، ماهر محمد عمادة شؤون المكتبات جامعة الملك سعود - الرياض (١٩٨٧م)
- ٢- الأساسيات في عملي أجنة الفقاريات الوصفي و التجريبي -الحميدي، احمد راشد عثمان عبد الله الدوخى و محمد حامد الغندور - جامعة الملك سعود - الرياض (١٩٩٨م).
- ٣- التكاثر في الثدييات الخلايا التناسلية و الإخصاب - أوستن، س.ر.ر. ف شورت ترجمة احمد بن راشد الحميدي و فيصل محمد أبو طربوش - جامعة الملك سعود (١٩٩٧م)

### 4. List Electronic Materials :

- Web sites related to the subjects of course
- 
- 

### 5. Other learning material :

- word
- Power point

## F. Facilities Required

### 1. Accommodation

- lecture halls, laboratories equipped with a sufficient number of fixed seats
- Provide different display devices smart blackboard, computer or electronic platform
  - o Provide anti-virus program to electronic platform
  - o put curtains in the halls to clarify the offer on blackboards

### 2. Computing resources

- Provide good Internet





- 
- 3. Other resources**
- Provide an appropriate place to raise some experimental animals
  - o Provide Anatomy of a high quality and a variety of tools
  - o Provide microscopes equipped with cameras and devices for display and microscopic slides sectors
  - o Provide a computer lab with all
  - o provide a good Internet network in the laboratory

## G Course Evaluation and Improvement Processes

<p><b>1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:</b> The application of questionnaires to assess the students about the quality of classrooms and laboratories</p> <ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :</b></p> <ul style="list-style-type: none"> <li>• Application of questionnaires to assess students courses in the end of the course.</li> <li>• Preparation of the annual reports of the department</li> </ul>
<p><b>3 Processes for Improvement of Teaching :</b></p> <ul style="list-style-type: none"> <li>• Application D2L and distance learning</li> <li>• Provision of modern literature and scientific journals.</li> <li>• Development of faculty members skills through the provision of training courses</li> <li>• providing the tools and apparatus necessary for application of the practical part of the course</li> </ul>
<p><b>4. Processes for Verifying Standards of Student Achievement</b></p> <ul style="list-style-type: none"> <li>• Review papers that have been corrected by the professor article by another member of the department and a member of the external review of a sample of paper answer</li> <li>• .....</li> </ul>
<p><b>5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :</b></p> <ul style="list-style-type: none"> <li>• Regular meeting of members staff of the department to find out the points of strengths and weaknesses</li> <li>• Assessment of Courses</li> <li>• Review of Study Plans</li> <li>• Analysis the student evaluation of topics and teaching method of courses</li> <li>• Develop study plans in the light of the needs of society</li> <li>• Continuous viewing on websites</li> </ul>

### Course Specification Approved

**Department Official Meeting No (6) Date 30 / 11 / 1433 H**

**Course's Coordinator**

**Department Head**

**Name :** Dr. Zeinab Mohammed Saleh Abdelmoein

**Name :** Dr. Mona Makkie.

**Signature :** .....

**Signature :** .....

**Date :** 12/ 4 / 1437 H

**Date :** .... / ... / ..... H



Institution:	Majmaah Faculty of Education
Academic Department :	Department Biology
Programme :	Biology
Course :	Phycology
Course Coordinator :	Dr. Jawaher AL ahiadeb
Programme Coordinator :	Dr. Mona Makkie
Course Specification Approved Date :	30/ 11 / 1433 H



## A. Course Identification and General Information

1 - Course title :	<b>Phycology</b>	Course Code:	<b>BOT 414</b>
2. Credit hours :	(2 hours Theory + 2 hours Practical) (Credited 3 hours).		
3 - Program(s) in which the course is offered:	<b>Biology</b>		
4 – Course Language :	<b>Arabic</b>		
5 - Name of faculty member responsible for the course:	<b>Dr Jawaher AL ahiadeb</b>		
6 - Level/year at which this course is offered :	<b>Eighth level</b>		
7 - Pre-requisites for this course (if any) :	(not applies)		
8 - Co-requisites for this course (if any) :	(not applies)		
9 - Location if not on main campus :	(not applies)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	lectures	What percentage?	70 %
B - Blended (traditional and online)	Home work	What percentage?	10 %
D - e-learning		What percentage?	.....%
E - Correspondence		What percentage?	.....%
F - Other	Practical	What percentage?	30%
Comments :	.....		

