<table>
<tr><td>Module name:</td><td>Comparative animal anatomy</td></tr>
<tr><td>Module level, if applicable</td><td>6th level</td></tr>
<tr><td>Code, if applicable</td><td>ZOO 322</td></tr>
<tr><td>Subtitle, if applicable</td><td></td></tr>
<tr><td>Courses, if applicable</td><td>Comparative animal anatomy</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>1 semester</td></tr>
<tr><td>Person responsible for the module</td><td>Dr. Zeinab Mohammed Saleh</td></tr>
<tr><td>Lecturer</td><td>Dr. Zeinab Mohammed Saleh</td></tr>
<tr><td>Language</td><td>Arabic</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory course for biology program</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Contact hours:58
Lecture:28
Practical :30
Additional learning hours (Self-Study e-learning, research) :66
Class size:27 students.</td></tr>
<tr><td>Workload</td><td><table><tr><td>Total-contact hours</td><td>Self-study</td><td>Discussion</td><td>Total workload</td></tr><tr><td>58</td><td>66</td><td>10</td><td>134</td></tr></table></td></tr>
<tr><td>Credit points</td><td>4.6 ECTs-3KSA.</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>To attend more than 75% of lecture and practical study</td></tr>
<tr><td>Recommended prerequisites</td><td>Chordates ZOO 312</td></tr>
</table>

Module objectives/intended learning outcomes	**Knowledge: the students are able to** Describe the characteristic of the internal skeleton , circulatory system and nervous system in some proto chordates and vertebrates. **Cognitive Skills: the students are able to** **1-** Explain the structure of the internal skeleton , circulatory system and nervous system in different classes of phylum chordates **2-** Compare between the composition of the body's systems in these animals explaining their suitability for different functions **Interpersonal Skills & Responsibility: the students are able to** Be responsible for self-learning and continuing personal and professional development with participating in group discussions and accepting the opinions of others **Communication, Information Technology, Numerical: the students are able to** Perfects the skill of using modern technology to increase the knowledge and preparation of research and homework **Psychomotor: the students are able to** **1-** Mastered the use of laboratory tools and equipment in dissection of lab animals correctly **2-** Perfect testing of the specimens and slides with drawing and writing a comment on the results

List of Topics	No. of Weeks	Contact Hours	%
Comparative anatomical study on the internal skeletal system(skull-notochord -vertebral column-pelvic and pectoral girdle and bones of fore and hind limbs) of some pro Chordata and vertebrates	5	20	34.48
Mid-term 1 +feedback	1	3	5.17
Comparative anatomical study on the circulatory system(heart, arterial supply and venous drainage) of amphioxus as pro Chordata and lamprey as cyclostomatous in addition to some vertebrates like, tilapia and dog fish, Neot from amphibians, sakankoor (Scincus) from reptiles, pigeon from birds, and rabbit from mammal	4	16	27.58
Mid-term 2 +feedback	1	3	5.17
Comparative anatomical study on the nervous system(brain- spinal cord-cranial nerves and sense organs) of the before mentioned chordate animals	4	16	27.58

The description should clearly indicate the weighting of the content and the level.

Study and examination requirements and forms of examination	20 degrees for two Midterm exams 10 degrees for assignments, Class work and reseach 50 degrees for final theoretical Exam 20 degrees for final practical Exam

Media employed	classroom provided with smartboard , computer , internet connection and enough seats Lab provided with the required devices , light microscopes and models for application of the practical part of the course
Reading list	١- التشريح المقارن للفقاريات – عبد الرحمن ، منى فريد المكتبة الأكاديمية – القاهرة (٢٠٠٢م) ٢-علم الحيوان العام – خليل ، فؤاد و محمد رشاد الطوبى و احمد حماد الحسيني و محمود حافظ وعطا الله خلف الدوينى الطبعة السادسة - مكتبة الانجلو المصرية - القاهرة (١٩٩٦م) ٣- الفقاريات - عبد الرحمن ، منى فريد المكتبة الأكاديمية – القاهرة (١٩٩٢م) ٤-بيولوجية الحيوان العملية الجزء الثاني الحسيني ، احمد حماد و إميل شنودة دميان أخر طبعة دار المعارف – القاهرة (٢٠٠٢م) ٥- التشريح المقارن للفقاريات – ترجمة السيد صلاح الدين النورس كنت .ج وزارة التعليم العالي و البحث العالي – جامعة الموصل (١٩٨٥م

