Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

COURSE REPORTS

Physics Program

Course title: General Physics Course code: (101)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. General Physics (101) 101 فيزياء عامة

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. Academic Year (1434-1435 H) (2013-2014) (semester 1)

4 Location (if not on main campus): Al-Ab dya Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|---------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| الوحدات والأبعاد | 3 | 3 | |
| المتجهات | 3 | 3 | |
| الحركة الخطية (الحركة في بعد واحد) | 3 | 3 | |
| الحركة الدورانية | 3 | 3 | |
| الحركة الموجية | 3 | 3 | |
| القوة وقوانين نيوتن | 3 | 3 | |
| خواص الموائع الساكنة | 6 | 6 | |
| خواص السوائل المتحركة | 6 | 6 | |
| المرونة | 3 | 3 | |
| الحرارة والديناميكا الحرارية | 6 | 6 | |
| 2 Course components (total contact hours per semester): | | | |

| Lectures: 39 hr | Tutorial: 39 hr | Practica l/Field work/In ternship : 3 hr | |
|-----------------|--------------------|------------------------------------------------------|--|
|-----------------|--------------------|------------------------------------------------------|--|

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 1. Explain strategy of the course in the beginning of the semester
- 2. Outlines of the physical laws, principles and the associated proofs.
- 3. Highlighting the day life applications whenever exist.
- 4. Encourage the students to see more details in the international web sites and reference books in the library.
- 5. Discussing some selected problems in each chapter.
- 6. Cooperate with different institution to find how they deal with the subject
- 7. Renew the course references frequently
- 8. Frequently check for the latest discovery in science

| Domains List Teaching Strategies set out in Course Specification | | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy | |
|------------------------------------------------------------------|--|--------------------------|-----|------------------------------------------------------------|--|
| | | No | Yes | Deal with Those Difficulties | |

| a. Knowledge | Demonstrating the basic | Yes | |
|------------------------------|----------------------------------------------------------|-----|--|
| | information and principles through | | |
| | lectures and the achieved | | |
| | applications | | |
| | Discussing phenomena with | Yes | |
| | illustrating pictures and diagrams | | |
| | Lecturing method: | Yes | |
| | Decenting method. Projector | Yes | |
| | Power point | Yes | |
| | Fower point e-learning | Yes | |
| | | Yes | |
| | Revisit concents | Yes | |
| | Discussions | Yes | |
| | Brain storming sessions | Yes | |
| | Start assh shorter by several idea | Yes | |
| | and the benefit of it | | |
| | Learn the student background of | Vac | |
| | the subject; | res | |
| | Show the best ways to deal with | Ves | |
| | problem; | 105 | |
| | • Keep the question "why" or "how" | Yes | |
| 1.0.1.1 | to explain always there | * 7 | |
| b. Cognitive | Preparing main outlines for | Yes | |
| Skills | teaching | * 7 | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | Yes | |
| | the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Yes | |
| | for practice solving problem | | |
| | Doing small research | Yes | |
| | | | |
| c. Interpersonal | • Learn how to search the internet | Yes | |
| Skills and Deenonsibility | I com how to cover microid | Vac | |
| Responsionity | - Learn now to cover missed | 168 | |
| | Learn how to summarize lactures | Vac | |
| | - Learn now to summarize fectures | 108 | |
| | course | | |
| | Learn how to solve difficulties in | Ves | |
| | learning: solving problems – | 105 | |
| | enhance educational skills | | |
| | Develop her interest in Science | Yes | |
| | through :(lab work, field trips | 105 | |
| | visits to scientific and research. | | |
| | Encourage the student to attend | Yes | |
| | lectures regularly by: | | |
| | • Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| e Psychomotor Skills (if applicable) | Lectures for problem solution. Encourage the student to ask good question to help solve the problem. | Yes Yes |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 1. Use the web for research to know the basic mathematical principles.
- 2. Discuss with the student and give exams to measure the mathematical skill.
- 3. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 4. Focusing on some real results and its physical meaning.
- 5. Encourage the student to ask good question to help solve the problem.
- 6. Display the lecture note and homework assignment at the web

C. Results

| 1 Number of students commencing the field experience: 37 | | |
|------------------------------------------------------------------------------|--|--|
| 2 Number of students completing the field experience: 33 | | |
| 3 Result Summary: Passed: No 25 Percent 67.56% Failed No 8 Percent 21.62% | | |
| Did not complete No 4 Percent 10.81% | | |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------------|-------|----|
| А | | | 95- | 0 | 70-74 | 3 |
| В | | | 100 | 0 | 65-69 | 3 |
| | | | | Ů | 00 07 | U |
| С | | | 85-89 | 0 | 60-64 | 19 |
| D | | | 80-84 | 0 | < 60 | 8 |
| F | | OR | 75-79 | 0 | | |
| Denied Entry | 7 | | Denied | Entry | | 4 |
| In Progress | | | | In Progress | | |
| Incomplete | | | Incomplete | | | |
| Pass | | _ | Pass | | | 25 |
| Fail | | | Fail | | | 8 |
| Withdrawn | | | Withdra | awn | | |

| 6. Variations from planned student assessment proces | ses (if any) (See items C 4 and 5 in the Course | | | |
|--------------------------------------------------------------------------------------|--------------------------------------------------|--|--|--|
| Specification.) | | | | |
| | | | | |
| a. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | |
| Variation | Reason | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course | | | |
| Specification) | - · | | | |
| Variation | Reason | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 1 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|

H Course Evaluation

| 1. Student evaluation of the course: |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Student evaluation of the course. |
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| I G |
| h Response of instructor or course team to this evaluation |
| b response of instructor of course team to this evaluation |
| |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available (e_{α}, B_{α}) head of department peer observations accreditation |
| specing and antitation of the state of the s |
| review, other stakeholders etc): |
| |
| a List the most important criticisms and strengths |
| I G |
| |
| b Response of instructor or course team to this evaluation |
| |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|--|--|
| Actions Required Updating the course according to the recent publications Visit to Researches Lab. | Completion Date | Person Responsible | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | |
| | | | | |

Name of Course Instructor: Jalel AL NASSER OUERFELLISignature:Date Report Completed: 2013/2014

Received by Program Coordinator

Date: 26/01/2014

Course title: General Physics (102)

Course code: 403102-4

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution : Umm AL-Qurra University

College/ Department : Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. General Physics 403102-4

2. If course is taught in more than one section indicate the section to which this report applies :

Group 2

3. Year and semester to which this report applies: 1434 H – Semester 1

4 Location (if not on main campus): **The main campus**

B Objectives

1. Summary of the main learning outcomes for students enrolled in the course.

The basic concepts of electricity and magnetism are taught in this course. Electrostatic, electric field, electric current and magnetic field are briefly covered. By the end of this course the student should have a reasonable understanding of electricity and magnetism, which represents the background of several other courses.

2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)

There is a plan to update all the experiments for this course.

C. Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

| 1 Topics to be Covered | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|
| Торіс | No of Weeks | Contact hours |
| Electromagnetism, electric charge, conductors and insulators, Coulomb's law and conservation of charge | 2 | 12 |
| Electric field, charge distribution, point charges and electric dipoles | 2 | 12 |
| Electric flux, Gauss's law, charges in conductors and applications of Gauss's law | 2 | 12 |
| Electrostatic and gravitational forces, electric potential, electric potential energy, potential due to charge distributions and equipotential surfaces | 2 | 12 |
| Capacitance, capacitors in parallel and series, energy stored in capacitors, energy stored in electric fields, dielectrics and capacitors with dielectrics | 2 | 12 |
| Electric currents, current density, resistance and resistivity, Ohm's law and DC circuits (Kirchoff's laws and RC circuits) | 2 | 12 |
| Magnetic field, magnetic force, magnetic force and electric currents, Ampere's law and magnetic fields due to electric loops | 2 | 12 |

| 2 Course components (total contact hours per semester): | | | | |
|---------------------------------------------------------|-------------|---------------------------------------|--------|--|
| Lecture: 4 | Tutorial: 0 | Practical/Fieldwork/Inte rnship: 3 | Other: | |

3. Additional private study/learning hours expected for students per week. (This should be an average :for the semester not a specific requirement in each week)

4-6 hours/week for homework and lab reports

4. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

a. Knowledge

(i) Description of the knowledge to be acquired

Basics of electricity and magnetism.

(ii) Teaching strategies to be used to develop that knowledge

- Continuous evaluation by several quizzes and exams plus homework.
- labs and online videos

(iii) Methods of assessment of knowledge acquired

- Quizzes every other week
- Mid-term exam
- Final exam
- Lab reports (every week)
- Final lab exam

b. Cognitive Skills

(i) Cognitive skills to be developed

Study the basic concepts of electricity and magnetism in this course.

(ii) Teaching strategies to be used to develop these cognitive skills:

Face Level Vocational and exercises.

(iii) Methods of assessment of students cognitive skills

Continuous monitoring.

c. Interpersonal Skills and Responsibility

(i) Description of the interpersonal skills and capacity to carry responsibility to be developed

(ii) Teaching strategies to be used to develop these skills and abilities

(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

d. Communication, Information Technology and Numerical Skills

(i) Description of the skills to be developed in this domain.

use courses well-developed

(ii) Teaching strategies to be used to develop these skills

(iii) Methods of assessment of students numerical and communication skills

Evaluate the course online

e. Psychomotor Skills (if applicable)

(i) Description of the psychomotor skills to be developed and the level of performance required

(ii) Teaching strategies to be used to develop these skills

(iii) Methods of assessment of students psychomotor skills

| 5. Schedule of Assessment Tasks for Students During the Semester | | | | |
|------------------------------------------------------------------|--------------------------------------------------------------------|----------|--------------------------------------|--|
| Assess ment | Assessment task (eg. essay, test, group project, examination etc.) | Week due | Proportion of Final Assessment | |
| 1 | Quizzes + homework | Every 2 | 10% | |

| | | weeks | |
|---|----------------|------------|-----|
| 2 | Lab reports | Every week | 10% |
| 3 | Lab final exam | 16th | 10% |
| 4 | Mid-term exam | 8th | 30% |
| 5 | Final exam | 17th | 40% |

D. Student Support

1. Arrangements for availability of faculty for individual student consultations and academic advice. (include amount of time faculty are available each week)

During office hours (6-8 hours/week). In addition, students can arrange appointments with the lecturer whenever suits them.

E. Learning Resources

1. Required Text(s) Physics, by J. Walker, fourth Ed.

2. Essential References

Fundamentals of Physics, by Halliday, Resnick and Walker

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)

Introduction to Electrodynamics, by Griffiths

4-.Electronic Materials, Web Sites etc

The lecturer prepared some solved exercise for each chapter, which are available on his personal website. Also, students are usually asked to watch some educational videos online about the subjects covered in the course.

5- Other learning material such as computer-based programs/CD, professional standards/regulations

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Lecture rooms, laboratories, etc.)

The maximum number of students in each group is 25, which can be conveniently accommodated in all class rooms and labs in the university.

2. Computing resources

3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

A fully equipped lab for demonstrating and conducting experiments for students

G. Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

Students are required to evaluate the course online (including the lecturer performance, the material .. etc) each semester. The student will not be able to receive his/her own final mark without this evaluation.

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

3 Processes for Improvement of Teaching

The consideration of the students' comments and evaluations, plus the continuous update and improvement of the course material

4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)

Students have the right to ask for re-marking any exam in case there is any suspicion of the results.

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

Continuous evaluation and consultation with the Faculty of Engineering to match their requirements.

H. Resources and Facilities

| 2. Consequences of any difficulties experienced for student learning in the course. | |
|-------------------------------------------------------------------------------------|--|
| All students must take all of the requirements before start in this course | |
| | |

I. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

J. Course Evaluation

| 1 Student evaluation of the course |
|----------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| (Autori Survey Results if available) |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review, other stakeholders etc): |
| |
| |
| a List the most important criticisms and strengths |
| |
| |
| |
| b Response of instructor or course team to this evaluation |
| |
| |

K. Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--|--|
| Actions proposed in the most recent previous course state w report(s) State w underta Was ap | whether each action was undertaken, the , and if the proposed action was not aken or completed, give reasons. | | |

2. Other action taken to improve the course this semester/year

Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------|--|--|
| Actions Required | Completion Date | Person Responsible | | |
| Updating the course according to the recent publications Visit to Researches Lab. | 1433\1434H 2012\2013 | Dr. Abdelmajid TIMOUMI | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | |
| (Recommendations by the instructor to the progra course would require approval at program, depar courses in the program.). | m coordinator if any pro tment or institutional lev | posed action to improve the el or that might affect other | | |

L. Results

| 1 Number of students commencing the field experience: 63 | | | | | | |
|-----------------------------------------------------------------|--------------|---------------------|-------------|--|--|--|
| 2 Number of students completing the field experience: 56 | | | | | | |
| 3 Result Summary: | | | | | | |
| Passed: No: 53 | Percent: 84% | Failed No: 3 | Percent: 5% | | | |
| Did not complete No: 7 | Percent: 11% | | | | | |

| | No | | % | No | % | No |
|-----------------------------|----------------|------|------------|-------|-------|----|
| А | 8 | - | 95- 100 | 4 | 70-74 | 9 |
| В | 21 | | 90-94 | 4 | 65-69 | 5 |
| С | 15 | - | 85-89 | 7 | 60-64 | 1 |
| D | 6 | | 80-84 | 14 | < 60 | 1 |
| F | 1 | OR | 75-79 | 6 | | |
| Denied Entry | 2 | - | Denied | Entry | | 2 |
| In Progress | 53 | - | In Prog | ress | | 53 |
| Incomplete | 7 | - | Incomp | lete | | 7 |
| Pass | 53 | - | Pass | | | 53 |
| Fail | 3 | - | Fail | | | 3 |
| Withdrawn | | - | Withdra | wn | | |
| ecial factors (if any) affe | ecting the res | ults | | | | |
| special factors | | | | | | |

Name of Course Instructor: Dr. Abdelmajid Amor Ali TIMOUMI

Signature:_____Date Report Completed:_____

Received by Program Coordinator Date : 20-01-2013

Course Title Electricity And Magnetism Course Title Code: (Ph 121)

Course Specification

For Guidance on the completion of this template, please refer toof Handbook 2Internal Quality Assurance Arrangements

Institution:- Umm AL-Qura University

College/Department :- College of Sciences / Physics Department

A Course Identification and General Information

1. Course title and code: Electricity and Magnetism (PH 121)

2. Credit hours: - 4 Cr. Hrs

3. Program(s) in which the course is offered.

(If general elective available in many programs indicate this rather than list programs) B.Sc Degree in Physics

4. Name of faculty member responsible for the course:

5. Level/year at which this course is offered: First year

6. Pre-requisites for this course (if any) PH 101 + MATH 101

7. Co-requisites for this course (if any) PH 285

8. Location if not on main campus :- Within The University Campus

B Objectives

1. Summary of the main learning outcomes for students enrolled in the course.

The objective of this course is to establish the meaning of the ends of the computational and use in communication, and differentiation, integration and applications of it.

The objectives of this course are to tease out the laws of Electricity and Magnetism from our everyday experience by specific examples of how electric and magnetic phenomena manifest themselves.

We want to be able:

The benchmark statement of the main learning outcomes are as follows:

- 1. To understand basic Fundamentals of electricity and magnetism phenomena: Physics of electrostatic Field, electrostatic Energy, and magnetic field.
- 2. The students should be trained on physical and generic skills (knowledge cognitive interpersonal communication problem solving IT)
- 3. To describe, in words, the ways in which various concepts in electricity and magnetism come into play in particular situations; to represent these phenomena and fields mathematically in those situations; and to predict outcomes in other similar situations.
- 4. The day life applications in the domain of these electric and magnetic phenomena
- 5. To analyse electric systems using a required basics
- 6. To understanding behaviour of components with direct current.

The overall goal is to use the scientific method to come to understand the enormous variety of electric and magnetic phenomena in terms of a few relatively simple laws

2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)

- 1- Explain strategy of the course in the beginning of the semester
- 2- Outlines of the physical laws, principles and the associated proofs.
- 3- Highlighting the day life applications whenever exist.
- 4- Encourage the students to see more details in the international web sites and reference books in the library.
- 5- Discussing some selected problems in each chapter.
- 6- Cooperate with different institution to find how they deal with the subject
- 7- Renew the course references frequently
- 8- Frequently check for the latest discovery in science

C. Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

| 1 Topi | cs to be Covered :- | | |
|--------|----------------------------------------------------------|-------|---------|
| | Topics | No of | Contact |
| | Topics | Weeks | hours |
| 1- | Electric charge and Coulomb's law | | |
| 1- | Introduction | | 0.5 |
| 2- | Electric Charge | | 0.5 |
| 3- | Conductors and Insulators | 1 | 0.5 |
| 4- | Coulomb's law | 1 | 0.5 |
| 5- | Charge is Quantized | | 0.5 |
| 6- | Charge is Conserved | | 0.5 |
| | | | |
| 2- Th | e Electric Field | | |
| 1- | Fields | | 0.5 |
| 2- | The Electric Field E | | 0.5 |
| 3- | The Electric Field of a Point Charges and Lines of Force | 1 | 0.5 |
| 4- | The Electric Field of Continuous Charge Distributions | 1 | 0.5 |
| 5- | A Point Charge in an Electric Field | | 0.5 |
| 6- | A Dipole in an Electric Field | | 0.5 |
| | | | |
| 3- Ga | uss Law | | |
| 1- | The flux of a Vector Field | | 0.5 |
| 2- | The Flux of the Electric Field | | 0.5 |
| 3- | Gauss law | 1 | 0.5 |
| 4- | A Charged Insolated Conductor | 1 | 0.5 |
| 5- | Applications of Gauss law | | 0.5 |
| 6- | Experimental Tests of Gauss law and Coulomb law | | 0.5 |
| | | | |
| 4- Ele | ectric Potential | | |
| 1- | Electrostatic and Gravitational Forces | _ | 0.5 |
| 2- | Electrical Potential Energy | | 0.5 |
| 3- | Electric Potential | | 0.5 |
| 4- | Calculating the Potential from the Field | | 0.5 |
| 5- | Potential due to Point Charge | 1.5 | 0.5 |
| 6- | Potential due to a Collection of Point Charges | 1.5 | 0.5 |
| 7- | The Electric Potential of Continuous Charge distribution | | 0.5 |
| 8- | Equipotential Surfaces | | 0.5 |
| 9- | Calculating the Field from the Potential | | 0.5 |
| 10- | - An Insulated Conductor | 1 | 0.5 |
| | | | |

| 5- Capacitors | | |
|----------------------------------------------|----------|-----|
| 1- Capacitance | | 0.5 |
| 2- Calculating the Capacitance | | 1.0 |
| 3- Capacitors in Series and Parallel | | 0.5 |
| 4- Energy Storage in an Electric Field | 1.5 | 0.5 |
| 5- Capacitor with Dielectric | | 1.0 |
| 6- Dielectrics: an Atomic View | | 0.5 |
| 7- Dielectrics and Gauss law | | 0.5 |
| | | |
| 6- Current and Resistance | | |
| 1- Electric Current | | 0.5 |
| 2- Current Denstiy | | 0.5 |
| 3- Resistance, Resistivity, and Conductivity | 1 | 0.5 |
| 4- Ohm's law | 1 | 0.5 |
| 5- Ohm's law: A Microscopic View | | 0.5 |
| 6- Energy Transfers in an Electric Circuit | | 0.5 |
| | | |
| 7- DC Circuits | | |
| 1- Electromotive Force | | 0.5 |
| 2- Calculating the Current in a Single Loop | | 0.5 |
| 3- Potential Differences | 1 | 0.5 |
| 4- Resistors in Series and Parallel | | 0.5 |
| 5- Multiloop Circuits | | 0.5 |
| 6- RC Circuits | | 0.5 |
| 8- The Magnetic Field | | 0.5 |
| 1- The Magnetic Field B | | 0.5 |
| 2- The Magnetic Force on a Moving Charge | | 1 |
| 5- Circulating Charges | | 1 |
| 4- The Hall Effect | <i>Z</i> | 1 |
| 5- The Magnetic Force on a Current | | 1 |
| - Torque on a Current Loop | | 0.5 |
| 7- The Magnetic Dipole | | 1 |
| 9- Ampere's Law | | |
| 1- The Biot-Savart Law | | 1 |
| 2- Applications of the Biot-Savart Law | | 1 |
| 3- Lines of Magnetic Field | 2 | 1 |
| 4- Two Parallel Conductors | | 1 |
| 5- Ampere's Law | | 1 |
| 6- Solenoids and Toroids. | | 1 |

| 2 Course components (total contact hours per semester): | | | | | | |
|---------------------------------------------------------|-----------------|-------------------------------------|--------------------------------|--|--|--|
| Lecture: 42 hr | Tutorial: 30 hr | Practical/Fieldwork /Internship: | Other: Office hours : 32 hr | | | |

3. Additional private study/learning hours expected for students per week. (This should be an average: for the semester not a specific requirement in each week)

4. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

a. Knowledge

- (i) knowledge that students should know and understand when they complete the course are as follow:
- (i) Learning fundamentals in electricity and magnetism theory.
- (ii) Understanding the physics of electricity and magnetism and their applications mentioned in the text.
- (iii) Improving logical thinking.
- (iv) To use mathematical formulation to describe the physical principle or phenomena
- (v) Ability to explain how things work.
- (ii) Teaching strategies to be used to develop that knowledge
- 1. Demonstrating the basic information and principles through lectures and the achieved applications
- 2. Discussing phenomena with illustrating pictures and diagrams
- 3. Lecturing method:
 - a. Blackboard
 - b. Power point

c. e-learning

4. Tutorials

5. Revisit concepts

- 6. Discussions
- 7. Brain storming sessions
- 8. Start each chapter by general idea and the benefit of it;
- 9. Learn the student background of the subject;
- 10. Show the best ways to deal with problem;
- 11. Keep the question "why" or "how" to explain always there;
- 12. Build a strategy to solve problem.
- (iii) Methods of assessment of knowledge acquired
- 1. Solve some example during the lecture.
- 2. Exams:
 - a) Quizzes
 - b) Short exams (mid term exams)
 - c) Long exams (final)
 - d) Oral exams
- 3. Discussions with the students.
- 4. Ask the student to clear the misunderstanding of some mathematical principle.
- 5. Ask quality question.

b. Cognitive Skills

- (i) Cognitive skills to be developed
 - 1. How to use physical laws and principles to understand the subject
 - 2. How to simplify problems and analyze phenomena
 - 3. Analyse and explain natural phenomena.
 - 4. Ability to explain the idea with the student own words.
 - 5. Represent the problems mathematically.
- (ii) Teaching strategies to be used to develop these cognitive skills
 - 1. Preparing main outlines for teaching
 - 2. Following some proofs
 - **3.** Define duties for each chapter
 - 4. Home work assignments
 - 5. Encourage the student to look for the information in different references

- 6. Ask the student to attend lectures for practice solving problem
- 7. Ask the student to do small research.

(iii) Methods of assessment of students cognitive skills

- 1. Midterm's exam. Exams, short quizzes
- 2. Asking about physical laws previously taught
- 3. Writing reports on selected parts of the course
- 4. Discussions of how to simplify or analyze some phenomena

c. Interpersonal Skills and Responsibility

(i) Description of the interpersonal skills and capacity to carry responsibility to be developed

- **Work independently.**
- **4** The students learn independently and take up responsibility.