## B Objectives

**What is the main purpose for this course?**

- recognize the important ecological and economic algae
- comparing the different sections of the algae where: virtual forms , and methods of reproduction , and the cycles of life , and their habitats .
- classify the different types of algae , which vary in size the power of God
- communicate effectively in group discussions and individual assignments
- notes microscopic samples of different types of algae to be classified and drawn and study of the general characteristics
- .

**Briefly describe any plans for developing and improving the course that are being implemented :**

- periodic review of the decision by a committee of plans and academic scheduling department.
- Periodically updated course content based on recent developments in the field.
- Keep up with the accelerator development in the area through the use of new technologies.
- Modernization of Learning Resources for a decision on a regular basis



## C. Course Description

### 1. Topics to be Covered (Practical + Theoretical)

List of Topics	No. of Weeks	Contact Hours
The definition and classification of algae.	1	4
-1 Types of algae that environmental Tamrha : fresh water algae , and algae water half the salt . Algae and salt water , giving a full explanation of the characteristics of these environments. 2-2 tints . 2-3 turkab vegetative . 2-4 Methods of sexual reproduction and non- sexual	3	12
2-5 Classification	2	8
Mid-term Exam1+Feedback	1	3
2-5 Classification into sects and factions and arranged , with the study of explanatory models , indicating the evolutionary line	5	20
Mid-term Exam2+Feedback	1	3
-Methods of feeding algae. . The importance of the biological and economic algae .The definition and classification of algae .	2	8

### 2. Course components (total contact hours and credits per semester):

	Credit	Contact Hours			Self-Study	Other	Total
		Lecture	Laboratory	Practical			
NCAAA	3 ch	28	30	-	-	-	58
ECTS	4.8 cp	28	30	-	64	18	140

### 3. Additional private study/learning hours expected for students per week.

3.4 Hrs.

### 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
<b>1.1.1</b>	Recognize the different sections of algae .	-Lecture	Written exams.
<b>1.2.1</b>	Classified the algae relative to each other and within the plant kingdom .	-Lecture	Written exams.







	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>2.0 Cognitive Skills</b>			
2.1.1	Explores the information and draw conclusions	-Lecture Brainstorming	Written exams.
2.2.1	Concludes different environment for algal species	-Lecture Brainstorming	Written exams.
<b>3.0 Interpersonal Skills &amp; Responsibility</b>			
3.4.1	Perfects the skill of self-learning and responsibility	-Discussion and dialogue	- Discussions
<b>4.0 Communication, Information Technology, Numerical</b>			
4.2.1	Use technology information in the research and writing proficiently	-E-learning	-Research papers
<b>5.0 Psychomotor</b>			
5.2.1	Examine microscopic samples with a detailed drawing of them .	-Laboratory strategy	-practical exams. -The Reports

### 5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Theoretical 1 <sup>st</sup> test Theoretical 2 <sup>nd</sup> test	7 <sup>th</sup> & 13 <sup>th</sup>	10% 10%
2	Practical test+ diverse activities	During semester	10%
3	Final practical test	16 <sup>th</sup>	20%
4	Final theoretical test	17-19 <sup>th</sup>	50%

### D. Student Academic Counseling and Support

Dr. Aisha Ohag Osman

E.mail: ai.osman@mu.eduu.sa

٤ huors

### E. Learning Resources

- . List Required Textbooks :



-الطحالب د.عبد العزيز بن قبلان السرياني و د. إدريس منير الترك و أ.د. محمد المحمد الحسيني ، المدينة المنورة طريق السلام المملكة العربية السعودية ٢٠٠٠ م .

- ٢-أساسيات تحضير العينات الدعيجي – عبدالله بن راشد ، عبدالسلام محمد المليجي ، محمد جلال محمد عبدالفتاح ، دار الخريجي للنشر والتوزيع ، الرياض (١٩٩٧)م..

## 2. List Essential References Materials :

-الطحالب د.عبد العزيز بن قبلان السرياني و د. إدريس منير الترك و أ.د. محمد المحمد الحسيني ، المدينة المنورة طريق السلام المملكة العربية السعودية ٢٠٠٠ م .

- ٢-أساسيات تحضير العينات الدعيجي – عبدالله بن راشد ، عبدالسلام محمد المليجي ، محمد جلال محمد عبدالفتاح ، دار الخريجي للنشر والتوزيع ، الرياض (١٩٩٧)م..