<table>
<tr><td>Module name:</td><td>Applied Genetics</td></tr>
<tr><td>Module level, if applicable</td><td>6th</td></tr>
<tr><td>Code, if applicable</td><td>BOT 325</td></tr>
<tr><td>Subtitle, if applicable</td><td>NONE</td></tr>
<tr><td>Courses, if applicable</td><td>none</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>2nd</td></tr>
<tr><td>Person responsible for the module</td><td>Dr. Amira Elmaghawry</td></tr>
<tr><td>Lecturer</td><td>Dr. Amira Elmaghawry</td></tr>
<tr><td>Language</td><td>Arabic</td></tr>
<tr><td>Relation to curriculum</td><td>compulsory</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Total Contact hours/semester:28 hrs.
Lecture:28
Class size:25 students</td></tr>
<tr><td>Workload</td><td><table><tr><td>Total-contact hours</td><td>Self-study</td><td>Discussion</td><td>Total workload</td></tr><tr><td>58</td><td>45</td><td>15</td><td>84</td></tr></table></td></tr>
<tr><td>Credit points</td><td>2.9 ECTs-2KSA.</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>Absence not exceed 25% (attendance at least 75%)</td></tr>
<tr><td>Recommended prerequisites</td><td>BIO 223</td></tr>
</table>

Module objectives/intended learning outcomes	- Knowledge: - On completing this course, students will be able to: - Determine genetic inbreeding and outbreeding and hybrid vigor results. - Explains the types of infertility and its importance in plant breeding. - Display the foundations of biotechnology and how it is used for human well-being - Cognitive Skills - Evaluate the importance of genetic engineering to human life and the environment - Recommend genetic counseling to avoid the possibility of a genetic defect in the family. - Use bioinformatics to collect data about DNA, RNA, and proteins - Interpersonal Skills & Responsibility - Know well self-learning skills and her responsibilities - Communication, Information Technology, Numerical - Use biological databases to provide structural and functional analysis of molecular biology. - Psychomotor - None

Content	

List of Topics	No. of Weeks	Contact Hours	%
Quantitative and qualitative characters and the methods for analyzing	1	2	7.7
Inbreeding, outbreeding, genetic results on different types of mattings and hybrid vigor	1	2	7.7
Heritability and selection and its effects on qualitative and quantitative characters	1	2	7.7
Hardy -Weinberg law	1	2	7.7
Infertility types and its importance in plant breeding	2	4	15.3
Mid-term exam 1+ feedback	1	2	
foundations to improve plant genetic	2	4	15.3
Using mutations to improve the production of antibiotics , crop and animal production and plant genotypes banks	1	2	7.7
Mid-term exam 2+ feedback	1	2	
genetics applications for human well-being	1	2	7.7
Genetic counseling and treatment of genetic disease	1	2	7.7
Foundations and applications of biotechnology in the agricultural and environmental purposes	1	2	7.7
Bioinformatics	1	2	7.7
laboratory Exams	2		100

Study and examination requirements and forms of examination	1st mid-term Exam 7th week 15 marks 2nd mid-term Exam 11th week 15 marks Reports+ assignments+ oral questions + e-learning 10 marks Final theoretical 16- 19th week 60 marks
Media employed	*classroom provided with smart-board , computer , internet connection and enough seats.*

Reading list	•*Biotechnology: fundamentals and applications Dr. Hassan Younis, 1st edition, 2006 - National Library and Documentation.* •*Basics of genetics Dr. Abdel-AzimTantawy, National Library, 1976* •*Biotechnology: fundamentals and applications Dr. Hassan Younis, 1st edition, 2006 - National Library and Documentation.* •*Basics of genetics Dr. Abdel-AzimTantawy, National Library, 1976* •*Genomics and Bioinformatics, Ahmed Elmaitany, El- Bostan Knowledge Library, 2006.* .