(ii) Teaching strategies to be used to develop these skills and abilities

- 1. Learn how to search the internet and use the library.
- 2. Learn how to cover missed lectures.
- 3. Learn how to summarize lectures or to collect materials of the course.
- 4. Learn how to solve difficulties in learning: solving problems enhance educational skills.
- 5. Develop her interest in Science through :(lab work, field trips, visits to scientific and research.
 - Encourage the student to attend lectures regularly by:
 - Giving bonus marks for attendance
 - Assigning marks for attendance.
 - give students tasks of duties

(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

- 1. Quizzes on the previous lecture
- 2. Checking report on internet use and trips
- 3. Discussion
- 4. The accuracy of the result gained by each group will indicate good group work
- 5. Presenting the required research on time and the degree of the quality will show the sense of responsibility.

d. Communication, Information Technology and Numerical Skills

- (i) Description of the skills to be developed in this domain.
 - 1. Computation
 - 2. Problem solving
 - 3. Data analysis and interpretation.
 - 4. Feeling mathematical reality of solving problems.
- (ii) Teaching strategies to be used to develop these skills
 - 1. Know the basic physical principles.
 - 2. Use the web for research.
 - 3. Discuss with the student.
 - 4. Exams to measure the mathematical skill.
 - 5. Clear the weakness point that should be eliminated.
 - 6. Encourage the student to ask for help if needed.
 - 7. Computational analysis.
 - 8. Data representation.
 - 9. Lectures for problem solution.
 - 10. Encourage the student to ask good question to help solve the problem.
 - 11. Display the lecture note and homework assignment at the web.

(iii) Methods of assessment of students numerical and communication skills

- 1. Their interaction with the lectures and discussions.
- 2. The reports of different asked tasks.
- 3. Homework, Problem solutions assignment and exam should focus on the understanding.
- 4. Results of computations and analysis.
- 5. Comments on some resulting numbers.
- 6. Research.

e. Psychomotor Skills (if applicable)

(i) Description of the psychomotor skills to be developed and the level of performance required

(ii) Teaching strategies to be used to develop these skills

(iii) Methods of assessment of students psychomotor skills

| 5. Schedule of Assessment Tasks for Students During the Semester | | | | | | |
|------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------|--------------------------------------|--|--|--|
| Assessment | Assessment task (eg. essay, test, group project, examination etc.) | Week due | Proportion of Final Assessment | | | |
| 1 | Midterm 1 | 5 th week | 15 | | | |
| 2 | Midterm 2 | 10 th week | 15 | | | |
| 3 | In-Class Problem Solving | 13 th ,7 th week | 10 | | | |
| 4 | Homework | Every week | 10 | | | |
| 5 | Final exam | End of semester | 50 | | | |

D. Student Support

1. Arrangements for availability of faculty for individual student consultations and academic advice. (include amount of time faculty are available each week)

8 office hours per week

E Learning Resources

| 1. Required Text(s) |
|------------------------------------------------------------------------------------|
| 2. Essential References |
| 3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List) |

[1] Fundamental of Physics, 8th Edition, by: Jearl Walker. (2008)

4-.Electronic Materials, Web Sites etc

5- Other learning material such as computer-based programs/CD, professional standards/regulations

Wikipedia

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Lecture rooms, laboratories, etc.)

- Lecture room for 30 students
- </u> Library

2. Computing resources

Computer roomScientific calculator.

3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

4 Midterm and final exam.

🗕 Quiz.

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

3 Processes for Improvement of Teaching

- (a) Course report
- (b) Program report
- (c) Program self study
 - Fortification of the student learning.

Handling the weakness point.

4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)

- The instructors of the course are checking together and put a unique process of evaluation
- 4 Check marking of a sample of papers by others in the department.
- **4** Feedback evaluation of teaching from independent organization.

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

- 1- The following points may help to get the course effectiveness
 - Student evaluation
 - Course report
 - Program report
 - Program Self study
- 2- According to point 1 the plan of improvement should be given.
- 3- Contact the college to evaluate the course and the benefit it add to other courses.

Add some subject and cut off others depending on the new discoveries in Mathematics and basic science.

Course title: Classical Mechanics I Course code: (PH 241)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Classical Mechanics I (PHS. 241)

2. If course is taught in more than one section indicate the section to which this report applies (Group1 and Group 2)

3. Year and semester to which this report applies. (1434-1435) (1st semester)
4 Location (if not on main campus),

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|-------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Vector Analysis | | | |
| 1-Definition | | | |
| 2-Scalar Product | | | |
| 3- Vector or Cross product | | | |
| 4- Triple Scalar Product, Triple Vector Product | | | |
| 5-Gradient | | | |
| 6- Divergence | 2weeks | 8hrs | |
| 7-Curl X | | | |
| 8- Successive Application of operator | | | |
| 9-Vector Integration | | | |
| 10-Gauss's Theorem | | | |
| Coordinate Systems | | | |
| 1- Curvilinear Coordinates | | | |

| 2- Differential Vector Operations | | | |
|-----------------------------------------------------------|--------|-------|--|
| 3- Cartesian Coordinates | | | |
| 4- Spherical Polar Coordinates | 1week | 4 hrs | |
| 5- Circular Cylindrical Coordinates | | | |
| General Motion of A Particle in Three Dimensions | | | |
| 1- Linear Momentum | 3weeks | 12hrs | |
| 2- Angular Momentum | | | |
| 3- The Work Principle | | | |
| 4- Conservative Forces and Force Fields | | | |
| 5- The Potential Energy Function in 3-Dim. | | | |
| Motion | | | |
| 6- Condition For The Existence of a Potential Function | | | |
| 7- Motion of a projectile in a Uniform | | | |
| Gravitational Field | | | |
| 8- The Harmonic Oscillator in Two And Three | | | |
| dimensions | | | |
| 9- Constrained Motion of a Particle | | | |
| 10- The Simple Pendulum | | | |
| 11- More Accurate Solution of The Simple | | | |
| Pendulum | | | |
| 12- Examples | | | |
| Non-inertial Reference Systems | | | |
| 1-Translation of the Coordinate System | 3weeks | 12hrs | |
| 2- Inertial Force | | | |
| 3-General Motion of The Coordinate System | | | |
| 4- Dynamics of a Particle in a Rotating Coordinate | | | |
| System(Coriolis Force) | | | |
| 5-Effects of The Earth's | | | |
| 6-The Foucault Pendulum | | | |
| 7-Examples | | | |
| Central Forces and Celestial Mechanics | | | |

| 1-The Law of Gravity | 3weeks | 12hrs | |
|------------------------------------------------|--------|-------|--|
| 2- Gravitational Force Between a sphere and a | | | |
| Particle | | | |
| 3- Potential Energy in a Gravitational Energy | | | |
| 4-Potential Energy in a General Central Field | | | |
| 5-Angular Momentum in a Central Field | | | |
| 6-The Law of Areas, Kepler's Laws Of Planetary | | | |
| Motion | | | |
| 7-Orbit of a Particle in a Central Field | | | |
| 8-Energy Equation of the Orbit | | | |
| 9-Orbits in an Inverse-Square Field | | | |
| 10-Periodic Time of Orbital Motion | | | |
| 11-Motion in an Inverse-Square Repulsive Field | | | |
| 12-Examples | | | |
| Special Relativity | | | |
| 1-The Michelson-Morley Experiment | 2weeks | 8 hrs | |
| 2-The Special Theory of Relativity | | | |
| 3-Time Dilation | | | |
| 4-The Twin Paradox | | | |
| 5-The Length Contraction | | | |
| 6-Meson Decay | | | |
| 7- The Lorentz Transformation | | | |
| 8-The Inverse Lorentz Transformation | | | |
| 9-Velocity Addition | | | |
| 10-Relativity of Mass | | | |
| 11-Mass and Energy | | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.
| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action Elsewhere in the Program |
|-----------------------------------|----------------------------------|----------------------------------------------------------|
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 9. Explain strategy of the course in the beginning of the semester.
- 10. Outlines of the physical laws, principles and the associated proofs.
- 11. Highlighting the day life applications whenever exist.
- 12. Encourage the students to see more details in the international web sites and reference books in the library.
- 13. Discussing some selected problems in each chapter.
- 14. Renew the course references frequently.
- 15. Frequently check for the latest discovery in science.

| Domains | List Teaching Strategies set out in Course Specification | Were Effec No | these tive? Yes | Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal with Those Difficulties |
|--------------|--------------------------------------------------------------------------------------------------|---------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| | | | | |
| a. Knowledge | 1- Solve some example during the lecture. | | Yes | |
| | 2- Exams: a. Quizzes | | Yes | |
| | b. Short exams (midterm exams) | | Yes | |
| | c. Long exams (final) | | Yes | |
| | d. Orar exams | | Yes | |
| | 3- Discussions with the students. | | Yes | |
| | 4- Ask the student to clear the misunderstanding of some physical principle. | | Yes | |
| | Ask quality question. | | Yes | |

| b. Cognitive | 8. Preparing main outlines for | Yes | |
|------------------------------|---------------------------------------|------------|--|
| Skills | teaching | | |
| | 9. Following some proofs | Yes | |
| | 10. Define duties for each | Yes | |
| | chapter | | |
| | 11. Home work assignments | Yes | |
| | 12. Encourage the student to | | |
| | look for the information in | Yes | |
| | different references | | |
| | 13. Ask the student to attend | Yes | |
| | lectures for practice solving | | |
| | problem | | |
| c. Interpersonal | 6. Learn how to search the | Yes | |
| Skills and Responsibility | internet and use the library. | | |
| Responsionity | 7. Learn how to cover missed | Yes | |
| | lectures. | | |
| | 8. Learn how to summarize | Yes | |
| | lectures or to collect | | |
| | materials of the course. | | |
| | 9. Learn now to solve | Yes | |
| | solving problems – enhance | | |
| | educational skills | | |
| | 10. Develop her interest in | Ves | |
| | Science through :(lab work. | 105 | |
| | field trips, visits to scientific | | |
| | and research. | | |
| | 11. Encourage the student to | Yes | |
| | attend lectures regularly by: | | |
| | i. Giving bonus | | |
| | marks for | | |
| | attendance | | |
| | ii. Assigning | | |
| | marks for | | |
| | attendance. | X 7 | |
| | 12. give students tasks of dutles | Yes | |

| d. Numerical | 12. Know the basic | Yes |
|--------------------------------------------|------------------------------------------------------|-----|
| Communication | mathematical principles. | |
| Skills | 13. Use the web for | Yes |
| | research. | |
| | 14. Discuss with the student. | Yes |
| | 15. Exams to measure the mathematical skills. | Yes |
| | 16. Clear the weakness point that should be | Yes |
| | eliminated. | |
| | 17. Encourage the student to ask for help if needed. | Yes |
| | 18. Computational analysis. | Yes |
| | 19. Data representation. | Yes |
| | 20. Focusing on some real results and its physical | Yes |
| | meaning. | |
| | 21. Lectures for problems solving. | Yes |
| | 22. Encourage the student to | Yes |
| | help solve the problem | |
| | | |
| e Psychomotor Skills (if applicable) | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 7. Use the web for research to know the basic mathematical principles.
- 8. Discuss with the student and give exams to measure the mathematical skill.
- 9. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 10. Focusing on some real results and its physical meaning.
- 11. Encourage the student to ask good question to help solve the problem.
- 12. Display the lecture note and homework assignment at the web
- 13. Scientific Films in the web site related to the course subjects
- 14. http://uqu.edu.sa/staff/ar/4300376

C. Results

| 1 Number of students commencing the field experience: 41 |
|----------------------------------------------------------|
| 3 Number of students completing the field experience: 34 |
| 4 Result Summary: |
| Passed: No 34 Percent 83% Failed No 0 Percent 0% |
| Did not complete No 7 Percent 17% |

I

| | No | | % | No | % | No |
|--------------|----|----|--------------|-------|-------|----|
| А | | | 95- | 0 | 70-74 | 5 |
| | | | 100 | - | | - |
| В | | | 90-94 | 0 | 65-69 | 7 |
| С | | | 85-89 | 3 | 60-64 | 16 |
| D | | | 80-84 | 1 | < 60 | 0 |
| F | | | 75-79 | 2 | | |
| D 1 1 D | | OR | D · 1 | - | | |
| Denied Entry | | | Denied | Entry | | 5 |
| In Progress | | - | absents | | | 2 |
| Incomplete | | | Incomp | lete | | 0 |
| Pass | | | Pass | | | 34 |
| Fail | | | Fail | | | 0 |
| Withdrawn | | | Withdra | wn | | 0 |

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| b. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | |
|--------------------------------------------------------------------------------------|-----------------------------------------|--|
| Variation | Reason | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course | |

b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course

| Specification) | | |
|----------------|--------|--|
| Variation | Reason | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |
| | |

.D Resources and Facilities

| Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 2 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) |
|-----------------------------------------------------------------------------|
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? |

Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc):

a List the most important criticisms and strengths

b Response of instructor or course team to this evaluation

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |
| | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------|
| Actions Required | Completion Date | Person Responsible |
| | 1434\1435H | Dr. Mufeed Al-Maghrabi |
| | 2013\2014 | |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the progra would require approval at program, department or program.). | m coordinator if any prop institutional level or tha | posed action to improve the course t might affect other courses in the |
| | | |

Name of Course Instructor: Dr. Mufeed Al-Maghrabi

Signature: Mufeed Al-Maghrabi Date Report Completed: 2013/2014

Received by Program Coordinator Date: 7/1/2014

Course title: thermodynamics

Course code: (403344)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code.

thermodynamics, Phys 403383

2. If course is taught in more than one section indicate the section to which this report applies (Group1, Group 2and Group 3)

3. Year and semester to which this report applies. (1432-1433) (semester 2) **4** Location (if not on main campus), Al-Zaher Campus (For Girls)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| 1. Thermal properties of matter: Temperature and Heat, Temperature scales, Type of thermometer, Zero law of Thermodynamic, Thermal transfers, thermal expansion. | 6 | 6 | |
| 2. Thermodynamics properties: equation of ideal gas, kinetic theory, Van der Waal equation for real gas, Deducation of the critical constant of a | 6 | 6 | |

| real gas of Van der Waal, Virial equation of state, Reduced equation of state, adiabatic compressibility, P-V-T relationship of real gases, Phase Diagram | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--|
| 2 First law of thermodynamics, Heat and Energy: The types of systems and the processing in thermodynamics, the definition of heat capacity and specific heat capacity, latent heat, apply the first law of thermodynamics to evaluate the temperature and work and the internal energy and energy conversion, explain the enthalpy, the relationship between specific heat for gas, the work done in adiabatic process. | 9 | 9 | |
| 3 Second law of thermodynamics: heat engines, refrigerators, and heat pumps, reversible processes, statements of Kelvin - Planck and Clausius. Carnot machine and its efficiency, and examine the principles of the Carnot cycle, and efficiency of Otto cycle and diesel fuel and gasoline, | 9 | 9 | |
| 4 Entropy and third law of thermodynamics: explain the concept of entropy, the change in entropy in the reversible processes, explain the third law of thermodynamics. | 6 | 6 | |
| 5 Thermodynamics potentials: | 6 | 6 | |

| thermodynamics potentials, internal energy U, enthalpy (H), free energy of Gibbs (G) and Helmholtz free energy (A), Maxwell relations and their the application, Tds equations, Clausiuos Claperyron equation. | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------|--|
| 2 Course components (total contact hours per semester): | | | |
| Lectures: 42 hr | Tutorial: 42 hr | Practica l/Field work/In ternship : | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action Elsewhere in the Program |
|-----------------------------------|----------------------------------|----------------------------------------------------------|
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 16. Explain strategy of the course in the beginning of the semester
- 17. Outlines of the physical laws, principles and the associated proofs.
- 18. Highlighting the day life applications whenever exist.
- 19. Encourage the students to see more details in the international web sites and reference books in the library.
- 20. Discussing some selected problems in each chapter.
- 21. Cooperate with different institution to find how they deal with the subject
- 22. Renew the course references frequently
- 23. Frequently check for the latest discovery in science

| Domains | List Teaching Strategies set out in Course | Were | these | Difficulties Experienced (if |
|---------|--------------------------------------------|-------|-------|------------------------------|
| | Specification | Effec | tive? | any) in Using the Strategy |
| | 1 | | | and Suggested Action to |
| | | No | Yes | Deal with Those Difficulties |
| | | | | |

| a. Knowledge | Demonstrating the basic | Yes | |
|------------------|----------------------------------------------------------------------------------------|------------|--|
| | information and principles through | | |
| | lectures and the achieved | | |
| | annlications | | |
| | Discussing phonomona with | Ves | |
| | - Discussing phenomena with | 105 | |
| | Inustrating pictures and diagrams | Ves | |
| | Lecturing method: During term | Vos | |
| | • Projector | Tes Vec | |
| | • Power point | Tes Vac | |
| | • e-learning | Yes | |
| | Tutorials | Yes | |
| | Revisit concepts | Yes | |
| | Discussions | Yes | |
| | Brain storming sessions | Yes | |
| | Start each chapter by general idea and the benefit of it | Yes | |
| | Learn the student background of | | |
| | the subject; | Yes | |
| | Show the best ways to deal with problem: | Yes | |
| | Keep the question "why" or "how" | Yes | |
| | to explain always there | 105 | |
| b. Cognitive | Preparing main outlines for | Yes | |
| Skills | teaching | | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | - Hama work assignments | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Yes | |
| | for practice solving problem | | |
| | Doing small research | Yes | |
| c. Interpersonal | • Learn how to search the internet | Yes | |
| Skills and | and use the library. | | |
| Responsibility | Learn how to cover missed | Yes | |
| | lectures. | | |
| | Learn how to summarize lectures | Yes | |
| | or to collect materials of the | | |
| | course. | | |
| | Learn how to solve difficulties in | Yes | |
| | learning: solving problems – | | |
| | enhance educational skills. | | |
| | Develop her interest in Science | Yes | |
| | through :(lab work, field trips, | | |
| | visits to scientific and research. | | |
| | Encourage the student to attend | Yes | |
| | lectures regularly by: | | |
| | Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good question to help solve the problem. | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| e Psychomotor Skills (if applicable) | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 15. Use the web for research to know the basic mathematical principles.
- 16. Discuss with the student and give exams to measure the mathematical skill.
- 17. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 18. Focusing on some real results and its physical meaning.
- 19. Encourage the student to ask good question to help solve the problem.
- 20. Display the lecture note and homework assignment at the web
- 21. Scientific Films in the web site related to the course subjects
- 22. http://uqu.edu.sa/staff/ar/4300376

C. Results

| 1 Number of students commencing the field experience: 28 | | | | |
|----------------------------------------------------------|--|--|--|--|
| 6 Number of students completing the field experience: 27 | | | | |
| 7 Result Summary: | | | | |
| Passed: No 17 Percent 62 Failed No 10 Percent 37% | | | | |
| Did not complete No 1 Percent 3 | | | | |

| | No | | % | No | % | No |
|--------------|----|----|---------|-------|-------|----|
| A | - | - | 95- | | 70-74 | |
| В | 2 | | 90-94 | | 65-69 | |
| С | 1 | | 85-89 | | 60-64 | |
| D | 14 | - | 80-84 | | < 60 | |
| F | 10 | OR | 75-79 | | | |
| Denied Entry | 1 | | Denied | Entry | | |
| In Progress | 28 | - | In Prog | ress | | |
| Incomplete | 1 | - | Incomp | lete | | |
| Pass | 17 | - | Pass | | | |
| Fail | 9 | | Fail | | | |
| Withdrawn | - | | Withdra | iwn | | - |

Г

| 6. Variations from planned student assessment proces | ses (if any) (See items C 4 and 5 in the Course | | | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------|--|--|--|--|
| Specification.) | | | | | |
| | | | | | |
| c. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | |
| Variation | Reason | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course | | | | |
| Specification) | | | | | |
| Variation | Reason | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| | - |
|-------------------------------------|--------------------------------------------------|
| Method(s) of Verification | Conclusion |
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 3 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: |
|----------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review, other stakeholders etc): |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the cou | rse in previous course reports: |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|------------------------------------------------------|-----------------------------|-------------------------------------|
| Actions Required | Completion Date | Person Responsible |
| Updating the course according to | 1434\1435H | |
| the recent publications | 2013\2014 | |
| Visit to Researches Lab. | | |
| | | |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the program | m coordinator if any prop | bosed action to improve the course |
| would require approval at program, department or | institutional level or that | t might affect other courses in the |
| program.). | | - |
| | | |

Name of Course Instructor: Dr. Roshdi Seoudi Mohamed Awed

Signature: Roshdi Awed Date Report Completed: 2013/2014

Received by Program Coordinator Date: 28/5/2014

Course title: Optics Course code: (403231)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code Optics

2. If course is taught in more than one section indicate the section to which this report applies ()

3. Year and semester to which this report applies. (1433-1434) (semester 1) **4** Location (if not on main campus):

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|---------------------------------------------------------|-----------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Waves and Simple Harmonic Motion | 10 | 10 | |
| Interference | 10 | 10 | |
| Diffraction Grating | 10 | 10 | |
| Fraunhofer Diffraction | 6 | 6 | |
| | | | |
| | | | |
| 2 Course components (total contact hours per semester): | | | |
| Lectures: 36 hr | Tutorial: 36 hr | Practica l/Field work/In ternship : | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| Fresnel Diffraction | Low significance | Advanced Optics |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 24. Explain strategy of the course in the beginning of the semester
- 25. Outlines of the physical laws, principles and the associated proofs.
- 26. Highlighting the day life applications whenever exist.
- 27. Encourage the students to see more details in the international web sites and reference books in the library.
- 28. Discussing some selected problems in each chapter.
- 29. Cooperate with different institution to find how they deal with the subject
- 30. Renew the course references frequently
- 31. Frequently check for the latest discovery in science

| Domains | List Teaching Strategies set out in Course | Were these | | Difficulties Experienced (if |
|---------|--------------------------------------------|------------|-----|------------------------------|
| | Specification | Effective? | | any) in Using the Strategy |
| | | No | Yes | Deal with Those Difficulties |

| a. Knowledge | Demonstrating the basic | | Yes | |
|-----------------|-----------------------------------------------------------------------------------------|-----|------------|--|
| U | information and principles through | | | |
| | lectures and the achieved | | | |
| | applications | | | |
| | Discussing phenomena with | | Yes | |
| | illustrating pictures and diagrams | | | |
| | Lecturing method: | | Yes | |
| | Projector | No | | |
| | Power point | 110 | Yes | |
| | e-learning | No | | |
| | Tutorials | | Yes | |
| | Revisit concepts | | Yes | |
| | Discussions | | Yes | |
| | Brain storming sessions | | Yes | |
| | • Start each chapter by general idea | | Yes | |
| | Learn the student background of | | | |
| | the subject; | | Yes | |
| | Show the best ways to deal with problem: | | X 7 | |
| | Keep the question "why" or "how" | | Yes | |
| | to explain always there | | Yes | |
| b. Cognitive | Preparing main outlines for | | Yes | |
| Skills | teaching | | | |
| | Following some proofs | | Yes | |
| | Define duties for each chapter | | Yes | |
| | Home work assignments | | Yes | |
| | Home work assignments | | Yes | |
| | • Encourage the student to look for the information in different | | | |
| | references | | | |
| | Ask the student to attend lectures for practice solving problem | | Yes | |
| | Doing small research | | Yes | |
| a Internersonal | • Learn how to seerch the internet | | Vac | |
| Skills and | and use the library. | | 105 | |
| Responsibility | Learn how to cover missed lectures | | Yes | |
| | Learn how to summarize lectures | | Yes | |
| | or to collect materials of the | | 105 | |
| | course. | | | |
| | Learn how to solve difficulties in | | Yes | |
| | learning: solving problems – | | | |
| | enhance educational skills. | | | |
| | Develop their interests in Science | | Yes | |
| | through :(lab work, field trips, | | | |
| | visits to scientific and research. | | | |
| | • Encourage the student to attend | | Yes | |
| | lectures regularly by: | | • • | |
| | • Giving bonus marks for attendance | | Yes | |
| | assigning marks for attendance. | | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good question to help solve the problem. | Yes No Yes Yes Yes Yes Yes No Yes Yes Yes |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Skills (if applicable) | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 23. Use the web for research to know the basic mathematical principles.
- 24. Discuss with the student and give exams to measure the mathematical skill.
- 25. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 26. Focusing on some real results and its physical meaning.
- 27. Encourage the student to ask good question to help solve the problem.
- 28. Display the lecture note and homework assignment at the web
- 29. Scientific Films in the web site related to the course subjects