## 3. List Recommended Textbooks and Reference Material :

- 1- Bold ,Harold C.&Michael J. Wynne (1997).  
Introduction to The Algae ,Prentice – Hall,INC, Englenwood Cliff,N,J,07632.
- 2-Morris, Ian(1997).  
An ANTRODUCTION To The Algae , Hhuchinson of London.
- 3- Philip ,Sze , (1997).
- 4-Biology OF The Algae . McGraw-Hill College.
- 5-lee, E,1990  
Phycology by Robert Cambridge University Press

## 4. List Electronic Materials :

- Related websites to the course.

## 5. Other learning material :

- Microsoft Office – word ,power point .....etc

## F. Facilities Required

### 1. Accommodation

- Hall can accommodate up to 40-50 students.
- A blackboard and Oqlamha normal as well as smart blackboard .
- Laboratory can accommodate 20-30 students for .
- Slices of algal samples ready
- Replicas of some types of algae
- optical microscopes

### 2. Computing resources

- Computer connected to a smart board

### 3. Other resources

Live algal samples in their environment , if possible.

- .sporh Zakia and projector .
- Wear a special white color lab .
- Ready for some types of algae are not available in the lab, sliced



- replicas of some types of algae are not available in the lab

## G Course Evaluation and Improvement Processes

### 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

Distribution of the questionnaires to students from course with multiple axes.

Analysis grades of students in the tests statistically and explained.

Sharing number of students during the explanation is an indication of the effectiveness of teaching.

### 2 Other Strategies for Evaluation of Teaching by the Program/Department

**Instructor :**

- Through a course evaluation.
- Annual reports prepared by the department.
- Benefit from the expertise corresponding accredited colleges.

### 3 Processes for Improvement of Teaching :

Apply modern technologies in education.

Electronic learning.

### 4. Processes for Verifying Standards of Student Achievement

Review papers that have been corrected by the professor course and another member of the department.

Sample paper of answer reviewed by an external member.

### 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

Regular meeting of the faculty members staff based on the course to enhance the strengths and weaknesses treatment.

By questionnaires viewing students about the course topics and available learning methods.

Review and develop study plans depending on recent data.

## Course Specification Approved

Department Official Meeting No ( ..... ) Date ٣٠ / ١١ / ١٤٣٣ H

### Course's Coordinator

**Name :** Dr .Jawaher AL ahiadeb

**Signature :** .....

**Date :** 12/ 4/ 1437 H

### Department Head

**Name:** Dr.

Mona Makkie

**Signature :** .....

**Date :** .../ ... / ..... H



Institution:	Faculty of Education
Academic Department :	Biology
Programme :	Biology
Course :	Plant Physiology II
Course Coordinator :	Dr. Mona Makky
Programme Coordinator :	Dr. Mona Makky
Course Specification Approved Date :	30/ 11 / 1433 H



## A. Course Identification and General Information

1 - Course title :	Plant Physiology (2)	Course Code:	BOT 413
2. Credit hours :	(3 hours = 2 hours Theory + 2 hours Practical)		
3 - Program(s) in which the course is offered:	Biology		
4 – Course Language :	Arabic		
5 - Name of faculty member responsible for the course:	Dr. Mona Makkie		
6 - Level/year at which this course is offered :	Seventh		
7 - Pre-requisites for this course: (not applies)			
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>(not applies)</li> </ul>		
9 - Location if not on main campus :	(not applies)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	60 %
B - Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	30 %
D - e-learning	<input type="checkbox"/>	What percentage?	.....%
E - Correspondence	<input type="checkbox"/>	What percentage?	.....%
F - Other	<input checked="" type="checkbox"/>	What percentage?	10 %
Comments :	.....		

## B Objectives

<p><b>What is the main purpose for this course?</b></p> <p>The course makes extensive processing of metabolisms in plant cell and the factors which affect on its activity. Studying nature, characters and factors affecting on their activities and enzymes catalyzed reactions control. Study mechanisms of energy transport, release and use in a living cell.</p> <p><b>Briefly describe any plans for developing and improving the course that are being implemented :</b></p> <ol style="list-style-type: none"> <li>1- Periodic review of the course by the committee plans and the department schedules.</li> <li>2- Regularly updated content as a modern developments in the field.</li> <li>3- Keep up with the rapid development in the area through the use of new technologies.</li> <li>4- Updated learning resources for course regularly.</li> <li>5- The use of Power point Data show in teaching, if possible.</li> </ol>
---





6- Comparison its syllabus what is served in other local, regional and global department.