<table>
<tr><td>Module name:</td><td>Applied Microbiology</td></tr>
<tr><td>Module level, if applicable</td><td>sixth</td></tr>
<tr><td>Code, if applicable</td><td>BOT 323</td></tr>
<tr><td>Subtitle, if applicable</td><td>none</td></tr>
<tr><td>Courses, if applicable</td><td>none</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>All semester</td></tr>
<tr><td>Person responsible for the module</td><td>Dr Enas Shaban Ahmed</td></tr>
<tr><td>Lecturer</td><td>Dr Enas Shaban Ahmed</td></tr>
<tr><td>Language</td><td>Arabic</td></tr>
<tr><td>Relation to curriculum</td><td>compulsory,</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Total Contact hours/semester:44 hrs.
Lecture:14
Laboratory:30
Class size:25 students</td></tr>
<tr><td>Workload</td><td><table><tr><td>Total-contact hours</td><td>Self-study</td><td>Discussion</td><td>Total workload</td></tr><tr><td>44</td><td>58</td><td>10</td><td>112</td></tr></table></td></tr>
<tr><td>Credit points</td><td>3.8 ECTs-2KSA</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>Attendance 75%</td></tr>
<tr><td>Recommended prerequisites</td><td>BOT,222</td></tr>
</table>

Module objectives/intended learning outcomes	***Knowledge*** 1- Identify different types of micro-organisms and the environments in which they live. *2-* Classify various microorganisms activities in the field of industry, soil and water ***Cognitive Skills*** *1- Classify antibiotic resistance bacteria* *2- Differentiate between economic important of microorganism* ***Interpersonal Skills & Responsibility*** *1- Interact collective discussion and take responsibility for self-learning.* ***Communication, Information Technology, Numerica*** *1- Learn how to search for an information using the library or internet resources and Working in a group and learn time management.* ***Psychomotor*** *1- Apply different experiments related to the course and evaluate the results*

Content	**List of Topics**	**No. of Weeks**	**Contact Hours**	**%**
	1- The existence of microorganisms in various environmental media + Food Microbiology	4	4	28.6
	2- Food Microbiology and Dairy Microbiology.	2	2	14.3
	Mid-term exam1+ feedback	1	0.5	3.5
	3- Industrial Microbiology.	2	2	14.5
	Mid-term exam2+ feedback	1	0. 5	3.5
	4- Soil microbiology.	3	3	21.4
	5- Water microbiology.	1	1	7.1
	6- Medical microbiology	1	1	7.1
	Practical Part			
	1- Isolate microbes from certain foods such as flour, cereals, milk powder	3	6	20
	2- Identification of microbial lactic acid in yogurt to prepare sliced them with cultivation curd	3	6	20
	3- Test the sensitivity of microbes to antibiotics	2	4	13.3
	4- Study the types of corruption for canned food and dairy products and vegetables and fruit.	2	4	13.3
	5- Study the effect of preservatives on the growth of microbes	2	4	13.3
	6- Extracting protein from yeast	2	4	13.3
	7- General Review	1	2	6.8
Study and examination requirements and forms of examination	*First term exam ..... 10%* *Second term exam .....10% .....* *Home work activities During semester 10%* *Practical exam At the end of semester 20%* *Final exam At the end of semester 50%*			
Media employed	*Class room provide with smart board, computer, internet connection, and enough seats .* *Lab provide with to required devices, light microscopes and slides for demonstration* *D2l and email es.ahmed@mu.edu.sa*			

Reading list	• *Sawy et al. (1996): Applied Microbiology Academy Library Egypt. (Alexander, N. Glazer; Hiroshi Nikaido; (W.H1995) Microbial Biotechnology. Freeman and company* • *Bergey's Manual of determinative Bacteriology (1995(Microbiology (Cambridge Ed. 1995.* • *Sawy et al. (1996): Applied Microbiology Academy Library Egypt* • *Shaykhli and Jawdat Sami (1994): laboratory experiments microbes in food and dairy Riyadh University.* • *Eysa , S (1427) Food microbiology. Elrashed library, Riyadh* • *Sikyta,B. (1995): Techniques in Applied Microbiology. Elsevier, Science. Amsterdam.*