C. Results

| 1 Number of students commencing the field experience: 28 |
|----------------------------------------------------------|
| 9 Number of students completing the field experience: 26 |
| 10 Result Summary: |
| Passed: No 19 Percent 73% Failed No 7 Percent 27% |
| Did not complete No 2 Percent 7% |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| A | | | 95- 100 | 0 | 70-74 | 5 |
| В | | | 90-94 | 0 | 65-69 | 1 |
| С | | | 85-89 | 0 | 60-64 | 8 |
| D | | | 80-84 | 2 | < 60 | 7 |
| F | 0 | OR | 75-79 | 3 | | |
| Denied Entry | | | Denied | Entry | | |
| In Progress | | | In Prog | ress | | |
| Incomplete | | | Incomp | lete | | 2 |
| Pass | | | Pass | | | 19 |
| Fail | | | Fail | | | 7 |
| Withdrawn | | | Withdra | awn | | 0 |

| 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course | | | | | | |
|-----------------------------------------------------------------------------------------------------|------------------|--|--|--|--|--|
| Specification.) | | | | | | |
| | | | | | | |
| d. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | | |
| Variation | Variation Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course | | | | | | |
| Specification) | | | | | | |
| Variation | Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| - | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 4 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: |
|--------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available (e.g. By head of department peer observations accreditation |
| raviou other stakeholders stel). |
| review, other stakeholders etc). |
| |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------|
| Actions Required Updating the course according to the recent publications | Completion Date 1433\1434H 2012\2013 | Person Responsible Dr. Mohamed M. Sabry |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the progra would require approval at program, department or program.). | m coordinator if any pro institutional level or that | posed action to improve the course at might affect other courses in the |
| | | |

Name of Course Instructor: Dr. Mohamed Mahmoud Sabry

Signature: Mohamed Sabry

Date Report Completed: 2012/2013

Received by Program Coordinator

Date: 10/1/2013

Course title: Mathematical Methods 1 Course code: (433240)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Mathematical Physics 1 (403240)

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. (1434-1435) (semester 1) **4** Location (if not on main campus)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|---------------------------------------------------------|-----------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Partial Differentiation | 8 | 8 | |
| Vector Analysis | 6 | 6 | |
| Line, Surface and Volume Integrals | 6 | 6 | |
| Infinite and Power Series | 6 | 6 | |
| Fourier Series | 4 | 4 | |
| Ordinary Differential Equations | 9 | 9 | |
| | | | |
| 2 Course components (total contact hours per semester): | | | |
| Lectures: 42 hr | Tutorial: 42 hr | Practica l/Field work/In ternship | |

| | | | : | |
|--|--|--|---|--|
|--|--|--|---|--|

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 32. Explain strategy of the course in the beginning of the semester
- 33. Outlines of the physical laws, principles and the associated proofs.
- 34. Highlighting the day life applications whenever exist.
- 35. Encourage the students to see more details in the international web sites and reference books in the library.
- 36. Discussing some selected problems in each chapter.
- 37. Cooperate with different institution to find how they deal with the subject
- 38. Renew the course references frequently

39. Frequently check for the latest discovery in science

| Domains List Teaching Strategies set out in Course Specification | | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy |
|------------------------------------------------------------------|--|--------------------------|-----|------------------------------------------------------------|
| | | No | Yes | and Suggested Action to Deal with Those Difficulties |

| a. Knowledge | Demonstrating the basic | Yes | |
|------------------------------|----------------------------------------------------------------------------------|------------|--|
| | information and principles through | | |
| | lectures and the achieved | | |
| | annlications | | |
| | Discussing phonomone with | Ves | |
| | - Discussing phenomena with | 105 | |
| | Industrating pictures and diagrams | Ves | |
| | Lecturing method: | Vos | |
| | • Projector | Tes Vec | |
| | • Power point | res | |
| | • e-learning | res | |
| | Tutorials | Yes | |
| | Revisit concepts | Yes | |
| | Discussions | Yes | |
| | Brain storming sessions | Yes | |
| | Start each chapter by general idea and the benefit of it | Yes | |
| | Learn the student healteneur d of | | |
| | Learn the student background of the subject; | | |
| | | Yes | |
| | • Show the best ways to deal with | | |
| | problem; | Yes | |
| | • Keep the question "why" or "how" | Vac | |
| h Constitues | to explain always there | I es | |
| b. Cognitive | Preparing main outlines for | Yes | |
| Skills | teaching | *7 | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | Yes | |
| | the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Yes | |
| | for practice solving problem | | |
| | Doing small research | Yes | |
| | | | |
| c. Interpersonal | Learn how to search the internet | Yes | |
| Skills and Bosponsibility | Learn how to cover missed | Vac | |
| Responsionity | - Learn now to cover missed | 168 | |
| | Learn how to summarize leatures | Vac | |
| | Learn now to summarize rectures | res | |
| | | | |
| | Learn how to colve difficulties in | Vac | |
| | Learn now to solve difficulties in | res | |
| | learning: solving problems – | | |
| | Develop their interacts in Said | V | |
| | • Develop their interests in Science | res | |
| | inrougn : (lab work, field trips, | | |
| | visits to scientific and research. | X 7 | |
| | Encourage the student to attend | Yes | |
| | - Ciating begins in the first in the | 37 | |
| | • Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good question to help solve the problem. | No | Yes Yes Yes Yes Yes Yes Yes Yes Yes | |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------|--|
| e Psychomotor Skills (if applicable) | | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 30. Use the web for research to know the basic mathematical principles.
- 31. Discuss with the student and give exams to measure the mathematical skill.
- 32. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 33. Focusing on some real results and its physical meaning.
- 34. Encourage the student to ask good question to help solve the problem.
- 35. Display the lecture note and homework assignment at the web
- 36. Scientific Films in the web site related to the course subjects

C. Results

| 1 Number of students commencing the field experience: 41 | | | | |
|-----------------------------------------------------------|--|--|--|--|
| 12 Number of students completing the field experience: 35 | | | | |
| 13 Result Summary: | | | | |
| Passed: No 20 Percent 48.8% Failed No 15 Percent 36.6% | | | | |
| Did not complete No 6 Percent 14.6% | | | | |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|----------|----|
| А | | | 95- 100 | 0 | 70-74 | 3 |
| В | | | 90-94 | 0 | 65-69 | 6 |
| С | | | 85-89 | 1 | 60-64 | 10 |
| D | | | 80-84 | 0 | < 60 | 15 |
| F | 0 | OR | 75-79 | 0 | | |
| Denied Entry | | | Denied | Entry | <u> </u> | |
| In Progress | | | In Progr | ess | | |
| Incomplete | | | Incomp | lete | | 6 |
| Pass | | | Pass | | | 20 |
| Fail | | | Fail | | | 15 |
| Withdrawn | | | Withdra | wn | | 0 |

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| e. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | | |
|--------------------------------------------------------------------------------------|------------------------------------------|--|--|--|--|--|
| Variation | Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| b. Variations (if any) from planned assessment process | ses in Domains of Learning (C4 in Course | | | | | |
| Specification) | | | | | | |
| Variation | Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| - | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| 5. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 5 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: |
|----------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review other stakeholders etc.). |
| Teview, onler stakeholders etc). |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| |
| |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| Actions Required Updating the course according to the recent publications | Completion Date 04/4/1435 04/2/2014 | Person Responsible Dr. Walid B. Belhadj | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------|--|--|--|
| 4. Recommendations to Program Coordinator (if Required) | | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | | |

Name of Course Instructor: Dr. Walid Belkacem Belhadj

Signature: Date Report Completed: 04/2/2014

Received by Program Coordinator Date:

Course title: Atomic Physics PH 253

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution Umm AL-Qura University

College/ Department

College of Sciences / Physics Department

A Course Identification and General Information

1. Course title and code. Atomic Physics PH 253

2. If course is taught in more than one section indicate the section to which this report applies: SectionS

[1,2,3,4]

3. Year and semester to which this report applies.

Second year, first semester

4 Location (if not on main campus) Within The University Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | |
| Black body radiation The photoelectric effect The Quantum theory of light X- Rays X-ray diffraction The Compton effect Pair production | 15 | 15 | | | |
| DE Broglie waves DE Broglie wave velocity Diffraction of particles Application of the uncertainty principle | 6 | 6 | | | |

| Wave – particle duality | | | |
|-------------------------------|----|----|--|
| Atomic models | 12 | 12 | |
| Alpha particle scattering | | | |
| Rutherford scattering formula | | | |
| Electron orbits | | | |
| Atomic spectra | | | |
| Bohr atom | | | |
| Energy level and spectra | | | |
| Sommerfeld model | | | |
| Atomic excitation | | | |
| | | | |
| QUANTUM THEORY OF THE | 0 | 0 | |
| HYDROGEN ATOM | 9 | 9 | |
| Quantum numbers of H atom | | | |
| The normal Zeeman effect | | | |
| Selection rules | | | |
| Electron spin | | | |
| Spin-orbit coupling | | | |
| Hund's Rule | | | |
| The exclusion principle | | | |
| Electrons configurations | | | |
| The periodic table | | | |
| Total angular momentum | | | |
| 5 | | | |
| | | | |
| | | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| Laser and maser | The lack of time | Taking in another |
| | | courses |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

| Domains | List Teaching Strategies set out in Course Specification | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy |
|---------|-------------------------------------------------------------|-----------------------|-----|------------------------------------------------------------|
| | | No | Yes | and Suggested Action to Deal with Those Difficulties. |

| a. | 1.Demonstrating the basic | Yes | |
|--------------|-------------------------------------------------|------------|--|
| Knowledge | information and principles through | | |
| | lectures and the achieved | | |
| | applications | | |
| | 2. Discussing phenomena with | Yes | |
| | illustrating pictures and diagrams | Var | |
| | 3. Lecturing method: | res | |
| | a. board | Yes | |
| | b. Power point | x 7 | |
| | 4. Tutorials | Yes | |
| | 5. Revisit concepts | | |
| | 0. Discussions 7. Brain storming sessions | Yes | |
| | | Var | |
| | 8. Start each chapter by general idea | res | |
| | and the benefit of it, | Yes | |
| | 9. Learn the student background of the subject: | | |
| | 10 Show the best ways to deal with | Yes | |
| | problem; | Yes | |
| | 11. Keep the question "why" or "how" | | |
| | to explain always there | Yes | |
| | 12 Encourage the concept of team | Yes | |
| | work | V 7 | |
| | 13- Logical thinking. | res | |
| | 14- Active teaching | Yes | |
| | 15- Self learning | Yes | |
| b. Cognitive | 1 Preparing main outlines for teaching | Yes | |
| Skills | 2 Following some proofs | | |
| | 2. Define duties for each shorter | Yes | |
| | 5. Define duties for each chapter | | |
| | 4. Homework assignments | Yes | |
| | 5. Encourage the student to look for | Ves | |
| | the information in different references | 105 | |
| | 6. Ask the student to attend lectures | | |
| | for practice solving problem | Yes | |
| | 7. Doing small research | | |
| | 8- Self learning | Yes | |
| | 9-Project based learning | Voc | |
| | 10- Report back sessions | 1 62 | |
| | 11-Active learning | Yes | |
| | 0 | | |
| | | | |

| с. | 1-Brain storming | Yes | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------|-----|--------------------------------------------------------|
| Interpersona 1 Skills and Responsibili ty | 2-Group discussion | Ves | |
| | 3-Experimental training | yes | |
| | 4-Summarizing lectures or collecting materials of the course. | Yes | |
| | 5-Try to solve difficulties in learning: solving problems – enhance educational skills. | Yes | |
| | 6- Encourage the student to attend general lectures | yes | |
| d. Numerical | 1. Know the basic mathematical principles. | Yes | |
| Communicat | 2. Use the web for research. | Yes | |
| ion Skills | 3. Computational analysis. | Yes | |
| | 4. Data representation. | Yes | |
| | 5. Focusing on some real results and | | |
| | its physical meaning. | Yes | |
| | 6. Lectures for problem solution. | VOC | |
| | 7. Experimental training | yes | |
| | 9.Exams to measure the mathematical skill. | yes | |
| | 10.Clear the weakness point that should be eliminated. | Yes | |
| | 11.Encourage the student to ask for help if needed. | Yes | |
| | 12.Encourage the student to ask good question to help solve the problem | yes | |
| e Psychomoto r Skills (if applicable) | 1- Experimental training | Yes | |
| | 2- Co-operative learning | Yes | |
| | 3- Research projects | yes | This strategy is difficult |
| | | | with the student because the want take the web only |
| | | | without reading and |
| | | | enhancing the collected data They must be trained |
| | | | to visit trust sources to get |
| | | | information. |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

The common semester I will deal the problem of research projects by teaching student to enter the scientific sites to get information. And also how to search about something in this sites

C. Results
| 1 Number of students commencing the field experience: 149 | | | | | |
|--------------------------------------------------------------------------|------------------------|--------------|----------------|--|--|
| 15 Number of students completing the field experience: 139 | | | | | |
| 3 Result Summary: | | | | | |
| Passed: No: 139 | Percent :93.28% | Failed No :7 | Percent :4.03% | | |
| Did not complete No | 3 Percent 2.01% | | | | |

Γ

| | | | | 110 | 70 | 110 |
|--------------|-----|----|---------|-------|----------|-----|
| А | 15 | - | 95- | | 70-74 | |
| | | - | 100 | | | |
| В | 36 | | 90-94 | | 65-69 | |
| С | 39 | - | 85-89 | | 60-64 | |
| D | 49 | - | 80-84 | | < 60 | |
| F | 7 | OP | 75-79 | | | |
| Denied Entry | | OK | Denied | Entry | <u> </u> | |
| In Progress | 149 | - | In Prog | ress | | |
| Incomplete | 3 | - | Incomp | lete | | |
| Pass | 139 | - | Pass | | | |
| Fail | 7 | | Fail | | | |
| Withdrawn | 0 | | Withdra | awn | | |

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| f. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | |
|-----------------------------------------------------------------------------------------------|--------|--|--|--|--|
| Variation | Reason | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course | | | | | |
| Specification) | | | | | |
| Variation Reason | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------|
| The instructors of the course are checking together and put a unique process of evaluation | Effective |
| Check marking of a sample of papers by others in the department | Equal with the level of student in written tests |

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before starting this course |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| yes | | |
| a List the most important criticisms and strengths | | |
| The course is Applicable This course improve the thinking ability and solving problems without memorizing The course improve the principle of team work group This course help in improving the ability to communicate active with others | | |
| b Response of instructor or course team to this evaluation | | |

updating the course updating the learning sources

2. Other Evaluation -- What evaluations were received? Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc):

Not exist

a List the most important criticisms and strengths

Not exist

b Response of instructor or course team to this evaluation

Not exist

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| Actions Required | Completion Date | Person Responsible |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|
| Updating the course | Within 2014- 2015 | Dr: Afaf Maweed |
| Improving the experimental part of the course | 2010 | |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the progra course would require approval at program, depar courses in the program.). | am coordinator if any pr tment or institutional le | oposed action to improve the vel or that might affect other |

Name of Course Instructor:_DR. Afaf Maweed Abdelmageed Ali

Signature:_afaf maweed _____

_Date Report Completed:_4-3-1435

Received by Program Coordinator

Date:_____

Course title: Classical mechanics (2) Course code: (PH 245)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qura University

College/ Department: College of Applied Sciences / Physics Department

A Course Identification and General Information

1. Course title and code. Classical mechanics (2) (PH 245)

2. If course is taught in more than one section indicate the section to which this report applies

Two groups

3. Year and semester to which this report applies. (1434-1435) (semester 1)

4 Location (if not on main campus) In the main campus

B- Course Delivery

| 1 Coverage of Planned Program | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------|--------------------------------------------------------------------------------------------------|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | |
| Dynamics of Systems of Many Particles: Scattering ; comparison of Laboratory And centre of mass coordinate systems, impulse and collision, Motion of a body with variable mass (rocket motion), Examples | 9 | 9 | | | |

| Mechanics of Rigid Bodies , Planar Motion: Center of mass of a rigid body, Some theorems of static equilibrium of rigid body, Rotation of a rigid body about a fixed axis (Moment of inertia), Calculation of the moment of inertia, the physical pendulum, General theorem concerning angular momentum, Laminar motion of rigid body, body rolling down in inclined plane | 12 | 12 | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|--|
| Motion of Rigid Bodies in Three Dimensions: Angular momentum of a rigid body, Use of matrices in rigid body dynamics (the inertia tensor), determination of principle axes, rotational kinetic energy of a rigid body, Moment of inertia of a rigid body about an arbitrary axis, Euler's equation of motion of a rigid body, Free rotation of a rigid body with an axis of symmetry, Gyroscopic precession motion of a top. | 12 | 9 | |
| Lectures: 42 hr | Tutorial: 42 hr | Practical/Fieldwork/Internship: | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action Elsewhere in the Program |
|-----------------------------------|----------------------------------|----------------------------------------------------------|
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 1. Explain strategy of the course in the beginning of the semester
- 2. Outlines of the physical laws, principles and the associated proofs.
- 3. Highlighting the day life applications whenever exist.
- 4. Encourage the students to see more details in the international web sites and reference books in the library.
- 5. Discussing some selected problems in each chapter.
- 6. Cooperate with different institution to find how they deal with the subject
- 7. Renew the course references frequently
- 8. Frequently check for the latest discovery in science

| Domains | Demains List Teaching Strategies set out in Course Specification | | hese ve? | Difficulties Experienced (if any) in Using the Strategy and Suggested Action to | |
|---------|---------------------------------------------------------------------|----|-------------|---------------------------------------------------------------------------------------|--|
| | | No | Yes | Deal with Those Difficulties . | |

| a. Knowledge | | | | |
|--------------|--------------------------------|-----|------------|--|
| | \Box Demonstrating the basic | | Yes | |
| | information and | | | |
| | principles through | | | |
| | lectures and the achieved | | | |
| | applications | | | |
| | \square Discussing phenomena | | Yes | |
| | with illustrating pictures | | 105 | |
| | and diagrams | | | |
| | \Box Lecturing method: | | | |
| | \square Projector | No | | |
| | \square Power point | No | | |
| | \square a learning | INU | Vas | |
| | \Box \Box Tutorials | | Vas | |
| | $\Box \text{Iutorials}$ | | Tes Vec | |
| | | | I es | |
| | | | res | |
| | \Box Brain storming sessions | | res | |
| | Start each chapter by | | Yes | |
| | general idea and the | | | |
| | benefit of it | | | |
| | Learn the student | | Yes | |
| | background of the | | | |
| | subject; | | | |
| | \Box Show the best ways to | | Yes | |
| | deal with problem; | | | |
| | \Box Keep the question "why" | | Yes | |
| | or "how" to explain | | | |
| | always there | | | |
| | | | | |

| b. Cognitive | | | |
|------------------|--------------------------------------|-----|--|
| Skills | Preparing main outlines for teaching | Yes | |
| | \Box Following some proofs | Yes | |
| | \Box Define duties for each | Yes | |
| | chapter | | |
| | □ Home work assignments | Yes | |
| | \Box Encourage the student to | Yes | |
| | look for the information in | | |
| | different references | | |
| | \Box Ask the student to attend | Yes | |
| | lectures for practice | | |
| | solving problem | V | |
| | Doing small research | res | |
| c. Interpersonal | | | |
| Skills and | • Learn how to search the | Yes | |
| Responsibility | internet and use the library. | 105 | |
| | □ Learn how to cover missed | Yes | |
| | lectures. | | |
| | \Box Learn how to summarize | Yes | |
| | lectures or to collect | | |
| | materials of the course. | | |
| | \Box Learn how to solve | Yes | |
| | difficulties in learning: | | |
| | solving problems – | | |
| | \square Develop her interest in | Vas | |
| | Science through (lab | 105 | |
| | work, field trips, visits to | | |
| | scientific and research. | | |
| | \Box Encourage the student to | Yes | |
| | attend lectures regularly | | |
| | by: | | |
| | □ Giving bonus marks for | Yes | |
| | attendance assigning marks | | |
| | for attendance | | |
| | | | |

| d. Numerical | | | |
|-----------------------------|----------------------------------|-----|--|
| and | \Box Know the basic | Vac | |
| Communication | I Know the basic | 105 | |
| SKIIIS | mathematical principles. | | |
| | \Box Use the web for research. | Yes | |
| | \Box Discuss with the student. | Yes | |
| | \Box Exams to measure the | Yes | |
| | mathematical skill. | | |
| | \Box Clear the weakness point | Yes | |
| | that should be eliminated. | | |
| | \Box Encourage the student to | Yes | |
| | ask for help if needed | 105 | |
| | Computational analysis | Vac | |
| | \Box Computational analysis. | res | |
| | Data representation. | Yes | |
| | □ Focusing on some real | Yes | |
| | results and its physical | | |
| | meaning. | | |
| | □ Lectures for problem | Yes | |
| | solution. | | |
| | \Box Encourage the student to | Yes | |
| | ask good question to help | | |
| | ask good question to help | 105 | |
| | solve the problem | | |
| D | | | |
| e Psychomotor Skills (if | | | |
| applicable) | | | |
| · · · · | | | |
| | | | |
| | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 1. Use the web for research to know the basic mathematical principles.
- 2. Discuss with the student and give exams to measure the mathematical skill.
- 3. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 4. Focusing on some real results and its physical meaning.
- 5. Encourage the student to ask good question to help solve the problem.
- 6. Display the lecture note and homework assignment at the web
- 7. Scientific Films in the web site related to the course subjects
- 8. http://uqu.edu.sa/staff/ar/4300376

C. Results

| 1 Number of students commencing the field experience: 15 | | |
|-----------------------------------------------------------------------------|--|--|
| 16 Number of students completing the field experience 15 | | |
| 3 Result Summary: Passed: No 14 Percent 93.33 % Failed No 1 Percent 6.7% | | |
| Did not complete No 0 Percent 0% | | |

| | | No | | % | No | % | No | |
|---------------------|-----------------------|-------------|------|------------|-------|-------|----|--|
| | А | 1 | | 95- 100 | 1 | 70-74 | 2 | |
| | В | 1 | | 90-94 | 0 | 65-69 | 3 | |
| | С | 5 | | 85-90 | 1 | 60-64 | 4 | |
| | D | 7 | | 80-84 | 0 | < 60 | 1 | |
| | F | 1 | OR | 75-79 | 3 | | | |
| | Denied Entry | - | - | Denied | Entry | | - | |
| | In Progress | - | | In Prog | ress | | - | |
| | Incomplete | - | - | Incomp | olete | | - | |
| | Pass | 14 | - | Pass | | | 14 | |
| | Fail | 1 | | Fail | | | 1 | |
| | Withdrawn | 0 | | Withdra | awn | | 0 | |
| special fac None | ctors (if any) affect | ing the res | ults | | | | I | |

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| g. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | |
|--------------------------------------------------------------------------------------|--|--|--|
| Variation Reason | | | |
| | | | |

| b. Variations (if any) from planned assessment process Specification) | es in Domains of Learning (C4 in Course |
|--------------------------------------------------------------------------|-----------------------------------------|
| | |
| Variation | Reason |
| Variation | Reason |
| Variation | Reason |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------|
| The instructors of the course are checking together and put a unique process of evaluation | True |
| Check marking of a sample of papers by others in the department | Equal with the level of student in written tests |
| Feedback evaluation of teaching from independent organization | True |

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| | |
| | |

H Course Evaluation

1 Student evaluation of the course: (Attach Survey Results if available) a List the most important criticisms and strengths b Response of instructor or course team to this evaluation 2. Other Evaluation -- What evaluations were received? Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc): a List the most important criticisms and strengths b Response of instructor or course team to this evaluation

I Planning for Improvement

| 1. Progress on actions proposed for improving the cou | rse in previous course reports: |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully |
| | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| Actions Required | Completion Date | Person Responsible |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------|
| Updating the course according to the recent publications Visit to simulation Lab | 1434\1435H 2013\2014 | Dr. Abdelrahman Lashin |
| Recommendations to Program Coordinator (in Recommendations by the instructor to the prograunity ourse would require approval at program, departures in the program.). | f Required) am coordinator if any p rtment or institutional le | roposed action to improve the evel or that might affect other |

Name of Course Instructor:__Dr. Abdelrahman Youssef Mohamed Lashin

Signature:___Abdelrahman Lashin Received by Program Coordinator Date Report Completed 1/1/2014 Date:

Course title: Statistical thermodynamics Course code: (403213)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code.