## C. Course Description

### 1. Topics to be Covered (Theoretical+ Practical)

List of Topics	No. of Weeks	Contact Hours
Metabolic processes identification and their types and biological systems.	1	4
Definition of the basic rules of the science of thermodynamics.	1	4
Phosphorylation types (ATP production) in cells and high nucleotide phosphate compounds.	2	8
Mid-term 1+ feedback	1	3
The study of enzymes (and their characteristics, and the factors which affecting on them, the interactions which catalyzed them).	3	12
Mid-term 2+ feedback	1	3
Carbohydrate metabolism (the main Pathways for catabolism carbohydrate, pentose phosphate pathway, processes for anabolism of sucrose, starch and cellulose in plant).	3	12
Fat metabolism (the fatty acids synthesis and methods of organization, oxidation, built, and demolished).	1	4
Metabolism of amino acids, proteins and essential nitrogen compounds.	1	4
Secondary compounds metabolism.	1	4

### 2. Course components (total contact hours and credits per semester):

	Credit	Contact Hours			Self-Study	Other	Total
		Lecture	Laboratory	Practical			
<b>NCAAA</b>	3 ch	28	30	-	-	-	58
<b>ECTS</b>	4.9 cp	28	30	-	60	20	138

### 3. Additional private study/learning hours expected for students per week.

3- hours

### 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
<b>1.1.1</b>	Comprehensive knowledge counts among the basic components of the	The lecture.	Collective and





	<b>NQF Learning Domains And Course Learning Outcomes</b>	<b>Course Teaching Strategies</b>	<b>Course Assessment Methods</b>
	cell metabolism mechanisms of carbohydrates, fats and proteins with the functionality of components within a living cell.	Collaborative learning	individual researches
<b>1.2.1</b>	Find the relationship between energy and circulating mechanisms, and means of edit, and the allow tapped in the living cell	Using visual aids if possible	Oral tests
<b>2.0</b>	<b>Cognitive Skills</b>		
<b>2.1.1</b>	To investigate and analyze the information and uses it to propose innovative solutions.	Discussion and dialogs	Oral tests
<b>2.2.1</b>	Find similarities and differences between theoretical subject and practical applied and fact. Linking between different metabolic pathways that occur in the cell	Lecture	Evaluation of Individual and collective researches.
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
<b>3.4.1</b>	Show interest to respond with colleagues while doing projects and research. Responsible for self-learning and continuing personal development using modern technical means.	Discussion and dialogs	Observation students interact from different situation.
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
<b>4.2.1</b>	Have mastered the use of information technology in the research and writing.	Explanation	Evaluate group discussions
<b>5.0</b>	<b>Psychomotor</b>		
<b>5.1.1</b>	Applies skill of many laboratory experiments related to the course using the tools and solutions and equipments in the lab.	Demonstration	Terminal and final practical tests

## 5. Schedule of Assessment Tasks for Students During the Semester:

	<b>Assessment task</b>	<b>Week Due</b>	<b>Proportion of Total Assessment</b>
1	Reports - Home works - Oral questions	Weekly	10%
2	Test (1)	6 <sup>th</sup>	10%
3	Test (2)	10 <sup>th</sup>	10%
4	Final practical test	16 <sup>th</sup>	20%
5	Final theoretical test	17-19 <sup>th</sup>	50%



## D. Student Academic Counseling and Support

Dr. Mona Makkie

[mmakkie@mu.edu.sa](mailto:mmakkie@mu.edu.sa)

22 hours

## E. Learning Resources

### 1. List Required Textbooks :

- .....
- .....
- .....

### 2. List Essential References Materials :

-المراجع الرئيسة:

١- فسيولوجيا النبات ( الإنزيمات وأيض النبات ) الجزء الثاني د. محمد جميل عبد الحافظ مطابع جامعة الرياض ١٩٧٨م.

٢- فسيولوجيا النبات العامة ( الجزء الثاني ) د. محمد بن عمر باصلاح و د. علي بن عبد المحسن الهلال و د. محمد حمد الوهبي جامعة الملك سعود ١٤٢٢ هـ .