Module name:	***Entomology II***
Module level, if applicable	***6th***
Code, if applicable	***ZOO 321***
Subtitle, if applicable	***NA***
Courses, if applicable	***NA***
Semester(s) in which the module is taught	***1st and 2nd semesters***
Person responsible for the module	***Prof. Dr: Hala Ali Abdel Salam saleh***
Lecturer	***Prof. Dr: Hala Ali Abdel Salam saleh***
Language	***Arabic***
Relation to curriculum	***Compulsory course for biology program***
Type of teaching, contact hours	*- Total Contact hours/semester:58 hrs.* • *Lecture:28* • *Practical :30* ***-Class size for lecture:20-25 students*** ***-Class size for Lab:10-17 students***
Workload	*Total-contact hours* | *Self-study* | *Discussion* | *Total workload* *58* | *60* | *10* | *128*
Credit points	***4.4 ECTs-3KSA.***
Requirements according to the examination regulations	***To attend more than 75% of lecture and practical study***
Recommended prerequisites	***Arthropoda, mollusca and echinodermata ZOO221 and Entomology 311***

Module objectives/intended learning outcomes	***Knowledge: the students are able to*** ***1. Describe the mechanism of digestion, execration, blood circulation, respiration process in different insects with the different adaptations of internal structures*** ***Cognitive Skills: the students are able to*** ***1. Explain the structure of nervous system and mechanism of nervous conduction.*** ***2. Compare between reproductive system, types of reproduction and metamorphosis in different insects.*** ***3. Explain contraction and relaxation of muscles*** ***Interpersonal Skills & Responsibility: the students are able to*** ***1. Show the presentation, educational films and speech in front of the others in good manner.*** ***Communication, Information Technology, Numerical: the students are able to*** ***1. Demonstrate the Preparation of presentations and research papers with reaching to useful sites on the Internet to increase knowledge of the contents of the course.*** ***Psychomotor: the students are able to*** ***1. Examine the microscopes specimens with identification by drawing and maintaining the laboratory tools by using them in a correct scientific way.***
Content	

Content	WKS No	Contact hours	%
Digestive system, alimentary canal, digestion process. feeding requirements and feeding habits.	2	8	13.79
Execratory orangs and execration process	1	4	6.90
Circulatory system, blood vessel, blood sinuses, blood circulation, blood and its cellsand blood clotting	1	4	6.90
Respiratory system, structure of tracheal system, respiration, in terrestrial insects, aquatic insects, and parasitic insects	2	8	13.79
Mid-term 1 + Feed back	1	3	5.17
Reproductive system: structure, types of reproduction. Embryogenesis, postembryonic development included metamorphosis	2	8	13.79
Nervous system: Division , nerve conduction, sense organs :mechanoreceptors, chemoreceptors auditory organs and visual organs	2	8	13.79
Mid Term+ Feedback	1	3	5.17

	Muscular system: types of muscle and structure	***1***	***4***	***6.90***
	Glands(organs of secretion), types and their secretions	***1***	***4***	***6.90***
	A brief study of the factors that affect the presence and the spread of insects, biotic factors and abiotic factors	***1***	***4***	***6.90***

Study and examination requirements and forms of examination	***20 degrees for two Midterm exams*** ***10 degrees for homeworks, lab reports and reseach*** ***50 degrees for final theoretical Exam*** ***20 degrees for final practical Exam***
Media employed	**-Classrooms be equipped 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.**
Reading list	- ***Dr. Badawi, Ibrahim& Ali bin Mohammed Alsuhaibani (1417H): Agricultural insects: structure and internal anatomy*** - ***Makki bin Abdullah Al Amoudi (2008): fundamentals process in entomology*** - ***Mahmoud, Abdul Aziz Abdul Rahman, Mahmoud El-Borai and Samir Mohammed Hassan(2007): Invertebrates*** - ***Tnoaha_ Dela- Howell and others translation Ahmad Latifi Abdul Salam and others(1983): Introduction to biological insects*** - ***Tawfik, Mohammed Fouad(1999): General knowledge of insects.*** - ***Rizk, George Nasrallah(1983): Structure and classification of insects*** - ***Dr. Naim Saraf (2009): General insects*** - ***Dr. Husseini, Ahmed Hammad and tend S. Demian Practical animal biology (Part II and III) latest edition***