Statistical thermodynamics, Phys 403213

2. If course is taught in more than one section indicate the section to which this report applies (Group1)

3. Year and semester to which this report applies. (1434-1435) (semester 1) **4** Location (if not on main campus), abdia

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| 1. Basics of probability and statistics: probability distributions, statistical averages, law of large numbers, random walk, examples of various distributions. Thermodynamics entropy, distinguishable and indistinguishable particles, Boltzmann statistics, Maxwell-Boltzmann distribution. Foundations of statistical mechanics. Microstates. Quantum and classical systems. | 9 | 9 | |
| 2. Partition function of an ideal gas, diatomic gas: vibrational and rotational modes, the total heat capacity of a diatomic gas. | 9 | 9 | |
| 3. Microcanonical, canonical and grand canonical statistical ensembles. | 9 | 9 | |
| 4. Fermi-Dirac and Bose-Einstein statistics (calculated by two methods), and applied to free electron theory and Bose-Einstein condensation. | 9 | 9 | |
| 5. Thermodynamics of radiation, blackbody spectrum, Bose- Einstein gases, Bose-Einstein condensation, liquid helium | 9 | 9 | |

| 2 Course components (total contact hours per semester): | | | |
|---------------------------------------------------------|--------------------|-------------------------------------------------|--|
| Lectures: 45 hr | Tutorial: 45 hr | Practica l/Field work/In ternship : | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 40. Explain strategy of the course in the beginning of the semester
- 41. Outlines of the physical laws, principles and the associated proofs.
- 42. Highlighting the day life applications whenever exist.
- 43. Encourage the students to see more details in the international web sites and reference books in the library.
- 44. Discussing some selected problems in each chapter.
- 45. Cooperate with different institution to find how they deal with the subject
- 46. Renew the course references frequently
- 47. Frequently check for the latest discovery in science

| Domains List Teaching Strategies set out in Course Specification | | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy |
|------------------------------------------------------------------|--|--------------------------|-----|------------------------------------------------------------|
| | | No | Yes | Deal with Those Difficulties |

| a. Knowledge | Demonstrating the basic | Yes | |
|------------------|--------------------------------------------------------|-----|--|
| | information and principles through | | |
| | lectures and the achieved | | |
| | applications | | |
| | Discussing phonomeno with | Ves | |
| | Discussing phenomena with | 105 | |
| | illustrating pictures and diagrams | Vac | |
| | Lecturing method: | Tes | |
| | Projector | Yes | |
| | Power point | Yes | |
| | e-learning | Yes | |
| | Tutorials | Yes | |
| | Revisit concepts | Yes | |
| | Discussions | Yes | |
| | Brain storming sessions | Yes | |
| | Start each chapter by general idea | Yes | |
| | and the benefit of it | | |
| | Learn the student background of | Vac | |
| | the subject; | res | |
| | Show the best ways to deal with | Yes | |
| | problem; | 100 | |
| | Keep the question "why" or "how" | Yes | |
| | to explain always there | | |
| b. Cognitive | Preparing main outlines for | Yes | |
| Skills | teaching | | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | 105 | |
| | the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Ves | |
| | for practice solving problem | 105 | |
| | | Vac | |
| | Doing small research | res | |
| c. Interpersonal | Learn how to search the internet | Yes | |
| Skills and | and use the library. | | |
| Responsibility | Learn how to cover missed | Yes | |
| | lectures. | | |
| | Learn how to summarize lectures | Yes | |
| | or to collect materials of the | | |
| | course. | | |
| | Learn how to solve difficulties in | Yes | |
| | learning: solving problems – | | |
| | enhance educational skills. | | |
| | Develop her interest in Science | Yes | |
| | through :(lab work, field trips, | | |
| | visits to scientific and research. | | |
| | Encourage the student to attend | Yes | |
| | lectures regularly by: | | |
| | Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| | Encourage the student to ask good question to help solve the problem. | Ies |
| e Psychomotor Skills (if applicable) | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 37. Use the web for research to know the basic mathematical principles.
- 38. Discuss with the student and give exams to measure the mathematical skill.
- 39. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 40. Focusing on some real results and its physical meaning.
- 41. Encourage the student to ask good question to help solve the problem.
- 42. Display the lecture note and homework assignment at the web
- 43. Scientific Films in the web site related to the course subjects
- 44. http://uqu.edu.sa/staff/ar/4300376

C. Results

| 1 Numb | per of students commencing the field experience: 28 |
|---------|--------------------------------------------------------|
| 17 | Number of students completing the field experience: 27 |
| 18 | Result Summary: |
| Passed: | No 28 Percent 7 Failed No 10 Percent 37% |
| Did not | complete No 1 Percent 3 % |

| 4 Distribution | of Grades (If per | centage m | arks are give | en indicate nun | nbers in e | ach 5 pei | centile group) | |
|---------------------------------------------------------------------------------------------------------------------|---------------------|-------------|---------------|-----------------|------------|-----------|----------------|--|
| | | No | | % | No | % | No | |
| | А | - | | | | | - | |
| | В | 1 | | | | | | |
| | С | 1 | | | | | | |
| | D | 7 | | | | | | |
| | F | 6 | OR | | | | | |
| | Denied Entry | 1 | | Denied | Entry | | | |
| | In Progress | 17 | | In Prog | gress | | | |
| | Incomplete | 1 | | | Incomp | olete | | |
| | Pass | 9 | | | Pass | | | |
| | Fail | 6 | | Fail | | | | |
| | Withdrawn | 0 | | Withdr | awn | | | |
| 19 Special factors (if any) affecting the results None | | | | | | | | |
| | | | | | | | | |
| 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.) | | | | | | | | |
| h. Variations | (if any) from plann | ned assessi | ment schedu | le (C5 in Cours | se Specifi | cation) | | |
| | Variation | | | | | Reason | | |

Г

| n. variations (if any) from planned assessment schedu | ile (C5 ill Course specification) |
|--------------------------------------------------------|-----------------------------------------|
| Variation | Reason |
| | |
| | |
| | |
| | |
| | |
| | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course |
| Specification) | |
| Variation | Reason |
| | |
| | |
| | |
| | |
| | |
| | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| 6. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 6 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: |
|----------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review, other stakeholders etc): |
| ······································ |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |
| |
| |

I Planning for Improvement

| 1. Progress on actions proposed for improving the cou | rse in previous course reports: |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------|
| Actions Required Updating the course according to the recent publications Visit to Researches Lab. | Completion Date 1432\1433H 2011\2012 | Person Responsible Dr. El-Hadi, Ahmed |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the program would require approval at program, department or program.). | n coordinator if any prop institutional level or that | bosed action to improve the course might affect other courses in the |
| | | |

Name of Course Instructor: Dr. Ahmed Mohamed El-Hadi

Signature: el-hadi Date Report Completed: 2013/2014

Received by Program Coordinator Date: 22/1/2014

Course title: Mathematical Physics II Course code: (433242)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qura University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Mathematical Physics II (433242)

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. Academic Year (1434-1435 H) (2013-2014) (first semester)

4 Location (if not on main campus): Al-Zaher Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|--------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| I Gamma and Beta Functions | 12 | 12 | |
| 1. The Factorial Function. | | | |
| 2. Gamma Function and Recursion relation. | | | |
| 3. Gamma Function of negative numbers. | | | |
| 4. Some important formulas involving Gamma | | | |
| functions. | | | |
| 5. Beta Functions. | | | |
| 6. The Relation between the Beta and Gamma | | | |
| Functions. | | | |
| 7. The Error Function. | | | |
| 8. Asymptotic Series. | | | |
| 9. Stirling Formula. | | | |
| 10. Problems. | | | |
| II Fourier Series | 12 | 12 | |
| 1. Periodic Functions. | | | |

| 2. Applications of Fourier Series. | | | |
|-----------------------------------------------------------|--------------------|----|--|
| 3. Average value of a function. | | | |
| 4. Fourier Coefficients. | | | |
| 5. Complex form of Fourier series. | | | |
| 6. Other intervals. | | | |
| 7. Even and Odd Functions. | | | |
| 8. An application to Sound. | | | |
| 9. Parseval's Theorem | | | |
| 10. Problems. | | | |
| III Solution of differential equation by series method | 18 | 18 | |
| 1. Legendre equation and Legendre functions | 10 | 10 | |
| a. Legendre's Equation | | | |
| b. Leibniz's Rule | | | |
| c. Rodrigue's Formula | | | |
| d. Generating Functions for Legendre Polynomials. | | | |
| e. Orthogonality of Legendre Polynomials. | | | |
| f. Recursion Relations of Legendre Polynomials. | | | |
| g. Normalization of Legendre Polynomials. | | | |
| h. Legendre Series. | | | |
| i. Associated Legendre Functions. | | | |
| 2. Bessel's Equation. | | | |
| a. Bessel's equation and the second solution of | | | |
| Bessel's equation. | | | |
| b. Recursion relation of Bessel functions. | | | |
| c. Other kinds of Bessel functions (Spherical Bessel | | | |
| functions). | | | |
| 3. Hermite Functions. | | | |
| 4. Laguerre Functions. | | | |
| 5. Problems. | | | |
| | | | |
| 2 Course components (total context hours not components): | | | |
| 2 Course components (total contact nours per semester): | | | |
| Lectures: 42 hr | Tutorial: 42 hr | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action Elsewhere in the Program |
|-----------------------------------|----------------------------------|----------------------------------------------------------|
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 48. Explain strategy of the course in the beginning of the semester
- 49. Outlines of the Mathematical physics laws, principles and the associated proofs.
- 50. Highlighting the day life applications whenever exist.
- 51. Encourage the students to see more details in the international web sites and reference books in the library.
- 52. Discussing some selected problems in each chapter.
- 53. Cooperate with different institution to find how they deal with the subject
- 54. Renew the course references frequently
- 55. Frequently check for the latest discovery in science

| Domains | ains List Teaching Strategies set out in Course Specification | | these tive? | Difficulties Experienced (if any) in Using the Strategy |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------|------------------------------------------------------------|
| | | No | Yes | Deal with Those Difficulties |
| a. Knowledge | Demonstrating the basic information and principles through lectures and the achieved applications Discussing phenomena with illustrating pictures and diagrams Lecturing method: Projector Power point e-learning Tutorials Revisit concepts Discussions Brain storming sessions Start each chapter by general idea and the benefit of it Learn the student background of the subject; Show the best ways to deal with problem; Keep the question "why" or "how" to explain always there | | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes | |

| b. Cognitive | Preparing main outlines for | Yes | |
|-----------------|--------------------------------------------------------------------|-----|--|
| Skills | teaching | | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | Yes | |
| | the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Yes | |
| | for practice solving problem | | |
| | Doing small research | Yes | |
| c Internersonal | Learn how to search the internet | Ves | |
| Skills and | and use the library. | 105 | |
| Responsibility | Learn how to cover missed | Yes | |
| 1 2 | lectures. | | |
| | Learn how to summarize lectures | Yes | |
| | or to collect materials of the | | |
| | course. | *7 | |
| | Learn how to solve difficulties in learning, solving much leave | Yes | |
| | enhance educational skills | | |
| | Develop her interest in Science | Ves | |
| | through :(lab work, field trips, | 105 | |
| | visits to scientific and research. | | |
| | Encourage the student to attend | Yes | |
| | lectures regularly by: | | |
| | Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |
| d. Numerical | Know the basic mathematical | Yes | |
| Communication | principles. | Ves | |
| Skills | • Use the web for research. | Yes | |
| | Discuss with the student. | Yes | |
| | Exams to measure the | Yes | |
| | mathematical skill. | | |
| | Clear the weakness point that | Yes | |
| | should be eliminated. | V | |
| | Encourage the student to ask for | Yes | |
| | help if needed. | Ves | |
| | Computational analysis. | Yes | |
| | Data representation. | Yes | |
| | Focusing on some real results and | | |
| | its physical meaning. | | |
| | • Lectures for problem solution. | Yes | |
| | • Encourage the student to ask good | Yes | |
| - Decel | question to help solve the problem. | | |
| e Psychomotor | | | |
| annlicable) | | | |
| appricatic) | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 45. Use the web for research to know the basic mathematical principles.
- 46. Discuss with the student and give exams to measure the mathematical skill.
- 47. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 48. Focusing on some real results and its mathematical and physical meaning.
- 49. Encourage the student to ask good question to help solve the problem.
- 50. Display the lecture note and homework assignment at the web

C. Results

| 1 Number of students commencing the field experience: 102 | | | |
|------------------------------------------------------------------------------------------------------------------|--|--|--|
| 20 Number of students completing the field experien 97 | | | |
| 3 Result Summary: Passed: No 87 Percent 85.3% Failed No 10 Percent 9.8% Did not complete No 5 Percent 4.9% | | | |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| А | 11 | | 95- 100 | 8 | 70-74 | 10 |
| В | 17 | | 90-94 | 3 | 65-69 | 10 |
| С | 25 | | 85-89 | 8 | 60-64 | 24 |
| D | 34 | | 80-84 | 9 | < 60 | 10 |
| F | 10 | OR | 75-79 | 15 | | |
| Denied Entry | 5 | | Denied | Entry | | 5 |
| In Progress | | | In Prog | ress | | |
| Incomplete | | | Incomp | lete | | |
| Pass | 87 | | Pass | | | 87 |
| Fail | 10 | | Fail | | | 10 |
| Withdrawn | 0 | | Withdra | awn | | 0 |

5 Special factors (if any) affecting the results

None

| 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course | | | | |
|------------------------------------------------------------------------------------------------------|--------|--|--|--|
| Specification.) | | | | |
| | | | | |
| i. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | |
| Variation | Reason | | | |
| | | | | |
| | | | | |
| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course | | | | |
| Specification) | | | | |
| Variation Reason | | | | |
| | | | | |
| | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Mathod(a) of Varification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| Method(s) of Verification | Conclusion |
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

D. Resources and Facilities

| 7. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. | |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| Shortage the hand books in Arabic and Web sites available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course | |
| E. Administrative Issues | | |
| 7 Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. | |

H Course Evaluation

1 Student evaluation of the course:

(Attach Survey Results if available)

a List the most important criticisms and strengths

b Response of instructor or course team to this evaluation

2. Other Evaluation -- What evaluations were received?

Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc):

a List the most important criticisms and strengths

b Response of instructor or course team to this evaluation

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. Was applied successfully | | |

2. Other action taken to improve the course this semester/year

Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------|
| Actions Required | Completion Date | Person Responsible |
| Updating the course according to | 1434\1435H | Dr. Fatma Elsayed Mahrous |
| the recent publications | 2013\2014 | |
| 1 | , | |
| 4. Recommendations to Program Coordinator (if | Required) | - |
| (Recommendations by the instructor to the progra would require approval at program, department or program.). | m coordinator if any pro institutional level or tha | posed action to improve the course it might affect other courses in the |
| | | |

Name of Course Instructor: Dr. Fatma Elsayed MahrousSignature: Fatma ElsayedDate Report Completed: 2013/2014

Received by Program Coordinator

Date: 6/1/2014

Course title: Electromagnetism I Course code: (PH 341)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Electromagnetism (I))

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. (1434-1435) (semester 1)4 Location (if not on main campus), Al-Zaher Campus (For Girls)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|---------------------------------------|-----------------------------|-------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Electrostatics | 6 | 6 | |
| 1. Electric Charge | | | |
| 2. Coulomb | | | |
| 3. The Electric Field - | | | |
| 4. Electrostatic Potential | | | |
| 5. Conductors & Insulators | | | |
| 6. Gauss's Law | | | |
| 7. The Electric Dipole | | | |
| 8. Multipole Expansion | | | |
| Solution of the Electrostatic Problem | 12 | 12 | |
| 1. Poisson's Equation | | | |
| 2. Laplace's Equation | | | |

| 3. Laplaces's Equation in one | | | |
|-----------------------------------------------------------------------------------------------------------------|---|---|--|
| Independent Variable | | | |
| 4. Laplace's Equation in Spherical Coordinates Conducting Sphere in Uniform | | | |
| 5. Cylindrical Harmonics | | | |
| 6. Electrostatic Images | | | |
| 7. Point charge & Conducting Sphere | | | |
| 8. Line charges & Line Images | | | |
| 9. System of Conductors | | | |
| 10. Poisson's Equation | | | |
| The Electrostatic Field in Dielectric Media | 9 | 9 | |
| 1. Polarization | | | |
| 2. Field Outside of a Dielectric Medium | | | |
| 3. The Electric Field inside a Dielectric | | | |
| 4. The Electric Displacement- | | | |
| 5. Electric Susceptibility and Dielectric Constant | | | |
| <i>Point Charge in a Dielectric Field</i> Boundary Conditions on The Field | | | |
| 8. Vector Boundary Value Problem | | | |
| | | | |
| Involving Dielectrics | | | |
| Involving Dielectrics9. Dielectric Sphere in a Uniform | | | |
| Involving Dielectrics 9. Dielectric Sphere in a Uniform Electric Field | | | |
| Involving Dielectrics 9. Dielectric Sphere in a Uniform Electric Field <i>MICROSCOPIC THEORY OF DIELECTRICS</i> | 6 | 6 | |

| Induced Dipoles | | | |
|----------------------------------------------------------------------|--------------------|----------------------------------------------|--|
| <i>Polar Molecules</i> Ferroelectricity | | | |
| ELECTROSTATIC ENERGY | 4.5 | 4.5 | |
| 1. Potential Energy of a Group of Point | | | |
| 2. Charges Energy Density of an Electrostatic Field | | | |
| 3. Energy of a System of Charged Conductors | | | |
| 4. Capacitors | | | |
| ELECTRIC CURRENT | 4.5 | 4.5 | |
| 1. Current Density & Equation of Continuity | | | |
| 2. Ohm's Law | | | |
| 3. Steady Currents in Continous Media | | | |
| 4. Microscopic Theory of Conduction | | | |
| 2 Course components (total contact hours per semester): | | | |
| Lectures: 45 hr | Tutorial: 42 hr | Practical/Fie ldwork/Inter nship: 3 hr | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action Elsewhere in the Program |
|-----------------------------------|----------------------------------|----------------------------------------------------------|
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

| Domains | List Teaching Strategies set out in Course Specification | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy and Suggested Action to | |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------|---------------------------------------------------------------------------------------|--|
| | | No | Yes | Deal with Those Difficulties | |
| a. Knowledge | Demonstrating the basic information and principles through lectures and the achieved applications | | Yes | | |
| | Discussing phenomena with illustrating pictures and diagrams | | Tes Ver | | |
| | • Lecturing method: | | res | | |
| | Projector | | Yes | | |
| | Power point | | Yes | | |
| | • e-learning | | Tes Vos | | |
| | Internals Devisit concents | | Ves | | |
| | Revisit concepts Discussions | | Yes | | |
| | Discussions Brain storming sessions | | Yes | | |
| | Start each chapter by general idea and the benefit of it | | Yes | | |
| | Learn the student background of the subject; | | Yes | | |
| | Show the best ways to deal with problem; | | Yes | | |
| | Keep the question "why" or "how" to explain always there | | Yes | | |
| b. Cognitive | Preparing main outlines for teaching | | Yes | | |
| SKIIIS | Following some proofs | | Ves | | |
| | Define duties for each chapter | | Yes | | |
| | - Define duties for each enapter | | Yes | | |
| | Home work assignments | | Yes | | |
| | Encourage the student to look for the information in different references | | | | |
| | Ask the student to attend lectures for practice solving problem | | Yes | | |
| | Doing small research | | Yes | | |

| T , 1 | - Y 1 - 1 - 1 | 37 |
|-----------------------------|-------------------------------------------------------------------------------------------------|-----|
| c. Interpersonal Skills and | Learn how to search the internet and use the library. | Yes |
| Responsibility | • Learn how to cover missed | Yes |
| | Learn how to summarize lectures | Yes |
| | or to collect materials of the | |
| | course. | X7 |
| | Learn how to solve difficulties in learning: solving problems – | Yes |
| | enhance educational skills. | |
| | Develop her interest in Science | Yes |
| | through :(lab work, field trips, | |
| | visits to scientific and research. Encourage the student to attend | Ves |
| | lectures regularly by: | 105 |
| | Giving bonus marks for attendance | Yes |
| | assigning marks for attendance. | |
| d. Numerical | Know the basic mathematical | Yes |
| Communication | principles. | Yes |
| Skills | • Use the web for research. | Yes |
| | Discuss with the student. | Yes |
| | Exams to measure the mathematical skill. | Yes |
| | Clear the weakness point that | Yes |
| | should be eliminated. | Vac |
| | Encourage the student to ask for help if needed | 105 |
| | Computational analysis | Yes |
| | Data representation. | Yes |
| | Focusing on some real results and its physical meaning. | 105 |
| | Lectures for problem solution. | Yes |
| | • Encourage the student to ask good | Yes |
| | question to help solve the problem. | |
| e Psychomotor | | |
| applicable) | | |
| upplication() | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- Better follow up on the progress of each student in class.
- Visit to Centre Lab to recognize the instruments related to course content
- Scientific Films in the web site related to the course subjects
- http://uqu.edu.sa/staff/ar/4300376

C. Results

1 Number of students commencing the field experience:

34
| 21 | Number of students completing the field experience: 3 | 34 |
|---------|-------------------------------------------------------|----|
| 22 | Result Summary: | |
| Passed: | No 29 Percent 85 Failed No 4 Percent | 12 |
| Did not | t complete No 1 Percent 3 | |

Г

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| А | 2 | - | 95- 100 | 0 | 70-74 | 5 |
| В | 11 | | 90-94 | 2 | 65-69 | 2 |
| С | 8 | - | 85-89 | 7 | 60-64 | 6 |
| D | 8 | - | 80-84 | 4 | < 60 | 4 |
| F | 4 | OR | 75-79 | 3 | | |
| Denied Entry | 1 | - | Denied | Entry | | 1 |
| In Progress | 33 | - | In Prog | ress | | 33 |
| Incomplete | 0 | - | Incomp | lete | | 0 |
| Pass | 29 | | Pass | | | 29 |
| Fail | 4 | - | Fail | | | 4 |
| Withdrawn | 0 | - | Withdra | wn | | 0 |

 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

 j. Variations (if any) from planned assessment schedule (C5 in Course Specification)

 Variation
 Reason

 b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course Specification)

 Variation
 Reason

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |
| D Deserves and Examples | |

.D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |

H Course Evaluation

| 1 Student evaluation of the course: |
|----------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |
| • |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review, other stakeholders etc): |
| |
| a List the most important criticisms and strengths |
| |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | | |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | | |
| New chapter was added to cover the new of the Was applied successfully electromagnetic field | | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| Actions Required Updating the course according to the recent publications Visit to Researches Lab. | Completion Date 1434\1435H 2013\2014 | Person Responsible Dr. Roshdi Seoudi | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------|--|--|--|--|--|
| 4. Recommendations to Program Coordinator (if Required) | | | | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | | | | |

Name of Course Instructor: Dr. Roshdi Seoudi Mohamed Awed

Signature: Roshdi Awed Date Report Completed: 2013/2014

Received by Program Coordinator

Date: 1/2/2014

First Semester

Academic Year 1434\1435H -2013\2014

Course title: Quantum Mechanic I Course code: (403344)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qura University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Quantum Mechanics I (PH 344)

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. Academic Year (1434-1435 H) (2013-2014) (first semester)