- ٣- فسيولوجيا النبات العملية عبدالجواد – هشام ومحمد حمد الوهبي الناشر : عمادة شؤون المكتبات جامعة الملك سعود الرياض ١٤٠٩ هـ .

### 3. List Recommended Textbooks and Reference Material :

١ - التنفس – الوهبي ، محمد حمد الناشر : عمادة شؤون المكتبات – جامعة الملك سعود – الرياض ١٩٨٢م.

٢- كيمياء حيوية (كيمياء حيوية تركيبية وكيمياء حيوية فسيولوجية الحملاوي عبدالرحمن أحمد ) الطبعة الثالثة دار القلم الكويت ١٩٨٤م.

٣- اسس الكيمياء الحيوية الأعرس محمد عبدالمنعم المكتبة الاكاديمية القاهرة ١٩٩٩م.

3- Steward , F,C,Growth and Organizotion in Plants .Addison-Wesley Co.Reading Warening 1986

### 4. List Electronic Materials :

- Related internet websites to the course.

### 5. Other learning material :

- Word and power point programs .

## F. Facilities Required

### 1. Accommodation

Buildings

Class room for 40- 50

Black board

Laboratory for 20-30 students.

Different laboratory apparatus to perform experiments..

Plant samples for experiments.

Chemical materials for preparing different concentrations of solutions use during testing.





## 2. Computing resources

Computer connected with internet.

## 3. Other resources

- Smart blackboard and projector
- pH meter
- Spectrophotometer
- Lab coat

## G Course Evaluation and Improvement Processes

### 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

Distribution of questionnaires to students at the end of the semester for special assessment for the course.  
A sample of students enrolled in the course interview to take their opinions.

### 2 Other Strategies for Evaluation of Teaching by the Program/Department

#### Instructor :

Evaluation of colleagues in the department to perform faculty member in the Presenting of course and effectiveness of the tools which used for presentation.

Internal periodic review for course (committee for plans of study and schedules).

Self-assessment of the program.

External audit.

The visiting professors assessment.

### 3 Processes for Improvement of Teaching :

Take audit results of the internal and external recommendations especially for the course.

Committee directives for the plans of study and schedules on the course.

Department management guidance about the performance faculty member based on direct observation.

### 4. Processes for Verifying Standards of Student Achievement

To use supervisors of similar courses of the course outside the university to review a sample of papers answers that have been corrected by a faculty member.

Collective correction by members of the department

Sample of papers that have been corrected by a special committee reviewing the department.

### 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

Comparing the course to similar courses made in similar sections.

Reviewing course characterization and syllabus regularly by a committee study plans and schedules.

Updating learning resources related to the course to make sure to keep pace of developments in the field.

Statistical evaluation of the results for students to benefit from the course and its results in the improve and develop the course.

## Course Specification Approved

Department Official Meeting No ( 6 ) Date 30 / 11 / 1433 H

Course's Coordinator

Department Head

Name : Dr. Mona Makkei

Name : Dr. Mona Makkei

Signature : .....

Signature : .....

Date : 12/ 4 / 1437 H

Date : .../ ... / ..... H



Institution:	Majmaah University
Academic Department :	Biology
Programme :	Biology
Course :	Research Methodology
Course Coordinator :	Dr. Amal EL-Sayed
Programme Coordinator :	Dr. Mona Makkeia
Course Specification Approved Date :	30/ 11 / 1433 H



## A. Course Identification and General Information

1 - Course title :	Research Methodology	Course Code:	BIO,415
2. Credit hours :	2hrs		
3 - Program(s) in which the course is offered:	Biology		
4 – Course Language :	Arabic.		
5 - Name of faculty member responsible for the course:		Dr. Amal EL-Sayed	
6 - Level/year at which this course is offered :		7 <sup>th</sup>	
7 - Pre-requisites for this course (if any) :	• non		
8 - Co-requisites for this course (if any) :	• non		
9 - Location if not on main campus :	( main building )		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input type="checkbox"/>	What percentage?	60 %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage?	20 %
D - e-learning	<input type="checkbox"/>	What percentage?	20 %
E - Correspondence	<input type="checkbox"/>	What percentage?	..... %
F - Other	<input type="checkbox"/>	What percentage?	.....%
Comments :	.....		