<table>
<tr><td>Module name:</td><td>Plant Growth and differentiation</td></tr>
<tr><td>Module level, if applicable</td><td>Sixth</td></tr>
<tr><td>Code, if applicable</td><td>BOT 324</td></tr>
<tr><td>Subtitle, if applicable</td><td>none</td></tr>
<tr><td>Courses, if applicable</td><td>none</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>All semester</td></tr>
<tr><td>Person responsible for the module</td><td>Dr Enas Shaban Ahmed</td></tr>
<tr><td>Lecturer</td><td>Dr Enas Shaban Ahmed</td></tr>
<tr><td>Language</td><td>Arabic</td></tr>
<tr><td>Relation to curriculum</td><td>compulsory,</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Total Contact hours/semester:58 hrs.
Lecture:28
Practical :30
Class size:25 students</td></tr>
<tr><td>Workload</td><td><table><tr><td>Total-contact hours</td><td>Self-study</td><td>Discussion</td><td>Total workload</td></tr><tr><td>58</td><td>60</td><td>20</td><td>138</td></tr></table></td></tr>
<tr><td>Credit points</td><td>4.7ECTs-3KSA.</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>Attendance 75</td></tr>
<tr><td>Recommended prerequisites</td><td>BIO 123</td></tr>
</table>

Module objectives/intended learning outcomes	***Knowledge*** *1- Identifythe growth and development of plants and factors affecting them.* *2- Recognize hormones and plant growth regulators and its role in plant tissue culture.* ***Cognitive Skills*** *1- Interpret the effect of each type of plant hormones on plant growth and development.* *2- Interpret plant tropism in response to an environmental stimulus* ***Interpersonal Skills & Responsibility*** *1- Learn how to search for an information using the library or internet resources* ***Communication, Information Technology, Numerica*** *1- Use modern techniques to search for the required references for work duties* ***Psychomotor*** *1- Apply different experiments related to plant growth and development and factors affecting them.* *2- Test students ability to analyze and graph data and find explanations for each experiment.*

Content	**List of Topics**	**No. of Weeks**	**Contact Hours**	**%**
	1-Plant developmental stages (from seeds to flowers and fruits)	*1*	*4*	*6.8*
	2- Natural Growth Regulators (Plant Hormones): Auxins - Gibberellins -Cytotokinins - Abscisic acid - Ethylene	*1*	*4*	*6.8*
	3- The study of Discovery -Structure - Properties - Measurements - Distribution in plants.	*1*	*4*	*6.8*
	4- Transport and metabolism of plant hormones	*1*	*4*	*6.8*
	5- Biosynthesis of plant hormones.	*1*	*4*	*6.8*
	Mid-term Exam1+Feedback	*1*	*3*	*5*
	6- Physiological function of plant hormones : Cell expansion- cell division and differentiated- seed development- senescence- flowering and fruit development	*2*	*8*	*13.7*
	7- molecular mechanism of hormones action: Signal transduction – functional genomic- transgenic plants	*1*	*4*	*6.8*
	Mid-term Exam2+Feedback	*1*	*3*	*5*
	8- Application of plant hormones: tissue culture- green house- nursery- agriculture to increase productivity.	*2*	*8*	*13.7*
	9- Other Biologically Active Compounds and Hypothetical Hormones: Polyamines - Coumarin - Triacontil , brossins - florigen .	*1*	*4*	*6.8*
	10- Synthetic Growth Regulators: Various Classes - Structure -applications and commercial importance.	*1*	*4*	*6.8*
	11- Free discussion and students activities.	*1*	*4*	*6.5*
Study and examination requirements and forms of examination	*First term exam ..... 10%* *Second term exam .....10% .....* *Homework activities During semester 10%* *Practical exam At the end of semester 20%* *Final exam At the end of semester 50%*			

Media employed	*Class room provide with smart board, computer, internet connection, and enough seats .* *Lab provide with to required devices, light microscopes and slides for demonstration* *D2l and email es.ahmed@mu.edu.sa*
Reading list	*General Plant Physiology (Part II) - d 0 Mohamed Ben Omar reform, d 0 Ali bin Abdul Mohsen Crescent - 0 Dr. Mohammed bin Hamad Al Wahaibi - scientific publishing and printing presses - King Saud University, Riyadh in 1427.* *Salah . M (1990) Practical of differentiation growth physiology. Saud king university.*