4 Location (if not on main campus): Main Campus +Al- Zaher Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| THE LIMITS OF CLASSICAL MECHANICS | 10 | 10 | |
| 1. Blackbody Radiation | | | |
| 2. Blackbody Radiation could not be explained by | | | |
| classical physics | | | |
| 3. The Planck Distribution and the Quantum of Energy | | | |
| 4. The Photoelectric Effect | | | |
| 5. The Compton Effect | | | |
| 6. Wave Prosperities and Electron Diffraction | | | |
| 7. De Broglie Waves are observed experimentally | | | |
| 8. The Bohr Atom and Derivation of Redberg constant | | | |
| WAVE PACKET AND THE UNCERTAINTY | 10 | 10 | |
| RELATION | | | |
| 1- Introduction of Complex Number, Special | | | |
| Integration, Fourier Transform and Integration, | | | |

| Fourier analysis and Wave Packet, Calculation of | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|--|
| The Half Band Width. | | | |
| 2- Wave Packet and its Calculation of their Band | | | |
| Width. | | | |
| 3- The Propagation of the Wave Packet. | | | |
| 4- From Wave Packet to the Schrodinger Equation | | | |
| 5- The Uncertainty Relation. | | | |
| 6- Measurements the Position of The Electron | | | |
| (Hesinberg Microscope) | | | |
| SCHRODINGER WAVE EQUATION AND | 8 | 8 | |
| PROBABILITY INTERPRETATION | Ū | Ū | |
| 1. Interpretation of the Probability Wave Function | | | |
| 2. Importance of Phases | | | |
| 3. Probability Current and Conservation Low | | | |
| 4. Expectations Values and particle Momentum | | | |
| 5. Derivation of Momentum Operator | | | |
| 6. Operators properties | | | |
| EIGEN FUNCTION AND EIGEN VALUES | 8 | 8 | |
| 1- Time Dependent Schrodinger Equation | Ū | Ū | |
| 2- Time Independent Schrodinger Equation | | | |
| 3- Concepts of Hamiltonian Operator | | | |
| 4- Solution of the Eigen Values Equation for the | | | |
| particle in a Box. | | | |
| 5- Derivation of some Physical Information from the | | | |
| Eigen Values Solutions. | | | |
| 6- Expansion Postulate and Its Physical Interpretation | | | |
| | | | |
| 7- Parity | | | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) 2- Reflection and Transmission Fluxes | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) 2- Reflection and Transmission Fluxes 3- Potential Well | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) 2- Reflection and Transmission Fluxes 3- Potential Well 4- Even and Odd Solutions | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) 2- Reflection and Transmission Fluxes 3- Potential Well 4- Even and Odd Solutions 5- The potential Barriers | 10 | 10 | |
| 7- Parity ONE-DIMENSIONAL POTENTIAL 1- The Potential Step: (Transmission and reflection) 2- Reflection and Transmission Fluxes 3- Potential Well 4- Even and Odd Solutions 5- The potential Barriers 6- Tunnelling Phenomena (cold emission) | 10 | 10 | |

| G | ENERAL CONSTRUCTION OF QUANTUM | 8 | 8 | |
|---------|-----------------------------------------------------|--------------------|----|--|
| | MECHANICS | | _ | |
| 1. | Eigen Function and Eigen Values "Hamiltonian | | | |
| | Operator" | | | |
| 2. | Other Observable | | | |
| 3. | Equation of Momentum Operator | | | |
| 4. | Theory of Expansion and Parity with the Vector | | | |
| 5. | Operator and Observable | | | |
| 6. | Time dependence the Classical Limit of | | | |
| 7. | Quantum Mechanics | | | |
| TI | IE SCHRODINGER EQUATION IN THREE | 10 | 10 | |
| | DIMENSIONS | | - | |
| 1. | The Central Potential | | | |
| 2. | Consequences of Rotational Invariance | | | |
| 3. | Invariance under Rotation about Z-Axis | | | |
| 4. | Commutative Relation of the Angular Momentum | | | |
| 5. | Separation of Variables in the Schrodinger Equation | | | |
| 6. | The Radial Equation | | | |
| 7. | The Hydrogen Atom | | | |
| 8. | The Energy spectrum | | | |
| 9. | The Degeneracy of the spectrum | | | |
| 10. | The Radial Eigen Function | | | |
| 2 Cours | se components (total contact hours per semester): | | | |
| Lecture | es: 62 hr | Tutorial: 62 hr | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 56. Explain strategy of the course in the beginning of the semester
- 57. Outlines of the physical laws, principles and the associated proofs.
- 58. Highlighting the day life applications whenever exist.
- 59. Encourage the students to see more details in the international web sites and reference books in the library.
- 60. Discussing some selected problems in each chapter.
- 61. Cooperate with different institution to find how they deal with the subject
- 62. Renew the course references frequently
- 63. Frequently check for the latest discovery in science

| | | 1 | | | | |
|----------------------------------------------------|----------------------------------------------------------------------------------|------------|-----|------------------------------|--|--|
| Domains List Teaching Strategies set out in Course | | Were these | | Difficulties Experienced (if | | |
| | Specification | Effective? | | any) in Using the Strategy | | |
| | | No | Yes | Deal with Those Difficulties | | |
| | | | | | | |
| a. Knowledge | Demonstrating the basic | | Yes | | | |
| | information and principles through | | | | | |
| | lectures and the achieved | | | | | |
| | applications | | | | | |
| | Discussing phenomena with | | Yes | | | |
| | illustrating pictures and diagrams | | | | | |
| | Lecturing method: | | Yes | | | |
| | Projector | | Yes | | | |
| | Power point | | Yes | | | |
| | e-learning | | Yes | | | |
| | Tutorials | | Yes | | | |
| | Revisit concepts | | Yes | | | |
| | Discussions | | Yes | | | |
| | Brain storming sessions | | Yes | | | |
| | Start each chapter by general idea | | Yes | | | |
| | and the benefit of it | | | | | |
| | • Learn the student background of | | Yes | | | |
| | the subject; | | 100 | | | |
| | Show the best ways to deal with problem; | | Yes | | | |
| | Keep the question "why" or "how" to explain always there | | Yes | | | |

| b. Cognitive | Preparing main outlines for | Yes | |
|------------------|---------------------------------------------------------------------------------------------|-----|--|
| Skills | teaching | | |
| | Following some proofs | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | Yes | |
| | - Encourage the student to look for the information in different | | |
| | references | | |
| | Ask the student to attend leatures | Vaa | |
| | for practice solving problem | res | |
| | Doing small ressarch | Ves | |
| | Doing small research | 103 | |
| c. Interpersonal | Learn how to search the internet | Yes | |
| Skills and | and use the library. | | |
| Responsibility | Learn how to cover missed | Yes | |
| | lectures. | V | |
| | Learn now to summarize lectures or to collect materials of the | res | |
| | | | |
| | Learn how to solve difficulties in | Yes | |
| | learning: solving problems – | 105 | |
| | enhance educational skills. | | |
| | Develop her interest in Science | Yes | |
| | through :(lab work, field trips, | | |
| | visits to scientific and research. | | |
| | Encourage the student to attend | Yes | |
| | lectures regularly by: | | |
| | Giving bonus marks for attendance | Yes | |
| | assigning marks for attendance. | | |
| d. Numerical | Know the basic mathematical | Yes | |
| and | principles. | Var | |
| Communication | • Use the web for research. | Yes | |
| SKIIIS | Discuss with the student. | Ves | |
| | • Exams to measure the | Yes | |
| | mathematical skill. | 105 | |
| | Clear the weakness point that | Yes | |
| | should be eliminated. | | |
| | Encourage the student to ask for | Yes | |
| | help if needed. | | |
| | Computational analysis | Yes | |
| | Data representation | Yes | |
| | Focusing on some real results and | Yes | |
| | its physical meaning. | | |
| | Lectures for problem solution | Vec | |
| | Encourage the student to ask good | Yes | |
| | question to help solve the problem | | |
| e Psychomotor | question to help borre the problem. | | |
| Skills (if | | | |
| applicable) | | | |
| | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 51. Use the web for research to know the basic mathematical principles.
- 52. Discuss with the student and give exams to measure the mathematical skill.
- 53. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 54. Focusing on some real results and its physical meaning.
- 55. Encourage the student to ask good question to help solve the problem.
- 56. Display the lecture note and homework assignment at the web
- 57. Scientific Films in the web site related to the course subjects
- 58. http://uqu.edu.sa/staff/ar/4300376

C. Results

| 1 Number of students commencing the field experience: 120 |
|-------------------------------------------------------------------------------------------------------------------|
| 23 Number of students completing the field experien 115 |
| 3 Result Summary: Passed: No 113 Percent 94.16% Failed No 1 Percent 1.0% Did not complete No 5 Percent 4.1% |

| 4 Distribution | of Grades (If per | centage m | arks are given ind | icate num | bers in e | each 5 per | centile gi | roup) |
|----------------|-------------------|-----------|--------------------|-----------|-----------|------------|------------|-------|
| | | No | | % | No | % | No | |
| | А | 21 | | 95- | 13 | 70-74 | 15 | |
| | | | | 100 | | , , , , , | 10 | |
| | В | 16 | | 90-94 | 8 | 65-69 | 14 | |
| | С | 31 | | 85-89 | 8 | 60-64 | 32 | |
| | D | 46 | | 80-84 | 8 | < 60 | 1 | |
| | F | 1 | OR | 75-79 | 16 | | | |
| | Denied Entry | 4 | | Denied | Entry | 1 | 4 | |
| | In Progress | | | In Prog | ress | | | |
| | Incomplete | 1 | | Incomp | lete | | 1 | |

| | Pass | 113 | | Pass | 13 | |
|-----------------|-----------------------|--------------|------|-----------|----|--|
| - | Fail | 1 | | Fail | 1 | |
| - | Withdrawn | | | Withdrawn | | |
| 5 Special facto | ors (if any) affectiv | ng the res | ilte | | | |
| None | is (if any) arecti | ing the resi | | | | |

| 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course |
|-----------------------------------------------------------------------------------------------------|
| Specification.) |
| |

| k. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | |
|--------------------------------------------------------------------------------------|-----------------------------------------|--|--|--|
| Variation | Reason | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course | | | |
| Specification) | ification) | | | |
| Variation | Reason | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 8 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| (much bur voj Results n'avanable) |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc): |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully | | | |

2. Other action taken to improve the course this semester/year

Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| Actions Required Updating the course according to the recent publications Visit to Researches Lab. | Completion Date 1434\1435H 2013\2014 | Person Responsible Dr. Fatma El-Sayed Mahrous |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------|
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the progra would require approval at program, department or program.). | m coordinator if any pr institutional level or th | oposed action to improve the course at might affect other courses in the |

| Name of Course Instructor: Dr. Fatma | El-Sayed Mahrous |
|--------------------------------------|----------------------------------|
| Signature: Fatma El-Sayed | Date Report Completed: 2013/2014 |

Received by Program Coordinator Date: 4/1/2014

Course title: Solid State Physics I Course code: (403371)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution : Umm Al-Qura University. College/Department : Faculty of Applied Sciences / Department of Physics .

A Course Identification and General Information

1. Course title and code. Solid State Physics 1 (PH 371) (3 hours / week).

2. If course is taught in more than one section indicate the section to which this report applies : Group 1.

3. Year and semester to which this report applies. : 1432 / 1433 (semester 2).

4 Location (if not on main campus) : on main campus .

B- Course Delivery

| 1 Coverage of Planned Program | | | | | |
|-----------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | |
| Crystal Structure | 12 | 14 | | | |
| Defects in Crystals | 9 | 10 | | | |
| Electrical Properties of Solids | 12 | 14 | | | |
| Lattice Vibrations and Thermal Properties of Solids | 9 | 10 | | | |
| | | | | | |

| Consequences of Non Coverage of Topics | |
|-----------------------------------------------------------|----------------|
| For any topics where significantly less time was spent th | ian was intend |

| For any topics where significantly less time was spent than was intended in the course specification, or | | | | |
|----------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------|--|--|
| where the topic was not taught at all | , comment on how significant you | believe the lack of coverage is for the | | |
| program objectives or for later courses in the program, and suggest possible compensating action if you | | | | |
| believe it is needed. | | | | |
| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action | | |
| | Coverage | Elsewhere in the Program | | |

| 3. Effectiveness (Specification. (Re Learning Outcome | of Planned Teachi fer to planned tea is in the National | ng Strategies for Intended Lee ching strategies in Course Spe Qualifications Framework) | ming (cificat | Outcomes ion and d | set out in the Course escription of Domains of |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------|
| Explain strate; Outlines of the Highlighting t Encourage the the library. Discussing sou Renew the cou Frequently che | gy of the course e physical laws, he day life appli e students to see me selected prob urse references f eck for the latest | in the beginning of the sem principles and the associate cations whenever exist. more details in the internati plems in each chapter. requently t discovery in science | iester id prov ional v | ofs. veb sites | and reference books in |
| Domains | List Teaching S | trategies set out in Course | Wen | e these | Difficulties Experienced |
| | эресписанов | | No | Yes | (If any) in Using the Strategy and Suggested Action to Deal with Those Difficulties. |
| a. Knowledge | Demonstration principles lectures an application Discussing j illustrating | ing the basic n and through 1d the achieved 15 phenomena with pictures and diagrams | | Yes Yes | |
| | | | | | |
| | Revisit conce Discussions Brain stormin Start each c the benefit Learn the st subject; Show the be | pts hapter by general idea and of it udent background of the est ways to deal with | | Yes Yes Yes Yes Yes | |

Yes

| b. Cognitive Skills | Preparing main outlines for teaching Following some proofs Define duties for each chapter Home work assignments Encourage the student to look for the information in different references Ask the students to attend lectures for practice solving problems | Yes Yes Yes Yes Yes Yes | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--|
| c. Interpersonal Skills and Responsibility | Learn how to search the internet and use the library. Learn how to cover missed lectures. Learn how to summarize lectures or to collect materials of the course. Learn how to solve difficulties in | Yes Yes Yes | |
| | learning: solving problems – enhance educational skills. Develop his interest in Science thr Encourage the student to attend lectures regularly by giving bonus marks for attendance | Yes Yes | |
| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good question to help solve the problems. | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes | |
| e Psychomotor Skills (if applicable) | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 1. Use the web to know the basic mathematical principles.
- 2. Discuss with the students and give exams to measure the mathematical skill.
- 3. Clear the weakness point that should be eliminated and encourage the students to ask for help if needed.
- 4. Focusing on some real results and its physical meaning.
- 5. Encourage the students to ask good questions to help solve the problems.6. Display the lecture note and homework assignment at the web
- 8. http://ugu.edu.sa/amkutub

C. Results

| 1 Number of students commencing the field experience: 10 2 Number of students completing the field experience: 7 | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|--------------|--|
| 3 Result Summary: Passed: No 6 Pe | pcent 85.7 | Failed No 1 | Percent 14.3 | |
| Did not complete No 3 | Percent 3 | 0 | | |

| | No | | % | No | % | No |
|--------------|----|----|-----------|-------|-------|----|
| A | | | 95- | | 70-47 | |
| | | | 100 | | | |
| В | 2 | | 90-94 | | 65-69 | |
| с | 1 | | 85-89 | | 60-64 | |
| D | 3 | | 80-84 | | < 60 | |
| F | 1 | OR | 75-79 | | | |
| Denied Entry | | | Denied E | lutry | | |
| In Progress | | | In Progre | 195 | | |
| Incomplete | | | Incomple | ate | | |
| Pass | 6 | | Pass | | | |
| Fail | 1 | | Fail | | | |
| With America | | | 11724 | | | |

5 Special factors (if any) affecting the results

The background of most students in Physics and Mathematics is very poor.

| Variations from planned student assessment proces Specification.) | ses (if any) (See items C 4 and 5 in the Course |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------|
| a. Variations (if any) from planned assessment schedu | le (C5 in Course Specification) |
| Variation | Reason |
| | |
| | |
| | |
| | |
| b. Variations (if any) from planned assessment process Specification) | es in Domains of Learning (C4 in Course |
| Variation | Reason |
| | |
| | |
| | |

| 7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.) | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--|--|
| Method(s) of Verification | Conclusion | | |
| | | | |
| | | | |

D Resources and Facilities

| Difficulties in access to resources or facilities (if any) | Consequences of any difficulties experienced for student learning in the course. |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any | The background of most students in Physics and Mathematics is very poor. |
| time between lectures | All students must take all of the requirements courses such as atomic physics, Mathematical Physics and Quantum Physics with good understanding before starting in this course. |

E. Administrative Issues

| Consequences of any difficulties experienced for student learning in the course. |
|--------------------------------------------------------------------------------------------------------|
| |
| |
| |

H Course Evaluation

| 1 Student evaluation of the course: |
|----------------------------------------------------------------------------------------------------------|
| |
| (Anach Strivey Results if Svalisole) |
| |
| a List the most important criticisms and strengths |
| |
| |
| |
| |
| |
| |
| |
| |
| b Response of instructor or course team to this evaluation |
| |
| |
| |
| |
| |
| |
| |
| |
| 2 Octor Evaluation What evaluation many matrix 22 |
| 2. Other Evaluation - what evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation |
| review, other stakeholders etc): |
| |

| a List the most important criticisms and strengths | |
|------------------------------------------------------------|--|
| | |
| | |
| | |
| b Response of instructor or course team to this evaluation | |
| | |
| | |
| | |
| | |
| | |

I Planning for Improvement

| Progress on actions proposed for improving the course in previous course reports: | | | | |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |

Other action taken to improve the course this semester/year
 Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | |
|----------------------------------------------------------------------------------|-------------------------|----------------------|--|--|
| Actions Required | Completion Date | Person Responsible | | |
| Updating the course according to the recent publications | 1432\1433H 2011\2012 | Dr. Abdul Aziz Kutub | | |

4. Recommendations to Program Coordinator (if Required)

(Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.).

Name of Course Instructor : Dr. Abdul Aziz M. S. KUTUB

Signature: Abdul Aziz Kutub

Date Report Completed : 15 / 7 / 1433 H.

Received by Program Coordinator

Date:

Course title: computer Course code: 403383-2

Course Report

For guidance on the completion of this template, refer to Section 2.5 of Chapter 2 in Part 2 in this Handbook

Institution :Umm AL-Qurra University

College/ Department :Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. **Computer 403383-2**

2. If course is taught in more than one section indicate the section to which this report applies :Group 1

3. Year and semester to which this report applies. Academic Year 1434\1435H .Semester 1

4 Location (if not on main campus) :The main campus

B- Course Delivery

| 1 Coverage of Planned Program | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------------------------|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | |
| computersI- introductionII- Hardware• Input and output units• Central processing unit• Memory and storage unitsIII- Software• DOS+ WINDOWS+FORTRAN | 8 | 8 | | |
| Flowcharts and algorithms Algorithms System flowcharts Programs flowcharts | 4 | 4 | | |

| Computer language : Fortran 77 | 6 | 6 | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|--|
| I- Fortran symbols, constants, variables II- Arithmetic expression III- Library functions IV- Input- output statements V- Control statements VI- DO Loop statements VII- Subscripted variables | | | |
| Virus | 2 | 2 | |
| I- What are computer virus infectionII- Detection- protection- immunization | | | |
| Physical application and plotting by computer | 2 | 2 | |
| I- Change of physical constant II- Calculation of error in laboratory experimental III- How to use origin software for plotting IV- Fitting a data | | | |
| Microsoft Windows 3.1 | 3 | 3 | |
| I- General view II- How to arrange windows and icons III- How to start , organize and switch between application IV- Use file manager V- Use print manager | | | |
| Microsoft Arabic WordI-Starting wordII-Word basic statements and functionIII-Editing a documentIV-Working with tables and equations | 3 | 3 | |
| Course components (total contact hours per semester): | 28hr | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 1. Explain strategy of the course in the beginning of the semester
- 2. Outlines of the simulation laws, principles and the associated proofs.
- 3. Highlighting the day life applications whenever exist.
- 4. Encourage the students to see more details in the international web sites and reference

books in the library.

- 5. Discussing some selected problems in each chapter.
- 6. Cooperate with different institution to find how they deal with the subject
- 7. Renew the course references frequently

8. Frequently check for the latest discovery in science

| Domains | List Teaching Strategies set | Were these | | Difficulties Experienced (if any) in |
|---------|------------------------------|------------|-----|--------------------------------------|
| | out in Course Specification | Effective? | | Using the Strategy and Suggested |
| | | | | Action to Deal with Those |
| | | No | Vac | Action to Deal with Those |
| | | 110 | 105 | Difficulties . |
| | | | | |

| a. Knowledge | Demonstrating the basic | Yes | |
|--------------|------------------------------------------|------------|--|
| | information and | | |
| | principles through | | |
| | lectures and the | | |
| | achieved applications | | |
| | Discussing phonomona | Ves | |
| | Discussing phenomena | 103 | |
| | with inustrating pictures | Vac | |
| | and diagrams | Vee | |
| | Lecturing method: | res | |
| | | Yes | |
| | Power point | Yes | |
| | | Yes | |
| | \Box I utorials | Yes | |
| | Revisit concepts Discussions | Yes | |
| | Discussions Regin storming sessions | Yes | |
| | Start agab abaptor by | Yes | |
| | Start each chapter by | | |
| | | | |
| | benefit of it | Yes | |
| | Learn the student | 105 | |
| | background of the | Ves | |
| | subject; | 105 | |
| | \Box Show the best ways to | Vac | |
| | deal with problem; | res | |
| | □ Keep the question "why" | | |
| | or "how" to explain always | | |
| | there | | |
| b. Cognitive | Preparing main | Ves | |
| Skills | • I repaining main | 105 | |
| | outlines for teaching | N 7 | |
| | Following some | Yes | |
| | proofs | | |
| | • Define duties for each | Yes | |
| | chapter | | |
| | | Yes | |
| | • Home work | 105 | |
| | assignments | | |
| | • Encourage the | | |
| | student to look for the | Yes | |
| | information in | | |
| | different references | | |
| | | | |
| | • Ask the student to | Vec | |
| | attend lectures for | 105 | |
| | practice solving | | |
| | problem | | |
| | Doing small research | Yes | |
| | | | |

| a Internersonal | T 1 (1 (1 | Vac | |
|-----------------|---------------------------------------------|-----|--|
| | • Learn how to search the | res | |
| Skills and | internet and use the | | |
| Responsibility | library. | | |
| | Learn how to cover | Yes | |
| | missed lectures | | |
| | Learn how to | Vos | |
| | - Learn now to | 105 | |
| | summarize lectures or to | | |
| | collect materials of the | | |
| | course. | | |
| | Learn how to solve | Yes | |
| | difficulties in learning. | | |
| | solving problems | | |
| | solving problems – | | |
| | ennance educational | | |
| | skills. | | |
| | Develop her interest in | Yes | |
| | Science through :(lab | | |
| | work, field trips, visits | | |
| | to scientific and | | |
| | research | | |
| | Encourage the student | Vac | |
| | Encourage the student | 105 | |
| | to attend lectures | | |
| | regularly by: | | |
| | Giving bonus marks for | Yes | |
| | attendance assigning | | |
| | marks for attendance | | |
| | marks for attendance. | | |
| d Numerical and | | | |
| Communication | | 3.7 | |
| Skille | • Use the web for | Yes | |
| SKIIIS | research. | | |
| | • Discuss with the | Yes | |
| | etudent | | |
| | | Vac | |
| | • Exams. | res | |
| | • Clear the weakness | Yes | |
| | point that should be | | |
| | | Yes | |
| | enminated. | 105 | |
| | • Encourage the student | | |
| | to ask for help if | | |
| | needed | Yes | |
| | D to the state | Yes | |
| | • Data representation. | | |
| | • Focusing on some real | | |
| | results and its physical | | |
| | meaning | | |
| | Trating | Yes | |
| | • Lectures for problem | | |
| | solution. | | |
| | • Encourage the student | | |
| | to ask good question | Yes | |
| | to halp galve the | | |
| | to help solve the | | |
| | problem | | |

| e Psychomotor Skills (if applicable) | | |
|--------------------------------------------|--|--|
| | | |

4. Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

1. Use the web for research to know the basic simulation principles.

2. Discuss with the student and give exams to measure the mathematical skill.

3. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.