## B Objectives

<p>What is the main purpose for this course?</p> <p>This course is designed to develop the student's independent study skills, writing and presentation skills as well as developing the student's ability to make literature survey.</p> <p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <p>Using D2L.</p> <p>Recent researches in Biology.</p>
---





## C. Course Description

### 1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Scientific research. Definition. The project suggested.	2	4
Introduction of the project. Description of the point suggested-writing the plan	2	4
How to get information from different sources, classical library, electronic sources	4	8
Writing essay	4	8
Revision of the project (research)	3	6

### 2. Course components (total contact hours and credits per semester):

	Credit	Contact Hours			Self-Study	Other	Total
		Lecture	Laboratory	Practical			
NCAAA	2 ch	30	30	-	-	-	30
ECTS	2.9 cp	30	30	-	45	10	85

### 3. Additional private study/learning hours expected for students per week.

2.4hrs/week

### 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.1</b>	<b>Knowledge</b>		
	On completing this course, students will be able to:		
<b>1.1.1</b>	Propose the subject and the aim of the work.	Discussion	exams
<b>1.2.1</b>	Describe the plan.	lectures	exams
<b>2.1</b>	<b>Cognitive Skills</b>		
	On completing this course, students will be able to:		
<b>2.1.1</b>	Explain results	Discussion	Evaluation of research
<b>2.2.1</b>	Write an essay	Solve problems	Evaluation of





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
			research
<b>3.1</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
	On completing this course, students will be able to:		
<b>3.3.1</b>	Show a trend towards accepting the opinions of others .	Cooperative learning	Evaluation of Power point
<b>4.1</b>	<b>Communication, Information Technology, Numerical</b>		
	On completing this course, students will be able to:		
<b>4.1.1</b>	- Innovate in presentation	E-Learning	Evaluation of research
<b>4.2.1</b>	-use IT and search for information	Self-learning	Evaluation of presentation
<b>5.1</b>	<b>Psychomotor</b>		
<b>5.1</b>	none	none	none

## 5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
<b>1</b>	<b>Research evaluation.</b>	weekly	40
<b>2</b>	<b>Final exam</b>	17 <sup>th</sup> -19 <sup>th</sup> week	60

## D. Student Academic Counseling and Support

Dr.Amal EL-Sayed Abd-ELHady  
 e-mail: : [a.elhady@mu.edu.sa](mailto:a.elhady@mu.edu.sa)  
 Office hours, 6 hours per week





## E. Learning Resources

### 1. List Required Textbooks :

- Writing the scientific research (2006). Abou Soloiman, E., E. 7<sup>th</sup> Press.

### 2. List Essential References Materials :

#### Scientific Research .Al Rabieaa, A., A.

- Based on the subject of the research the textbook (if any) will be assigned by the supervisor

### 3. List Recommended Textbooks and Reference Material :

- Science direct

### 4. List Electronic Materials :

- [www.pubmed.com](http://www.pubmed.com)
- [www.searchalot.com](http://www.searchalot.com)
- Saudi digital library.

### 5. Other learning material :

- non

## F. Facilities Required

### 1. Accommodation

- classroom with the capacity of maximum 25 students is required. (available).

### 2. Computing resources

- The classroom is equipped with a smart board, its running software 'active inspire', and internet connection.

### 3. Other resources

- non.

## G Course Evaluation and Improvement Processes

### 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- The statistics obtained from the students at the end of semester.
- Student's Discussions.





## 2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :

- Course evaluation
- Periodic revision.
- External staff revision.
- Staff evaluation from students after final result.

## 3 Processes for Improvement of Teaching :

- Annual refreshing training courses for the faculty members about the teaching practices .
- Supply the library with the most recent references( text book, journals)
- Internet connection in the classroom ,labs, library....etc.

## 4. Processes for Verifying Standards of Student Achievement

- A committee of faculty members are assigned for each subject to review the checking of the final exams.

## 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- A committee of faculty members are assigned for each subject to review the checking of the final exams.
- An internal revision report is written by the committee for each course.
- The feedbacks of the students are studied carefully.
- All feedbacks coming from the teachers of the course will be collected.
- Annual department review of course content and course specification
- Annual course report.

### Course Specification Approved

Department Official Meeting No ( ..... ) Date **30 / 11 / 1433 H**

#### Course's Coordinator

**Name :** Amal El-Sayed Abd  
EL- Hady  
**Signature :** .....  
**Date :** 12/ 4 / 1437 H

#### Department Head

**Name :** .....  
**Signature :** .....  
**Date :** .../ ... / ..... H