<table>
<tr><td>Module name:</td><td>Virology</td></tr>
<tr><td>Module level, if applicable</td><td>6th</td></tr>
<tr><td>Code, if applicable</td><td>BOT 326</td></tr>
<tr><td>Subtitle, if applicable</td><td>NA</td></tr>
<tr><td>Courses, if applicable</td><td>NA</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>2nd semester</td></tr>
<tr><td>Person responsible for the module</td><td>Assistant Prof: Rabab Mohamed Mohamed Ibrahim</td></tr>
<tr><td>Lecturer</td><td>Assistant Prof: Rabab Mohamed Mohamed Ibrahim</td></tr>
<tr><td>Language</td><td>Arabic</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory course for biology program</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Total Contact hours/semester:14 hrs.
Lecture:14
Class size:11 students</td></tr>
<tr><td>Workload</td><td><table><tr><td>Total-contact hours</td><td>Self-study</td><td>Discussion</td><td>Total workload</td></tr><tr><td>14</td><td>20</td><td>10</td><td>44</td></tr></table></td></tr>
<tr><td>Credit points</td><td>1.5 ECTs-1KSA.</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>To attend more than 75% of lecture</td></tr>
<tr><td>Recommended prerequisites</td><td>non</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Knowledge:
On completing this course, students will be able to:
1-Describe the chemical structure and properties of virus
2- Outline the classification of viruses through the modes of transmission, pathogenesis and control of viral diseases
Cognitive Skills:
1- Interpret the results of plant and animal viral diseases
2- Investigate the clinical diagnosis of viruses
Interpersonal Skills & Responsibility:
1-work in a team .
2-discuss results of work in groups
Communication, Information Technology, Numerical:
1-The students Able to use IT
Psychomotor: non</td></tr>
</table>

<table>
<tr><td>Content</td><td>
<table>
<tr><th>List of Topics</th><th>No. of Weeks</th><th>Contact Hours</th><th>%</th></tr>
<tr><td>1-Introduction to Virology, general characters of virus.</td><td>2</td><td>2</td><td>14</td></tr>
<tr><td>2-Chemical Structure of Virus.</td><td>1</td><td>1</td><td>7</td></tr>
<tr><td>3-Virus Classification</td><td>1</td><td>1</td><td>7</td></tr>
<tr><td>4-Relation between Virus and other organisms</td><td>1</td><td>1</td><td>7</td></tr>
<tr><td>Mid-term exam 1+Feedback</td><td>1</td><td>0.5</td><td>3.5</td></tr>
<tr><td>5-Parasitism of Virus on Human, animals and plants.</td><td>3</td><td>3</td><td>22</td></tr>
<tr><td>Mid-term exam 2+Feedback</td><td>1</td><td>0.5</td><td>3.5</td></tr>
<tr><td>6-The process of Viral infection and Multiplication</td><td>1</td><td>1</td><td>7</td></tr>
<tr><td>7-Purification of Viruses</td><td>1</td><td>1</td><td>7</td></tr>
<tr><td>8-Examples on Human ,Animal and Plant Viruses</td><td>3</td><td>3</td><td>22</td></tr>
</table>
</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>30 degrees for two Midterm exams
10 degrees for assignments, Class work and reseach
60 degrees for final theoretical Exam</td></tr>
<tr><td>Media employed</td><td>classroom provided with smartboard , computer , internet connection and enough seats</td></tr>
<tr><td>Reading list</td><td>1. List Required Textbooks :
2. List Essential References Materials :
Hussien M. (2003) Virulent Viruses , Deanship of Libraries Affairs in Riyadh, King Saud University
3. List Recommended Textbooks and Reference Material :
4. List Electronic Materials :
http://www.virologyj.com/
http://www.tulane.edu/~dmsander/garryfavweb.html
http://www.yk.rim.or.jp/~aisoai/soft.html
http://www.bioprotocol.com/protocolstools/index.jhtml</td></tr>
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