4. Encourage the student to ask good question to help solve the problem.

5. Display the lecture note and homework assignment at the web

6. Scientific Films in the web site related to the course subjects

C. Results

| 1 Number of students starting the course: | | 44 |
|-------------------------------------------|-------------------------------------------|----|
| 24 | Number of students completing the course: | 44 |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| А | 0 | | 95- 100 | 0 | 70-74 | 6 |
| В | 5 | - | 90-94 | 0 | 65-69 | 9 |
| С | 10 | | 85-89 | 0 | 60-64 | 20 |
| D | 29 | | 80-84 | 5 | < 60 | 0 |
| F | 0 | OR | 75-79 | 4 | | |
| Denied Entry | | | Denied | Entry | | |
| In Progress | | | In Prog | ress | | |
| Incomplete | | | Incomp | olete | | |
| Pass | | - | Pass | | | |
| Fail | | | Fail | | | |
| Withdrawn | | | Withdr | awn | | |

| 4 Result Summary: | | | | | | |
|--------------------------|--------------------------|-----------------|-------------|--|--|--|
| Passed: No | 44 Percent 100 | Failed No | 0 Percent 0 | | | |
| Did not complete No | 0 Percent 0 | Denied Entry No | Percent | | | |
| 5 Special factors (if an | y) affecting the results | | | | | |
| None | | | | | | |

| 6. Variations from planned student assessment proc | esses (if any) (See items C 4 and 5 in the Course | |
|------------------------------------------------------|---------------------------------------------------|--|
| Specification.) | | |
| 1 , | | |
| l. Variations (if any) from planned assessment sched | lule (C5 in Course Specification) | |
| Variation Reason | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| b. Variations (if any) from planned assessment proce | sses in Domains of Learning (C4 in Course | |
| Specification) | | |
| Variation | Reason | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-----------------------------------|------------|
| | TRUE |
| The instructors of the course are | |
| checking together and put a | |
| unique process of evaluation | |
| | |
| | |
| | |

| Check marking of a sample of papers by others in the department | Equal with the level of student in written tests |
|-----------------------------------------------------------------|--------------------------------------------------|
| | |

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. | |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course | |

E. Administrative Issues

| uences of any difficulties experienced for rning in the course. |
|-----------------------------------------------------------------|
| |
| |

F Course Evaluation

| 1 Student evaluation of the course: |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| a List the most important criticisms and strengths |
| |
| |
| b Response of instructor or course team to this evaluation |
| |
| |
| 2. Other Evaluation What evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc): |
| |
| |
| a List the most important criticisms and strengths |
| |
| |
| b Response of instructor or course team to this evaluation |

G Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------|--|--|--|
| Actions Required | Completion Date | Person Responsible | | | |
| Updating the course according to the recent publications Visit to Researches Lab. | 1434\1435H 2013\2014 | | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | | |
| | | | | | |
| | | | | | |

| Name of Course Instructor: Dr. LOULOU | Mehrez |
|---------------------------------------|------------------------|
| Signature: | Date Report Completed: |

Received by Program Coordinator

Date: 26/01/2014

Course title: Electromagnetism 2 Course code: (342)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Electromagnetism II (342)

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies. Academic Year (1434-1435 H) (2013-2014) (second semester)

4 Location (if not on main campus): Abdiya Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|-------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| The Magnetic Field of Steady Currents | 12 | 12 | |
| 1- Introduction. | | | |
| 2- The magnetic field induced by electric | | | |
| current. | | | |
| 3- Lorentz Force Law. | | | |
| a. Cyclotron. | | | |
| b. Magnetic force acting on a wire carrying current placed in magnetic field. | | | |
| c. Magnetic force acting on a electric circuit | | | |
| d Magnetic moment of an electric circuit | | | |
| 4. Riot-Savart law | | | |
| 5- Application of Biot-Savart law | | | |
| a. Calculation of magnetic filed at a centre of | | | |
| b Calculation of magnetic field at a point on | | | |
| the axis of a circle carrying current. | | | |
| c. Calculation of magnetic field due to a wire | | | |
| carrying current. | | | |

| d. Calculation of magnetic field of a solenoid. e. Helmholtz Pair. 6- Divergence and Curl of magnetic field. 7- Ampere law. a. Calculation of magnetic field due to a wire carrying current. b. Calculation of magnetic field of a co-axial wire. c. Calculation of magnetic field of non-uniform conductor carrying current. 8- Vector magnetic potential. 9- Scalar magnetic potential. 10- Magnetic Flux | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--|
| | | | |
| Electromagnetic Induction | 6 | 6 | |
| 1- Introduction. | | | |
| 2- Electromagnetic induction. | | | |
| 3- Relation between magnetic field and electric | | | |
| field. | | | |
| 4- Self-Inductance. | | | |
| a. Self-inductance of a Toroid. | | | |
| 5- Mutual inductance | | | |
| a. Mutual inductance of Toroid. | | | |
| 6- Newmann Formula. | | | |
| Magnetic Properties of Materials. | 8 | 8 | |
| 1- The origin of magnetism in the matter | | | |
| 2- Magnetic moment of the atom | | | |
| 3- Magnetization | | | |
| 4- Magnetic current density | | | |
| 5- Surface current density | | | |
| 6- Magnetic Intensity | | | |
| 7- Field of a Magnetized Object | | | |
| 8- Magnetic suscentibility Permeability and | | | |
| Hysteresis | | | |
| 9- Classification of magnetic materials | | | |
| 10- Boundary condition of magnetic field | | | |
| 11- Electric circuits containing magnetic media | | | |
| 12- Magnetic circuits | | | |
| 13-Examples. | | | |
| Magnetic Energy | 6 | 6 | |
| 1- Magnetic energy of a solid electric circuit | | | |
| 2- Magnetic energy of a successive solid electric circuits. | | | |

| 3- Magnetic energy density. 4- Forces and Torques on a solid electric circuit. 5- Examples. | | | |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------|----|--|
| Maxwell's Equations and Electromagnetic Waves. | 10 | 10 | |
| 1- Introduction. | | | |
| 2- Displacement current. | | | |
| 3- Maxwell's Equations. | | | |
| 4- Wave Equation for Electric and Magnetic | | | |
| Fields. | | | |
| 5- Plane Wave. | | | |
| 6- Plane Waves in Isotropic Media. | | | |
| 7- Transfer of Plane Waves in conductors. | | | |
| 8- Resistance of conductors at ultra high | | | |
| frequencies. | | | |
| 9- Applications of Maxwell's Equations | | | |
| a. Boundary Conditions. | | | |
| b. Refraction and Reflection at the boundary | | | |
| of two non-conducting media. | | | |
| 10- Electromagnetic waves Energy | | | |
| 11- Examples. | | | |
| 2 Course components (total contact hours per semester): | | | |
| Lectures: 42 hr | Tutorial: 42 hr | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 64. Explain strategy of the course in the beginning of the semester
- 65. Outlines of the physical laws, principles and the associated proofs.
- 66. Highlighting the day life applications whenever exist.
- 67. Encourage the students to see more details in the international web sites and reference books in the library.
- 68. Discussing some selected problems in each chapter.
- 69. Cooperate with different institution to find how they deal with the subject
| 70. Renew the course references frequently | | | | | | | |
|--------------------------------------------|----------------------------------------------------------------------------------|------------|------------|------------------------------|--|--|--|
| 71. Frequentl | y check for the latest discovery in science | | | | | | |
| | | | | | | | |
| Domains | List Teaching Strategies set out in Course | Were these | | Difficulties Experienced (if | | | |
| | Specification | Effect | ive? | any) in Using the Strategy | | | |
| | | No | Yes | and Suggested Action to | | | |
| | | | | Dear with Those Difficulties | | | |
| a. Knowledge | Demonstrating the basic | | Yes | | | | |
| C | information and principles through | | | | | | |
| | lectures and the achieved | | | | | | |
| | applications | | | | | | |
| | Discussing phenomena with | | Yes | | | | |
| | illustrating pictures and diagrams | | •• | | | | |
| | Lecturing method: | | Yes | | | | |
| | Projector | | Yes Vec | | | | |
| | Power point | | Tes Ves | | | | |
| | e-learning Tutoriala | | Ves | | | | |
| | Futuritais Revisit concepts | | Yes | | | | |
| | Discussions | | Yes | | | | |
| | Brain storming sessions | | Yes | | | | |
| | Start each chapter by general idea | | Yes | | | | |
| | and the benefit of it | | | | | | |
| | • Learn the student background of | | Yes | | | | |
| | Show the best ways to deal with | | Ves | | | | |
| | problem; | | 103 | | | | |
| | Keep the question "why" or "how" to explain always there | | Yes | | | | |
| b. Cognitive | Preparing main outlines for | | Yes | | | | |
| Skills | teaching | | | | | | |
| | Following some proofs | | Yes | | | | |
| | Define duties for each chapter | | Yes | | | | |
| | Home work assignments | | Yes Voc | | | | |
| | Encourage the student to look for | | 168 | | | | |
| | the information in different | | | | | | |
| | references | | | | | | |
| | • Ask the student to attend lectures | | Yes | | | | |
| | for practice solving problem | | | | | | |
| | Doing small research | | Yes | | | | |
| c. Interpersonal | Learn how to search the internet | | Yes | | | | |
| Skills and | and use the library. | | | | | | |
| Responsibility | Learn how to cover missed | | Yes | | | | |
| | lectures. | | | | | | |
| | • Learn how to summarize lectures | | Yes | | | | |
| | or to collect materials of the | | | | | | |
| | ■ Learn how to solve difficulties in | | Vec | | | | |
| | learning: solving problems – | | 105 | | | | |

| | enhance educational skills. Develop her interest in Science through :(lab work, field trips. | Yes |
|------------------|----------------------------------------------------------------------------------------------------------------------------|-----|
| | visits to scientific and research.Encourage the student to attend | Yes |
| | lectures regularly by: Giving bonus marks for attendance assigning marks for attendance. | Yes |
| d. Numerical and | Know the basic mathematical principles | Yes |
| Communication | - Use the such for an example | Yes |
| Skills | • Use the web for research. | Yes |
| | Discuss with the student. | Yes |
| | Exams to measure the mathematical skill. | Yes |
| | Clear the weakness point that should be eliminated. | Yes |
| | Encourage the student to ask for help if needed. | Yes |
| | Computational analysis | Yes |
| | Computational analysis. Data representation | Yes |
| | Focusing on some real results and its physical meaning. | Yes |
| | Lectures for problem solution. | Yes |
| | Encourage the student to ask good question to help solve the problem. | Yes |
| e Psychomotor | | |
| Skills (if | | |
| applicable) | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 59. Use the web for research to know the basic mathematical principles.
- 60. Discuss with the student and give exams to measure the mathematical skill.
- 61. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 62. Focusing on some real results and its physical meaning.
- 63. Encourage the student to ask good question to help solve the problem.
- 64. Display the lecture note and homework assignment at the web

C. Results

| 1 Number of students commencing the field experience: 12 |
|------------------------------------------------------------------------------------------------------------|
| 25 Number of students completing the field experien 12 |
| 3 Result Summary: Passed: No 12 Percent 100% Failed No 0 Percent 0% Did not complete No 0 Percent 0% |

| | 110 | | 70 | 110 | 70 | 110 |
|--------------------------|-----------------|------|------------|-------|-------|-----|
| А | 0 | | 95- 100 | 0 | 70-47 | 1 |
| В | 2 | | 90-94 | 0 | 65-69 | 5 |
| С | 1 | - | 85-89 | 0 | 60-64 | 4 |
| D | 9 | - | 80-84 | 2 | < 60 | 0 |
| F | 0 | OR | 75-79 | 0 | | |
| Denied Entry | 0 | - | Denied | Entry | | 0 |
| In Progress | | | In Prog | ress | | |
| Incomplete | | - | Incomp | lete | | |
| Pass | 12 | - | Pass | | | 12 |
| Fail | 0 | | Fail | | | 0 |
| Withdrawn | | | Withdra | awn | | |
| factors (if any) affecti | l ng the res | ults | | | | |

| 6. | Variations | from planned student | assessment | processes | (if any) (| See items (| C 4 and 5 in | the Course |
|----|---------------|----------------------|------------|-----------|------------|-------------|--------------|------------|
| Sp | ecification.) |) | | | | | | |

| m Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | |
|-------------------------------------------------------------------------------------|-----------------------------------------|--|--|--|--|
| Variation Reason | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| b. Variations (if any) from planned assessment process | es in Domains of Learning (C4 in Course | | | | |
| Variation | Reason | | | | |
| variation | incusoii | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| 9. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 9 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

1 Student evaluation of the course:

(Attach Survey Results if available)

a List the most important criticisms and strengths

b Response of instructor or course team to this evaluation

2. Other Evaluation -- What evaluations were received? Specify and attach reports where available. (eg. By head of department, peer observations, accreditation

review, other stakeholders etc):

a List the most important criticisms and strengths

b Response of instructor or course team to this evaluation

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | |
| New chapter was added to cover the new of the electromagnetic field | Was applied successfully | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------|--|--|--|--|
| Actions Required | Completion Date | Person Responsible | | | | |
| Updating the course according to | 1434\1435H | Dr. Said Mohamed Attia | | | | |
| the recent publications | 2013\2014 | | | | | |
| Visit to Researches Lab. | | | | | | |
| | | | | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | | | |
| (Recommendations by the instructor to the progra | m coordinator if any proj | posed action to improve the course | | | | |
| would require approval at program, department or | institutional level or that | t might affect other courses in the | | | | |
| program.). | | | | | | |
| | | | | | | |
| 4. Recommendations to Program Coordinator (if (Recommendations by the instructor to the progra would require approval at program, department or program.). | Required) m coordinator if any prop institutional level or that | posed action to improve the course t might affect other courses in the | | | | |

Name of Course Instructor: Dr. Said Mohamed AttiaSignature: Said AttiaDate Report Completed: 2013/2014

Received by Program Coordinator

Date: 1/1/2014

Course title: Nuclear Physics 1 Course code: (403361)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution: Umm AL-Qurra University College/ Department: Faculty of Applied Science / Physics Department

A Course Identification and General Information

1. Course title and code. Nuclear Physics 1 (403361)

2. Year and semester to which this report applies. (1432-1433) (semester 2)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|------------------------------------------------------|---|---|--|
| NUCLEAR PHYSICS | 8 | 8 | |
| 1. Definations and Nuclear Radii | | | |
| 2. Nuclear Mass Binding Energy | | | |
| 3. Nuclear Reactions, Energy Levels, Nuclear Isomers | | | |
| 4. Angular Momentum, Parity and Symmetry | | | |
| 5. Dipole Moment, Quadrupole Moment | | | |
| | | | |
| LIQUID DROP MODEL | 7 | 7 | |
| 1- Binding Energy | | | |
| 2- Semi-emperical Mass Formula | | | |
| 3- Mass Spectrometer | | | |
| 4- Nuclear Reactions and Q-value | | | |
| | | | |
| NUCLEAR SHELL MODEL | 7 | 7 | |
| 1. Single Particle Model with Square Well and | - | | |
| Harmonic Oscillator | | | |
| 2. Magic Numbers | | | |
| 3. Spin for Different Nuclei | | | |
| 4. Excited Roots | | | |

| 6. Parity and Isotopic spin Image: Constant of the second sec | 5. Nuclear Magnetic Moments | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------|----------------------|--|
| GAMMA TRANSITIONS661. Multiple Moments662. Decay Constants13. Selection Rules14. Angular Correlation15. Internal Conversion6ALPHA TRANSITIONS61. Heavy Ions-Stability62. Decay constants13. Tunnel Effect14. Energy Levels55. Internal Conversion5661. Theory of Beta-Decay22. Allowed and Forbidden Transitions33. Selection Rules14. Non-Conservation of Parity3531. Nuclear Force and Meson Theory22. Pions and Muons13. Kaons and Hyperons1 | 6. Parity and Isotopic spin | | | |
| GAMMA TRANSITIONS661- Multiple Moments22- Decay Constants3- Selection Rules4- Angular Correlation5- Internal ConversionALPHA TRANSITIONS661- Heavy Ions-Stability2- Decay constants3- Tunnel Effect4- Energy LevelsBETA TRANSITIONS551. Theory of Beta-Decay2. Allowed and Forbidden Transitions3. Selection Rules4. Non-Conservation of ParityELEMENTARY PARTICLES33. Nuclear Force and Meson Theory2. Pions and Muons3. Kaons and Hyperons | | | | |
| 1. Multiple Moments | GAMMA TRANSITIONS | 6 | 6 | |
| 2- Decay Constants Image: Selection Rules 3- Selection Rules Image: Selection Rules 4- Angular Correlation 6 5- Internal Conversion 6 ALPHA TRANSITIONS 6 1- Heavy Ions-Stability 6 2- Decay constants 1 3- Tunnel Effect 1 4- Energy Levels 5 5. Internal Conversion 5 0 5 5. Internal Conversion 5 6 6 1- Heavy Ions-Stability 1 2- Decay constants 1 3- Tunnel Effect 1 4- Energy Levels 5 5. Internor of Beta-Decay 1 2. Allowed and Forbidden Transitions 1 3. Selection Rules 1 4. Non-Conservation of Parity 3 7. Nuclear Force and Meson Theory 2 2. Pions and Muons 1 3. Kaons and Hyperons 1 | 1- Multiple Moments | | | |
| 3- Selection Rules 4 4- Angular Correlation 5 5- Internal Conversion 6 ALPHA TRANSITIONS 6 1- Heavy Ions-Stability 6 2- Decay constants - 3- Tunnel Effect - 4- Energy Levels - BETA TRANSITIONS 5 1. Theory of Beta-Decay - 2. Allowed and Forbidden Transitions - 3. Selection Rules - 4. Non-Conservation of Parity 3 3. Selection Rules - 4. Non-Conservation of Parity - 2. Pions and Muons - 3. Kaons and Hyperons - | 2- Decay Constants | | | |
| 4- Angular Correlation 5- Internal Conversion ALPHA TRANSITIONS 6 1- Heavy Ions-Stability 2- Decay constants 3- Tunnel Effect 4- Energy Levels BETA TRANSITIONS 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 7 BETA TRANSITIONS 5 5 5 5 5 5 6 6 6 7 8 8 9 9 9 9 9 9 9 9 < | 3- Selection Rules | | | |
| 5- Internal Conversion Image: Second Sec | 4- Angular Correlation | | | |
| ALPHA TRANSITIONS61- Heavy Ions-Stability62- Decay constants63- Tunnel Effect44- Energy Levels5551. Theory of Beta-Decay52. Allowed and Forbidden Transitions33. Selection Rules44. Non-Conservation of Parity31. Nuclear Force and Meson Theory32. Pions and Muons33. Kaons and Hyperons4 | 5- Internal Conversion | | | |
| ALPHA TRANSITIONS661- Heavy Ions-Stability662- Decay constants33- Tunnel Effect44- Energy Levels5551. Theory of Beta-Decay52. Allowed and Forbidden Transitions53. Selection Rules44. Non-Conservation of Parity3331. Nuclear Force and Meson Theory32. Pions and Muons43. Kaons and Hyperons4 | | | | |
| 1- Heavy Ions-Stability2- Decay constants3- Tunnel Effect4- Energy Levels BETA TRANSITIONS 51. Theory of Beta-Decay2. Allowed and Forbidden Transitions3. Selection Rules4. Non-Conservation of Parity ELEMENTARY PARTICLES 33. Nuclear Force and Meson Theory2. Pions and Muons3. Kaons and Hyperons | ALPHA TRANSITIONS | 6 | 6 | |
| 2- Decay constants3- Tunnel Effect4- Energy LevelsBETA TRANSITIONS551. Theory of Beta-Decay2. Allowed and Forbidden Transitions3. Selection Rules4. Non-Conservation of ParityELEMENTARY PARTICLES31. Nuclear Force and Meson Theory2. Pions and Muons3. Kaons and Hyperons | 1– Heavy Ions-Stability | | | |
| 3 - Tunnel Effect4 - Energy LevelsBETA TRANSITIONS551. Theory of Beta-Decay2. Allowed and Forbidden Transitions3. Selection Rules4. Non-Conservation of ParityELEMENTARY PARTICLES31. Nuclear Force and Meson Theory2. Pions and Muons3. Kaons and Hyperons | 2– Decay constants | | | |
| 4- Energy LevelsImage: Constraint of the second | 3- Tunnel Effect | | | |
| BETA TRANSITIONS551. Theory of Beta-Decay552. Allowed and Forbidden Transitions663. Selection Rules664. Non-Conservation of Parity66ELEMENTARY PARTICLES331. Nuclear Force and Meson Theory332. Pions and Muons663. Kaons and Hyperons66 | 4– Energy Levels | | | |
| BETA TRANSITIONS551. Theory of Beta-Decay552. Allowed and Forbidden Transitions353. Selection Rules464. Non-Conservation of Parity33ELEMENTARY PARTICLES331. Nuclear Force and Meson Theory332. Pions and Muons6663. Kaons and Hyperons666 | | | | |
| 1. Theory of Beta-Decay 1. Theory of Beta-Decay 2. Allowed and Forbidden Transitions 1. Selection Rules 3. Selection Rules 1. Non-Conservation of Parity ELEMENTARY PARTICLES 3 3. Nuclear Force and Meson Theory 3 2. Pions and Muons 1. Kaons and Hyperons | BETA TRANSITIONS | 5 | 5 | |
| Allowed and Forbidden Transitions Selection Rules Non-Conservation of Parity ELEMENTARY PARTICLES Nuclear Force and Meson Theory Pions and Muons Kaons and Hyperons | 1. Theory of Beta-Decay | - | | |
| 3. Selection Rules 4. Non-Conservation of Parity 4. Non-Conservation of Parity ELEMENTARY PARTICLES 3 3 1. Nuclear Force and Meson Theory 3 3 2. Pions and Muons 4 4 3. Kaons and Hyperons 4 4 | 2. Allowed and Forbidden Transitions | | | |
| 4. Non-Conservation of Parity | 3. Selection Rules | | | |
| ELEMENTARY PARTICLES331. Nuclear Force and Meson Theory332. Pions and Muons443. Kaons and Hyperons44 | 4. Non-Conservation of Parity | | | |
| ELEMENTARY PARTICLES331. Nuclear Force and Meson Theory332. Pions and Muons443. Kaons and Hyperons44 | | | | |
| Nuclear Force and Meson Theory Pions and Muons Kaons and Hyperons | ELEMENTARY PARTICLES | 3 | 3 | |
| Pions and Muons Kaons and Hyperons | 1. Nuclear Force and Meson Theory | | | |
| 3. Kaons and Hyperons | 2. Pions and Muons | | | |
| | 3. Kaons and Hyperons | | | |
| 4. Classification of Elementary Particles | 4. Classification of Elementary Particles | | | |
| | | | | |
| 2 Course components (total contact hours per semester): | 2 Course components (total contact hours per semester): | | | |
| Lectures: 42 hr Tutorial: Practical/Fieldwork/ | Lectures: 42 hr | Tutorial: | Practical/Fieldwork/ | |
| 56 hr Internship: | | 56 hr | Internship: | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|-----------------------------------|-------------------------|------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- 1. Explain strategy of the course in the beginning of the semester
- 2. Outlines of the physical laws, principles and the associated proofs.
- 3. Highlighting the day life applications whenever exist.
- 4. Encourage the students to see more details in the international web sites and reference books in the library.
- 5. Discussing some selected problems in each chapter.
- 6. Cooperate with different institution to find how they deal with the subject
- 7. Renew the course references frequently
- 8. Frequently check for the latest discovery in science

| Domains | List Teaching Strategies set out in Course | Were | these | Difficulties Experienced (if |
|---------|--------------------------------------------|-------|-------|------------------------------|
| | Specification | Effec | tive? | any) in Using the Strategy |
| | | No | Yes | with Those Difficulties . |

| a. Knowledge | Demonstrating the basic | Yes | |
|------------------|----------------------------------------------------------------------------------|-----|--|
| | information and principles through | | |
| | lectures and the achieved | | |
| | applications | | |
| | Discussing phenomena with | Yes | |
| | - Discussing phenomena with illustrating pictures and diagrams | 105 | |
| | Lecturing method: | Yes | |
| | Declaring method. Declaring method. | Yes | |
| | Projector Dower point | Ves | |
| | | Ves | |
| | E-leanning Tutorials | Ves | |
| | Tutollais Devisit concents | Ves | |
| | Revisit concepts Discussions | Ves | |
| | Discussions Brain starming associants | Ves | |
| | - Brain storning sessions | Ves | |
| | Start each chapter by general idea and the benefit of it | 105 | |
| | Learn the student background of | 37 | |
| | the subject; | Yes | |
| | • Show the best ways to deal with | Yes | |
| | problem; | | |
| | Keep the question "why" or "how" to explain always there | Yes | |
| b Cognitive | Preparing main outlines for | Yes | |
| Skills | teaching | 105 | |
| Skills | Following some proofs | Yes | |
| | Define duties for each shorter | Yes | |
| | Define duties for each chapter | Yes | |
| | Home work assignments | Yes | |
| | Encourage the student to look for | 105 | |
| | the information in different | | |
| | references | | |
| | Ask the student to attend lectures | Yes | |
| | for practice solving problem | 105 | |
| | Doing small research | Yes | |
| | | | |
| c. Interpersonal | Learn how to search the internet and use the library | Yes | |
| Desponsibility | Learn how to cover missed | Vac | |
| Responsionity | - Learn now to cover missed | 105 | |
| | Learn how to summarize lectures | Vac | |
| | or to collect materials of the | 103 | |
| | course | | |
| | Learn how to solve difficulties in | Vec | |
| | - Learning: solving problems | 103 | |
| | enhance educational skills | | |
| | Develop their interest in Science | Vec | |
| | through : (lab work field trips | 105 | |
| | visits to scientific and research | | |
| | Fncourage the student to attend | Vec | |
| | lectures regularly by | 105 | |
| | Giving honus marks for attendance | Vec | |
| | assigning marks for attendance | 105 | |
| | assigning marks for attendance. | | |

| d. Numerical and Communication Skills | Know the basic mathematical principles. Use the web for research. Discuss with the student. Exams to measure the mathematical skill. Clear the weakness point that should be eliminated. Encourage the student to ask for help if needed. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Encourage the student to ask good question to help solve the problem. | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes | |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--|
| a Daviah amatan | | | |
| Skills (if applicable) | | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

Use the web to know the basic principles and laws of physics.

Discuss with the student and take exams to measure their skills.

- 1. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 2. Focusing on some real results and its physical meaning.
- 3. Encourage the student to ask questions to clear the concept of Physics.
- 4. Encourage the student to ask questions to help solve the problem.
- 5. Display the lecture note and homework assignment at the web
- 6. Scientific Films in the web site related to the course subjects

C. Results

| 1 Number of students commencing the field experience: | 10 | |
|-------------------------------------------------------|----|--|
| 2 Number of students completing the field experience: | 10 | |
| 3 Result Summary: | | |

| Passed: | No | 10, | Percent | 100 | | Failed | No | 0 | Percent | 0% |
|---------|----|-----|---------|-----|---|--------|----|---|---------|----|
| | | - , | | | 7 | | | | | |

Did not complete No 0 Percent 0 %

| | No | | % | No | % | No |
|--------------|----|-----|------------|-------|-------|----|
| A | | | 95- 100 | 1 | 70-74 | 2 |
| В | | | 90-94 | 2 | 65-69 | 0 |
| С | | | 85-89 | 0 | 60-64 | 1 |
| D | | | 80-84 | 4 | < 60 | |
| F | | OR | 75-79 | 0 | | |
| Denied Entry | | 011 | Denied | Entry | | 0 |
| In Progress | | | In Prog | ress | | 10 |
| Incomplete | | | Incomp | lete | | 0 |
| Pass | | | Pass | | | 10 |
| Fail | | | Fail | | | 0 |
| Withdrawn | | | Withdra | wn | | 0 |

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| a. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | | |
|--------------------------------------------------------------------------------------|------------------------------------------|--|--|--|--|--|
| Variation | Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| b. Variations (if any) from planned assessment process | ses in Domains of Learning (C4 in Course | | | | | |
| Specification) | - | | | | | |
| Variation | Reason | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|-------------------------------------|--------------------------------------------------|
| The instructors of the course are | TRUE |
| checking together and put a unique | |
| process of evaluation | |
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department. | |
| Feedback evaluation of teaching | TRUE |
| from independent organization | |

.D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 1 | Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | |

H Course Evaluation

| 1 Student evaluation of the course: |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Attach Survey Results if available) |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |
| 2. Other Evaluation What evaluations were received? Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc): |
| a List the most important criticisms and strengths |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | | |
| New chapter was added to cover the new of the field | Was applied successfully | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------|
| Actions Required | Completion Date | Person Responsible |
| Updating the course according to | 1432\1433H | |
| the recent publications | 2011\2012 | Dr. Saiful Islam |
| Visit to Researches Lab. | | |
| | | |
| 4. Recommendations to Program Coordinator (if | Required) | |
| (Recommendations by the instructor to the program would require approval at program, department or program.). | m coordinator if any prop institutional level or tha | posed action to improve the course t might affect other courses in the |
| | | |

Name of Course Instructor: Dr. Saiful Islam Abdussalam

Signature: Saiful Islam Date Report Completed: 2011/2012

Received by Program Coordinator Date: 28/5/2012

Course title: Workshop Course code: 403382

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution
Umm Al-qurra University
College/ Department
Faculty of Applied Science, Physics Department

A Course Identification and General Information

1. Course title and code.

Workshop, Phys 403382

2. If course is taught in more than one section indicate the section to which this report applies

one section only

3. Year and semester to which this report applies.

1434 h, 1st semester

4 Location (if not on main campus)

On Abdiya campus (faculty of science)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|-------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Engineering and industrial drawing | 2 | 2 | |
| DEFINATIONS | 4 | 4 | |
| Applications on the use of engineering tools and guidelines | 4 | 4 | |
| Applications | 2 | 2 | |
| Industrial drawing | 2 | 2 | |
| Applications on projection | 2 | 0 | The preparation and organization of the 5 th conference of science |
| Intersections | 2 | 2 | |
| how to find a intersection | 2 | 2 | |

| APPLICATIONS ON INTERSECTION | 4 | 4 | |
|------------------------------|---|---|--|
|------------------------------|---|---|--|

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action |
|-----------------------------------|----------------------------------|------------------------------|
| | | Elsewhere in the Program |
| Applications on projection | No Significance | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- Explain strategy of the course in the beginning of the semester
- Outlines of the physical laws, principles and the associated proofs.
- Highlighting the day life applications whenever exist.
- Encourage the students to see more details in the international web sites and reference books in the library.
- Discussing some selected problems in each chapter.
- Cooperate with different institution to find how they deal with the subject
- Renew the course references frequently

• Frequently check for the latest discovery in science

| Domains | List Teaching Strategies set out in Course Specification | | nese /e? | Difficulties Experienced (if any) in Using the Strategy and Suggested |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|--------------------------------------------------------------------------|
| | | No | Yes | Action to Deal with Those Difficulties. |
| a. Knowledge | (vi) Learning fundamentals in engineering and industrial drawing: (vii) Acquire the basic engineering experience of practice in the field of engineering drawing. (viii) Abel to use the engineering drawing experience in different artistic field. (ix) Improving logical thinking. (x) To use mathematical formulation to describe the physical principle or phenomena (xi) Ability to explain how things work | | yes | |

| b. Cognitive Skills | Physical laws and principles were used to understand the subject. Problems were simplified and phenomena were analyzed. Ability to explain the idea with the student own words has been improved. Problems are Represented mathematically. | yes | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| c. Interpersonal Skills and Responsibility | Work independently. The students learn independently and take up responsibility. | yes | |
| d. Numerical and Communication Skills | Examples and problems were simplified to understand and analysed the phenomena. | yes | |
| e Psychomotor Skills (if applicable) | none | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 23. Use the web for research to know the basic mathematical principles.
- 24. Discuss with the student and give exams to measure the mathematical skill.
- 25. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 26. Focusing on some real results and its physical meaning.
- 27. Encourage the student to ask good question to help solve the problem.
- 28. Display the lecture note and homework assignment at the web.

C. Results

| 1 Number of students commencing the field experience: 14 | | | | |
|--------------------------------------------------------------------|--|--|--|--|
| 26 Number of students completing the field experien 14 | | | | |
| 3 Result Summary: Passed: No 14 Percent 100%% Failed No Percent | | | | |
| Did not complete No Percent | | | | |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| А | | | 95- 100 | | 70-47 | 1 |
| В | | | 90-94 | | 65-69 | 3 |
| С | | | 85-89 | 1 | 60-64 | 6 |
| D | | | 80-84 | | < 60 | 0 |
| F | | OR | 75-79 | 2 | | |
| Denied Entry | | | Denied | Entry | 1 | |
| In Progress | | | In Prog | ress | | |
| Incomplete | | | Incomp | lete | | |
| Pass | 14 | | Pass | | | 14 |
| Fail | | | Fail | | | |
| Withdrawn | | | Withdra | awn | | |

 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

 n. Variations (if any) from planned assessment schedule (C5 in Course Specification)

 Variation
 Reason

 b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course Specification)

 Specification)

 Variation

 Variation

 Reason

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be

| Method(s) of Verification | Conclusion |
|---------------------------|------------|
| | |

D Resources and Facilities

attached.)

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic. | Giving More time to achieve the required tasks |

E. Administrative Issues

| 1. Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) |
|-----------------------------------------------------------------------------|
| a List the most important criticisms and strengths |
| The course need more time and equipments for laboratory is recommended |
| b Response of instructor or course team to this evaluation |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | | |
|--------------------------------------------------------------------------------------|-----------------------------------------------|--|--|--|--|
| | | | | | |
| Actions proposed in the most recent previous course | State whether each action was undertaken, the | | | | |
| report(s) | impact, and if the proposed action was not | | | | |
| Giving the course more time undertaken or completed, give reasons. | | | | | |
| Offering the suitable text book | | | | | |
| | | | | | |
| | | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

The course must be teaches with the experienced teacher not by any body

| 3. Action Plan for Next Semester/Year | | | | | |
|--------------------------------------------------------------------------|-----------------|------------------------|--|--|--|
| Actions Required Reference books in Arabic and English is Required | Completion Date | Person Responsible | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | | |

(Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.).

Name of Course Instructor: Dr. Jalel AL NASSER OUERFELLI

Signature:_____Date Report Completed:_____

Received by Program Coordinator

Date:____ 26/01/2014___

Course title: Advanced Optics

Course code: PH 432

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution Umm AL-Qura University

College/ Department

College of Sciences / Physics Department

A Course Identification and General Information

1. Course title and code. Advanced optics PH 432

2. If course is taught in more than one section indicate the section to which this report applies

3. Year and semester to which this report applies.

Fourth year, first semesters

4 Location (if not on main campus)

Within The University Campus

B- Course Delivery

| 1 Coverage of Planned Program | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------|--|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | | |
| Fraunhofer Diffraction Fraunhofer Diffraction by a single slit Fraunhofer Diffraction by a circular aperature Apodization Fresnel diffraction More exact diffraction theories | 6 | 6 | | | | |
| Fourier analysis and Fourier optics Basic principle , periodic objects Contrast improvement , derivations of the optical amplitude transfer functions optical intensity transfer functions Resolving power | 9 | 9 | | | | |
| Plane wave holography Point source holography Central body holography | 6 | 6 | | | | |

| Practical considerationClassification of holography | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--|
| Wave theory of aberrations Geometrical aberration fundamentals Spherical aberration Skew rays and spherical aberration Chromatic aberration Light as energy | 9 | 9 | |
| Non paraxial matrices Non spherical | 6 | 6 | |
| Newtonians & Gaussianian equation Snell law and lenses matrices | 6 | 6 | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of | Possible Compensating Action |
|--------------------------------------|--------------------------------------|-------------------------------------|
| | Coverage | Elsewhere in the Program |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| 3. Effectiveness of Planned Teach | ing Strategies for Intended Learning | g Outcomes set out in the Course |
| Specification. (Refer to planned tea | ching strategies in Course Specific | ation and description of Domains of |
| Learning Outcomes in the National | Qualifications Framework) | - |

| Domains | List Teaching Strategies set out in Course | Were | these | Difficulties Experienced (if | |
|---------|--------------------------------------------|------------|-------|-----------------------------------------|----------------------------|
| | Specification | Effective? | | cification Effective? any) in Using the | any) in Using the Strategy |
| | | No | Yes | with Those Difficulties . | |

| a. Kasada dag | 1.Demonstrating the basic | Yes | |
|------------------|-----------------------------|--------|--|
| Knowledge | information and principles | | |
| | through lectures and the | | |
| | achieved applications | Ves | |
| | 2. Discussing phenomena | 105 | |
| | with illustrating pictures | Yes | |
| | and diagrams | Yes | |
| | 3. Lecturing method: | | |
| | a. Blackboard | Yes | |
| | b. Power point | | |
| | 4. Tutorials | Yes | |
| | 5. Experimental learning | Yes | |
| | 6. Discussions | | |
| | 7. Brain storming | Yes | |
| | 8. Start each chapter by | | |
| | general idea and the | Yes | |
| | benefit of it | Yes | |
| | 9. To improve the student | N7 a a | |
| | background of the subject | res | |
| | 10 Show the best ways to | Yes | |
| | deal with problem | Yes | |
| | 11 Solving problems | | |
| | | Yes | |
| | 12 Encourage the concept of | Yes | |
| | team work | V | |
| | 13- Logical thinking. | x es | |
| | 14- Active teaching | Yes | |
| | 15- Self learning | | |

| b. Cognitive Skills | 1. Preparing main outlines for | Yes | |
|------------------------|---------------------------------|-----|--|
| Dimis | teaching | | |
| | 2. Following some proofs | Yes | |
| | 3. Define duties for each | Yes | |
| | chapter | Yes | |
| | 4. Homework assignments | | |
| | 5. Encourage the student to | Yes | |
| | look for the information in | | |
| | different references | Yes | |
| | 6. Ask the student to attend | | |
| | lectures for practice | Yes | |
| | solving problem | | |
| | 7. Doing small research | Yes | |
| | 8- Self learning | | |
| | 9- Project based learning | Yes | |
| | 10- Report back sessions | Yes | |
| | 11-Active learning | | |
| C. Interpersona | 1- Brain storming | Yes | |
| l Skills and | 2- Group discussion | | |
| Responsibili tv | 3- Experimental training | | |
| 5 | 4- Summarizing lectures or | Yes | |
| | collecting materials of the | | |
| | course. | Vag | |
| | 5- Try to solve difficulties in | 165 | |
| | learning: solving problems | | |
| | 6- enhance educational | Yes | |
| | skills. | | |
| | 7- Encourage the student to | | |
| | attend general lectures | | |

| d. Numerical and Communicat ion Skills | Know the basic mathematical principles. Use the web for research. Computational analysis. Data representation. Focusing on some real results and its physical meaning. Lectures for problem solution. Experimental training. | Yes Yes Yes | In case of web research the student use copy paste only with out doing more effort in improving the idea. This problem will be solved by giving the student to search on web site and how to write scientific papers. |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| e Psychomoto r Skills (if applicable) | 1- Co-operative learning 2- Research projects | yes | In the case of research projects the student deal with this issue by copy and paste from the web without trying to read. The problem will be solved by giving the student a lecture how to search on scientific web sites and also how to write to write the scientific papers and projects |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

1- giving the student how write a paper using scientific web site.

C. Results

| 1 Numb | er of students cor | nmencing the field expe | rience: 43 | | |
|----------|--------------------|---------------------------|----------------|----------------|--|
| 27 | Number of stude | ents completing the field | experience: 42 | | |
| 3 Result | Summary: | | | | |
| Passed: | No : 41 | Percent :95.34% | Failed No :2 | Percent :4.65% | |

Did not complete No 0 Percent 0%

| 4 Distribution | of Grades (If per | rcentage m | arks are given | indicate num | bers in a | each 5 per | centile group) | | | | | | |
|--------------------------------------------------|---------------------|-------------|----------------|------------------|-----------|------------|----------------|---|---|-----|--|-------|--|
| | | No | | % | No | % | No | | | | | | |
| | A | 10 | - | _ | _ | | - | - | - | 95- | | 70-47 | |
| | В | 4 | | 90-94 | | 65-69 | | | | | | | |
| | С | 1 | - | 85-89 | | 60-64 | | | | | | | |
| | D | 23 | | 80-84 | | < 60 | | | | | | | |
| | F | 2 | OR | 75-79 | | | | | | | | | |
| | Denied Entry | | | Denied | Entry | | | | | | | | |
| | In Progress | - | - | In Prog | ress | | | | | | | | |
| | Incomplete | - | - | Incomp | lete | | | | | | | | |
| | Pass | 41 | - | Pass | | | | | | | | | |
| | Fail | 2 | | Fail | | | | | | | | | |
| | Withdrawn | | | Withdra | awn | | | | | | | | |
| 5 Special factors (if any) affecting the results | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 6 Variations | from planned stu | dant accord | mont me coose | a (if any) (S | | C 1 and 5 | in the Course | | | | | | |
| Specification. |) | uent assess | ment processe | es (II any) (Se | e nems | C 4 and 5 | In the Course | | | | | | |
| o. Variations | (if any) from plan | ned assess | ment schedule | (C5 in Cours | e Specif | ication) | | | | | | | |
| | Variation | | | | - | Reason | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| b. Variations (| (if any) from plann | ned assessr | nent processes | in Domains | of Learn | ing (C4 in | Course | | | | | | |
| specification) | Variation | | | | | Reason | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|------------------------------------|--------------------------------------------------|
| Check marking of a sample of | Equal with the level of student in written tests |
| papers by others in the department | |
| | |
| | |
| | |

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1- Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures | All students must take all of the requirements before start in this course |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| | |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) | | | | |
|--------------------------------------------------------------------------|--|--|--|--|
| yes | | | | |
| a List the most important criticisms and strengths | | | | |
| 1- The course is applicable | | | | |
| 2- The continues help of the instructor to students | | | | |
| 3- The instructor is interesting in what she gave during the course | | | | |
| 4- The instructor is taking care with student progress during the course | | | | |
| 5- The leakage of the new active learning methods | | | | |
| 6- the leakage of team work principle | | | | |
| | | | | |

b Response of instructor or course team to this evaluation

1- Using active learning by using the Google drive programme

2- Improve the principle of team working

2. Other Evaluation -- What evaluations were received? Specify and attach reports where available. (eg. By head of department, peer observations, accreditation review, other stakeholders etc):

Not exist

a List the most important criticisms and strengths

Not exist

b Response of instructor or course team to this evaluation

Not exist

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | | | |

2. Other action taken to improve the course this semester/year

Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--|--|--|--|
| Actions Required | Completion Date | Person Responsible | | | | |
| 1- Using the Google drive programme 2- Self-learning part to improve the leadership behaviour | Within 2014- 2015 | Dr: Afaf Maweed | | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | | | |

Name of Course Instructor:_ Dr. Said Mohamed Attia _____-

Signature: *Said Attia* _____ Date Report Completed: 7/3/1435

Received by Program Coordinator

Date:_____

Course Title: Electronics

Course Code: PH403423-4

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

Institution Umm Al-qurra University College/ Department Faculty of Applied Science, Physics Department

A Course Identification and General Information

1. Course title and code.

PH403423-4 **Electronics**,

2. If course is taught in more than one section indicate the section to which this report applies

one section only

3. Year and semester to which this report applies. **1433 h, 2nd semester**

4 Location (if not on main campus)

On the main campus

B- Course Delivery

| 1 Coverage of Planned Program | | | | | | |
|----------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------------|--|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | | |
| Semiconductors and pn junction | 4 | 4 | | | | |
| Diodes and its Applications | 4 | 4 | | | | |
| Bipolar junction transistor | 2 | 2 | | | | |
| Biasing of Bipolar junction transistor | 2 | 2 | | | | |
| Small signal bipolar transistor | 4 | 4 | | | | |
| Field effect transistor and baising | 2 | 2 | | | | |
| Small signal Field effect transistor | 2 | 2 | | | | |
| Power amplifier | 2 | 0 | The preparation and organization of the 5 th conference of science | | | |
| Digital electronic devices | 2 | 0 | | | | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action |
|-----------------------------------|------------------------------------------|------------------------------------|
| | | Elsewhere in the Program |
| Dowon amplifian | Effect on the post graduate study in the | No compensating action is possible |
| Power ampimer | electronic field | Elsewhere in the Program |
| Digital electronic devices | Effect on the post graduate study in the | No compensating action is possible |
| Digital electronic devices | electronic field | Elsewhere in the Program |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- Gain knowledge on Electronics
- Be familiar with the basic physics knowledge on Electronics.
- Understand the construction and operation of some electronic devises such as diode, transistor and field effect transistor.
- Understand and appreciate of the analyses of electronic circuits.
- Define and describe the parameters of electronic devises.
- Illustrate the characteristics of electronic devises.
- Be familiar with the basic physical properties of electronic devises.

| • Deep understanding of the importance of electronic devises in our lives | | | | | |
|------------------------------------------------------------------------------------|---------------|------------|---------------------------|--|--|
| Domains List Teaching Strategies set out in Course Were these Difficulties Experie | | | | | |
| | Specification | Effective? | Using the Strategy and Su | | |

| Domains | List Teaching Strategies set out in Course | Were these | | Difficulties Experienced (if any) in |
|---------|--------------------------------------------|------------|-----|------------------------------------------|
| | Specification | Effective? | | Using the Strategy and Suggested |
| | | No | Yes | Action to Deal with Those Difficulties . |

| a. Knowledge | Demonstrating the basic information and principles through lectures and the achieved applications. Discussing phenomena with illustrating pictures and diagrams. Lecturing method: Blackboard, Power point e-learning , Tutorials , Revisit concepts, Discussions, Brain storming sessions, Start each chapter by general idea and the benefit of it; , Learn the student background of the subject; , Show the best ways to deal with problem; Keep the question "why" or "how" to explain always there; Build a strategy to solve problem. Encourage interactive, learning and develop individualized interest | yes | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| b. Cognitive Skills | physical laws and principles were used to understand the subject. | | |
| | • Problems were simplified and phenomena were analyzed. Ability to explain the idea with the student own words has been improved. Problems are Represented mathematically. | yes | |
| c. Interpersonal Skills and Responsibility | Work independently. The students learn independently and take up responsibility. | yes | |
| d. Numerical and Communication Skills | Examples and problems were simplified to understand and analysed the phenomena. | yes | |
| e Psychomotor Skills (if applicable) | none | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 29. Use the web for research to know the basic mathematical principles.
- 30. Discuss with the student and give exams to measure the mathematical skill.
- 31. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 32. Focusing on some real results and its physical meaning.
- 33. Encourage the student to ask good question to help solve the problem.
- 34. Display the lecture note and homework assignment at the web.

C. Results

| 1 Number of students commencing the field experience: 8 |
|--------------------------------------------------------------------------------------------|
| 28 Number of students completing the field experien 8 |
| 3 Result Summary: Passed: No 8 Percent Failed No Percent Did not complete No Percent |

| | No | | % | No | % | No |
|--------------|----|----|------------|--------------|-------|----|
| А | | - | 95- 100 | | 70-47 | 2 |
| В | | | 90-94 | | 65-69 | 1 |
| С | | | 85-89 | 2 | 60-64 | 1 |
| D | | | 80-84 | 1 | < 60 | |
| F | | OR | 75-79 | 1 | | |
| Denied Entry | | - | Denied | Denied Entry | | |
| In Progress | | - | In Prog | ress | | |
| Incomplete | | - | Incomp | lete | | |
| Pass | 8 | - | Pass | | | 8 |
| Fail | | - | Fail | | | |
| Withdrawn | | - | Withdra | wn | | |
5 Special factors (if any) affecting the results **none**

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| non | | | |
|-----------------------------------------------------------------------------------------------|--------|--|--|
| p. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | |
| Variation Reason | | | |
| | | | |
| non | | | |
| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course | | | |
| Specification) | | | |
| Variation | Reason | | |
| | | | |
| | | | |

| 7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the | | | |
|------------------------------------------------------------------------------------------------------|------------|--|--|
| department. See G4 in Course Specification) (Where independent report is provided a copy should be | | | |
| attached.) | | | |
| Method(s) of Verification | Conclusion | | |

| D Resources | and Facilities |
|--------------------|----------------|
| | |

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures. | Giving More time to achieve the required tasks |

E. Administrative Issues

| 2. Consequences of any difficulties experienced for student learning in the course. |
|-------------------------------------------------------------------------------------|
| |
| |
| |

H Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) |
|-----------------------------------------------------------------------------|
| a List the most important criticisms and strengths |
| The course need more time and equipments for laboratory |
| b Response of instructor or course team to this evaluation |
| course team asked to solve this point |

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|
| Actions proposed in the most recent previous course report(s) Giving the course more time Offering the suitable text books Preparing the class rooms with the data show devices to make the lecture presentation possible. | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

The course must be teached with the experienced teacher not by any body

| 3. Action Plan for Next Semester/Year | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------|--|--|
| Actions Required | Completion Date | Person Responsible | | |
| | | | | |
| | | | | |
| | | | | |
| 4. Recommendations to Program Coordinator (if | 4. Recommendations to Program Coordinator (if Required) | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.) | | | | |
| The experimental section (laboratory) must be supported by devices | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Name of Course Instructor: Prof. Y.M. MOUSTAFA

| Signature: | _Date Report | Completed: |
|------------|--------------|------------|
| | | |

Received by Program Coordinator

Date:_____

Course Title: Nuclear Physics (2)-461

Course Code : 461

Course Report

For guidance on the completion of this template, refer to Section 2.5 of Chapter 2 in Part 2 in this Handbook

| Institution | Umm Al-Qura University |
|---------------------|--------------------------------------------------|
| College/ Department | College of Sciences (Women Section), Phys. Dept. |

A Course Identification and General Information

| 1. Course title and code. | Nuclear Physics (2)- 461 | l |
|----------------------------------------|-------------------------------|------------------------------------|
| 2. If course is taught in more applies | than one section indicate the | e section to which this report |
| 3. Year and semester to which | h this report applies. 1432/ | 1433 $2^{\underline{nd}}$ semester |
| 4 Location (if not on main ca | ampus) | main campus. |

B- Course Delivery

Г

| 1 Coverage of Planned Program | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| I – <u>Introduction</u> : (Nuclear potentials and their curves, Potential height and barriers, Bound and unbound states, Simple theory of the deuteron, Spin dependence of nuclear forces .) | 1-2 W | 4 hrs | |
| II- Nucleon-Nucleon_scattering, (P-P), (n-p) at low and high energies, Scattering cross-sections, Experimental deuteron low energy (n-p) scattering, Theory of (p-p) scattering at low energies, scattering of α - particles and impact parameter, Meson theory of | 2 W | 6 hrs | |

| nuclear forces, The effective range, Yukawa potential. | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--|
| III- <u>Nuclear Models:</u> Nuclear dipole magnetic moment, Nuclear electric quadrupole moment, Nuclear Shell Model, Determination of spin-parity to the ground state of nuclei, Nuclear deformation and unified model, The collective motion of rotational and vibrational state. | 2-3 W | 6 hrs | |
| IV- <u>Nuclear reactions:</u> Classification of nuclear reactions, Reaction dynamics, The Q equation, Theory of stripping reactions. | 1-2 W | 4 hrs | |
| V <u>- Nuclear Moments:</u> Hyperfine structure of atomic spectra, The affiliation of an external magnetic field and nuclear magnetic moment, The torque occurs at strong and weak magnetic field. | 2 W | 6 hrs | |
| VI- <u>Nuclear energy:</u> Fission process, Neutron released in the fission process, Nuclear reactor operating with natural Uranium as fuel, Fussion, Thermo nuclear energy. | 1-2 W | 4 hrs | |

| 2. Consequences of Non Coverage of Topics | | | | |
|-------------------------------------------|-----------------------------------------------|-----------------------------|--|--|
| For any topics where significa | ntly less time was spent than | was intended in the course | | |
| specification, or where the topi | c was not taught at all, comm | ient on how significant you | | |
| believe the lack of coverage is | for the program objectives or | for later courses in the | | |
| program, and suggest possible | compensating action if you b | elieve it is needed. | | |
| Topics (if any) not Fully | Significance of Lack of Possible Compensating | | | |
| Covered | Coverage Action Elsewhere in the | | | |
| Program | | | | |
| | | | | |
| | | | | |
| | | | | |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

| Domains | List Teaching Strategies set out in Course | Were these Effective? | | Difficulties Experienced (if any) in Using the Strategy and |
|--------------|-----------------------------------------------|--------------------------|-----|-------------------------------------------------------------|
| | Specification | No | Yes | Suggested Action to Deal |
| | | | | with Those Difficulties . |
| a. Knowledge | 1- Mainly lectures. | | Yes | |
| | 2- Ask group of | | Yes | |
| | students to | | | |
| | collect some data | | | |
| | from the web | | | |
| | about a certain | | | |
| | subject of the | | | |
| | course and ask | | | |
| | them to explain | | | |
| | what found to | | yes | |
| | their colleges in | | | |
| | the class. | | | |
| | 3- Use some | | | |
| | scientific aids | | | |
| | from the web. | | | |
| | | | | |

| b. Cognitive Skills | 1-Ask them to make designs for nuclear things related to their course.2-Give some quizzes during lectures. | Yes yes | |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--|
| c. Interpersonal Skills and | 1-Give some quizzes | yes | |
| Responsibility | the lectures. 2-Make some tutorials during the lecture. | yes | |
| d. Numerical | 1-Ask students to get | yes | |
| Communication | from web for a certain | | |
| Skills | isotope. | | |
| | | | |
| e Psychomotor | | | |
| applicable) | | | |
| | | | |

4. Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

1- Computer for each student or at maximum for two students

2-Connection to the internet for each computer.

3-Connection to the internet for lecturer.

C. Results

| 1 Nun | nber of students starting the course: 15 |
|-------|------------------------------------------|
| 29 | Number of students completing the cours |

| percentile g | roup) | 1 | U | U | | | | |
|------------------------|-------------------|------------|-------------|---------|---------|-----------|--------|----|
| | | No | | % | No | % | No | |
| | А | 4 | | 95- | 3 | 70- | 3 | |
| | | | | 100 | | 74 | 5 | |
| | В | 4 | | 90- | 1 | 65- | | |
| | | | | 94 | | 69 | | |
| | С | 4 | | 85- | 1 | 60- 64 | 3 | |
| | D | 3 | | 89- | 3 | < 60 | | |
| | - | C | | 84 | C . | | | |
| | F | | | 75- | 1 | | | |
| | D 1 | | OR | 79 D | | | | |
| | Denied | | | Denie | d Entry | | | |
| | Linuy | | | | | | | |
| | In Progress | | | In Pro | ogress | | | |
| | Incomplete | | | Incom | plete | | | |
| | Pass | 15 | | Pass | | | 15 | |
| | Fail | | | Fail | | | | |
| | Withdrawn | | | Withd | lrawn | | | |
| 4 Result Sur | mmary: | | | | | | | |
| Passed: Percent | N0% | P | | 100% | Failed | |] No · | - |
| Did not com Percent | nplete N | F | t | 0% | Denie | d F |] No - | 0% |
| 5 Special fa | actors (if any) a | ffecting t | the results | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

3 Distribution of Grades (If percentage marks are given indicate numbers in each 5

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.) q Variations (if any) from planned assessment schedule (C5 in Course Specification) Variation Reason

| b. Variations (if any) from planned assessmer | t processes in Domains of Learning (C4 in |
|-----------------------------------------------|-------------------------------------------|
| Course Specification) | |
| Variation | Reason |
| | |
| | |
| | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|---------------------------|------------|
| | |
| | |
| | |
| | |
| | |

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| | |

E. Administrative Issues

F Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) |
|--------------------------------------------------------------------------------------------|
| |
| a List the most important criticisms and strengths |
| |
| |
| |
| |
| |
| |
| |
| b Response of instructor or course team to this evaluation |
| |
| |
| |
| |
| |
| |
| 2 Other Evolution What evolutions were received? |
| 2. Other Evaluation what evaluations were received? |
| Specify and attach reports where available. (eg. By head of department, peer observations, |
| accreditation review, other stakeholders etc): |
| |
| |
| |
| a List the most important criticisms and strengths |
| |
| |
| |
| b Response of instructor or course team to this evaluation |
| |
| |
| |

G Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | | |
|--------------------------------------------------------------------------------------|--------------------------------------------|--|--|--|--|
| Actions proposed in the most recent | State whether each action was undertaken, | | | | |
| previous course report(s) | the impact, and if the proposed action was | | | | |
| not undertaken or completed, give reason | | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|--|--|
| Actions Required | Completion Date | Person Responsible | | |
| | | | | |
| | | | | |
| | | | | |
| 4. Recommendations to Program Coordin | nator (if Required) | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.) | | | | |
| | | | | |
| | | | | |
| | | | | |
| Name of Course Instructor: Prof. Sohair | Mohamed Diab | | | |

Signature:_____Date Report Completed:_____

Received by Program Coordinator

Date:_____

Course Title: Nuclear Technology

Course Code: Physics-463

Course Report

For guidance on the completion of this template, refer to Section 2.5 of Chapter 2 in Part 2 in this Handbook

| Institution | Umm Al-Qura University |
|---------------------|--------------------------------------------------|
| College/ Department | College of Sciences (Women Section), Phys. Dept. |

A Course Identification and General Information

| 1. Course title and code | Nuclear Technology Physics-463 |
|----------------------------------------------------|------------------------------------------------------|
| 2. If course is taught in more than one se applies | ction indicate the section to which this report |
| 3. Year and semester to which this report | t applies. $1432/1433$ $2^{\underline{nd}}$ semester |
| 4 Location (if not on main campus) | main campus. |

B- Course Delivery

| 1 Coverage of Planned Program | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------------------------|--|--|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned | | |
| I – <u>Nuclear reactors</u> : Classification of types of nuclear reactors according to: 1- their masses 2- type of reaction, 3- type of moderator, 4- phase of fuel, 5- generation of electricity, 6- breading reactors. | 2 W | 4 hrs | | | |
| II- <u>Nuclear energy:</u> nuclear reactions cross-sections and applications – nuclear fission process – calculation of energy fission using different methods – | 2 W | 4 hrs | | | |

| explanation of fission process by liquid drop model – the potential energy curve for fission and critical deformation energy. | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------------------------|
| III- <u>Slowing down of neutrons</u> : thermal neutron diffusion – diffusion of slowing down neutrons – calculation of the average number of neutrons emitted per fission in terms of cross sections of fissions and absorption. | 3 W | 6 hrs | |
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| IV- Prompt neutrons and delayed neutron in the fission reaction and their decay schemes- the affection of the enriched Uranium on the number of absorption neutrons- calculation of the average value of loosing energy of neutrons per collision by the moderator materials – calculation of the number of collisions which reduce the energy of incident neutrons to thermal energy. | 3W | 6hrs | |
| V- <u>Studying the properties of moderator</u> <u>material:</u> . Slowing down of neutrons – scattering process- the flux distribution for thermal neutrons- average logarithmic energy loss per collision – slowing down power (SDP)- moderator ratio (MR) – Maxwell distribution of velocities and energy distribution of neutrons. | 2 W | 4 hrs | |
| VI- Optimum parameters of the re- production medii reproduction factor- critical data of the reactor. | 1W | 2hr | |
| VII- Electricity generating reactors - the light water reactor – heavy water reactor – pressurized reactor. | 1 W | 2 hrs | |
| VIII- <u>Accelerators:</u> Van – de Graff accelerator – Cyclotron accelerator. | 1W | 2hrs | |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| | 1 0 7 | |
|---------------------------|-------------------------|-------------------------|
| Topics (if any) not Fully | Significance of Lack of | Possible Compensating |
| Covered | Coverage | Action Elsewhere in the |
| | | Program |
| | | |
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3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

| Domains | List Teaching Strategies set out in Course | Ceaching StrategiesWere theseat in CourseEffective?ficationNoYes | | Difficulties Experienced (if any) in Using the Strategy and |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------|-------------------------------------------------------------|
| | Specification | | | Suggested Action to Deal with Those Difficulties . |
| a. Knowledge | 4- Mainly lectures. 5- Ask group of students to collect some data from the web about a certain subject of the course and ask them to explain what found to their colleges in the class. 6- Use some scientific aids from the web. | | Yes Yes yes | |

| b. Cognitive | 1-Ask them to make | Yes | |
|------------------|-------------------------|-----|--|
| Skills | designs for nuclear | | |
| | things related to their | | |
| | course. | yes | |
| | 2-Give some quizzes | | |
| | during lectures. | | |
| | | | |
| c. Interpersonal | 1-Give some quizzes | yes | |
| Skills and | during | | |
| Responsibility | the lectures. | yes | |
| | 2-Make some tutorials | | |
| | during | | |
| | the lecture. | | |
| d. Numerical | 1-Ask students to get | yes | |
| and | data | | |
| Communication | from web for a certain | | |
| Skills | isotope. | | |
| | - | | |
| e Psychomotor | | | |
| Skills (if | | | |
| applicable) | | | |
| ` | | | |
| | | | |

4. Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

1- Computer for each student or at maximum for two students

2-Connection to the internet for each computer.

3-Connection to the internet for lecturer.

C. Results

| 1 Num | ber of students starting the course: |
|-------|--------------------------------------------|
| 30 | Number of students completing the cours 19 |

| 3 Distributio | on of Grades (| If percen | tage marks | are | given i | indicate | numbe | rs in each | 5 |
|--------------------------------------------------|----------------|-----------|------------|-----|------------|-------------|------------|-----------------|---|
| percentile g | roup) | | | | | | | | |
| | | No | | | % | No | % | No | |
| | Δ | 0 | | - | 05 | 1 | 70 | | |
| | A | 9 | | | 93- 100 | 1 | 70- | | |
| | B | 2 | | - | 90- | 8 | 65- | 2 | |
| | D | - | | 9 | 94 | Ũ | 69 | 2 | |
| | С | 2 | | | 85- | | 60- | 4 | |
| | | | | | 89 | | 64 | | |
| | D | 6 | | | 80- | 2 | < 60 | | |
| | | | | | 84 | | | | |
| | F | | | | 75- | 2 | | | |
| | | | OR | | 79 | | | | |
| | Denied | | | | Denie | d Entry | | | |
| | Entry | | | | | | | | |
| | LD | | | - | | | | | |
| | In Progress | | | | In Pro | In Progress | | | |
| | T | | | - | | | | | |
| | Incomplete | | | | Incomplete | | | | |
| | Pass | 19 | | - | Pass | | | | |
| | Fail | | | | Fail | | | | |
| | Withdrawn | | | - | Withd | lrawn | | | |
| 4 Result Su | mmary: | | | | | | | | |
| D 1 1/ | | Ţ | | 100 | | | | | |
| Passed: 19 | | ŀĿ₊ | lt | 100 |)% | Failed | | |] |
| Percent | 0% | | | | | | | | |
| Did not con | nlete | Pe | | 00 | % | Denie | d F | $\Big _{N_{0}}$ | |
| Percent | 0% | · L | | 0, | 0 | Denie | ч <u> </u> | | |
| 5 Special factors (if any) affecting the results | | | | | | | | | |
| 1 | | U | | | | | | | |
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| 6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.) | | | |
|----------------------------------------------------------------------------------------------------------------------|--------|--|--|
| r. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | |
| Variation | Reason | | |
| | | | |

| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in | | | |
|----------------------------------------------------------------------------------------|--------|--|--|
| Course Specification) | | | |
| Variation | Reason | | |
| | | | |
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| | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|---------------------------|------------|
| | |
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D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| | |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|

F Course Evaluation

| 1 Student evaluation of the course: (Attach Survey Results if available) | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| a List the most important criticisms and strengths | | | |
| | | | |
| | | | |
| | | | |
| b Response of instructor or course team to this evaluation | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 2. Other Evaluation What evaluations were received? Specify and attach reports where available (eq. By head of department peer observations | | | |
| accreditation review, other stakeholders etc): | | | |
| | | | |
| a List the most important criticisms and strengths | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| b Response of instructor or course team to this evaluation | | | |
| | | | |
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| | | | |

G Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Actions proposed in the most recent previous course report(s) | State whether each action was undertaken, the impact, and if the proposed action was not undertaken or completed, give reasons. | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

| 3. Action Plan for Next Semester/Year | | | | |
|-----------------------------------------------------------------------------------------|-----------------|--------------------|--|--|
| Actions Required | Completion Date | Person Responsible | | |
| | | | | |
| | | | | |
| | | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to | | | | |
| improve the course would require approval at program, department or institutional level | | | | |
| or that might affect other courses in the program.). | | | | |
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Name of Course Instructor: Prof. Sohair Mohamed Diab

Signature:_____Date Report Completed:_____

Received by Program Coordinator Date:_____

Course Title: Solid State Physics II

(433472-3, PH 472)

Course Report

For guidance on the completion of this template, please refer to pages 21 to 23 of Handbook 2 Internal Quality Assurance Arrangements

| Institution |
|----------------------------------------------------------|
| Umm Al-qurra University |
| College/ Department |
| Faculty of Applied Science for girls, Physics Department |

A Course Identification and General Information

1. Course title and code.

Solid State Physics II (433472-3, PH 472)

2. If course is taught in more than one section indicate the section to which this report applies

one section only

3. Year and semester to which this report applies.

1433 h, 2nd semester
4 Location (if not on main campus)

On Alzaher campus (facity of science for girls)

B- Course Delivery

| 1 Coverage of Planned Program | | | |
|--------------------------------------------|-----------------------------|----------------------------|--------------------------------------------------------------------------------------|
| Topics | Planned Contact Hours | Actual Contact Hours | Reason for Variations if there is a difference of more than 25% of the hours planned |
| Superconducting Properties of Solids | 6 | 7 | |
| X-Rays Diffraction in Crystals | 6 | 7 | |
| Free Electron Theory in Metals | 3 | 4 | |
| Thermal Properties of Crystal Lattice | 3 | 5 | |
| Dielectric Properties of Solids | 6 | 4 | |
| Magnetic Properties of Solids | 3 | 1 | The preparation and organization of the 5 th conference of science |
| The Semiconductors: Theory and Application | 4 | 0 | The preparation and organization of the 5 th conference of science |

2. Consequences of Non Coverage of Topics

For any topics where significantly less time was spent than was intended in the course specification, or where the topic was not taught at all, comment on how significant you believe the lack of coverage is for the program objectives or for later courses in the program, and suggest possible compensating action if you believe it is needed.

| Topics (if any) not Fully Covered | Significance of Lack of Coverage | Possible Compensating Action |
|-----------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
| | | Elsewhere in the Program |
| Magnetic Properties of Solids | No Significance | |
| The Semiconductors: Theory and Application | Effect on the post graduate study in the electronic field | No compensating action is possible Elsewhere in the Program |

3. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

- Explain strategy of the course in the beginning of the semester
- Outlines of the physical laws, principles and the associated proofs.
- Highlighting the day life applications whenever exist.
- Encourage the students to see more details in the international web sites and reference books in the library.
- Discussing some selected problems in each chapter.
- Cooperate with different institution to find how they deal with the subject
- Renew the course references frequently
- Frequently check for the latest discovery in science

| | <u> </u> | | |
|---------|--------------------------------------------|------------|-----------------------------------------|
| Domains | List Teaching Strategies set out in Course | Were these | Difficulties Experienced (if any) in |
| | Specification | Effective? | Using the Strategy and Suggested |
| | - | | Action to Deal with Those Difficulties |
| | | No Ve | Action to Dear with Those Difficulties. |
| | | 100 10 | 5 |
| | | | |

| a. Knowledge | | | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| | (xii)knowledge that students should know and understand when they complete the course are as follow: | | |
| | (xiii) Learning fundamentals in electron gas theory | | |
| | (xiv) Understanding the physics of solid properties and their applications mentioned in the text. | | |
| | (xv)Improving logical thinking. | yes | |
| | (xvi) To use mathematical formulation to describe the physical principle or phenomena | | |
| | (xvii) Ability to explain how physical properties work in solids. | | |
| | (xviii) Learning theory and applications of the solid state. | | |
| | (xix) Methods of measurement and assessment of properties of solids | | |
| b. Cognitive Skills | physical laws and principles were used to understand the subject. problems were simplified and phenomena were analyzed. Ability to explain the idea with the student own words has been improved. Problems are Represented mathematically. | yes | |
| c. Interpersonal Skills and Responsibility | Work independently. The students learn independently and take up responsibility. | yes | |
| d. Numerical and Communication Skills | Examples and problems were simplified to understand and analysed the phenomena. | yes | |
| e Psychomotor Skills (if applicable) | none | | |

4. Summarize actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

- 35. Use the web for research to know the basic mathematical principles.
- 36. Discuss with the student and give exams to measure the mathematical skill.
- 37. Clear the weakness point that should be eliminated and encourage the student to ask for help if needed.
- 38. Focusing on some real results and its physical meaning.
- 39. Encourage the student to ask good question to help solve the problem.
- 40. Display the lecture note and homework assignment at the web.

C. Results

| 1 Number of students commencing the field experience: 25 |
|---------------------------------------------------------------------------------------------|
| 31 Number of students completing the field experien 25 |
| 3 Result Summary: Passed: No 25 Percent Failed No Percent Did not complete No Percent |

| | No | | % | No | % | No |
|--------------|----|----|------------|-------|-------|----|
| A | | - | 95- 100 | 3 | 70-47 | 3 |
| В | | | 90-94 | 1 | 65-69 | 2 |
| С | | - | 85-89 | 5 | 60-64 | |
| D | | - | 80-84 | 7 | < 60 | |
| F | | OR | 75-79 | 4 | | |
| Denied Entry | | - | Denied | Entry | | |
| In Progress | | - | In Prog | ress | | |
| Incomplete | | - | Incomp | lete | | |
| Pass | 25 | - | Pass | | | 25 |
| Fail | | | Fail | | | |
| Withdrawn | | - | Withdra | iwn | | |

5 Special factors (if any) affecting the results **none**

6. Variations from planned student assessment processes (if any) (See items C 4 and 5 in the Course Specification.)

| s. Variations (if any) from planned assessment schedule (C5 in Course Specification) | | | | | |
|-----------------------------------------------------------------------------------------------|--|--|--|--|--|
| Variation Reason | | | | | |
| | | | | | |
| b. Variations (if any) from planned assessment processes in Domains of Learning (C4 in Course | | | | | |
| Specification) | | | | | |
| Variation Reason | | | | | |

7 Verification of Standards of Achievement (Eg. check marking of a sample of papers by others in the department. See G4 in Course Specification) (Where independent report is provided a copy should be attached.)

| Method(s) of Verification | Conclusion |
|---------------------------|------------|

D Resources and Facilities

| 1. Difficulties in access to resources or facilities (if any) | 2. Consequences of any difficulties experienced for student learning in the course. |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Shortage the hand books in Arabic and WEB rooms available for student to be useful at any time between lectures. | Giving More time to achieve the required tasks |

E. Administrative Issues

| 1 Organizational or administrative difficulties encountered (if any | 2. Consequences of any difficulties experienced for student learning in the course. |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| | |

H Course Evaluation

 Student evaluation of the course: (Attach Survey Results if available)
 a List the most important criticisms and strengths
 The course need more time and experimental section (laboratory) is recomended
 b Response of instructor or course team to this evaluation
 course team asked to solve this point

I Planning for Improvement

| 1. Progress on actions proposed for improving the course in previous course reports: | | | | |
|--------------------------------------------------------------------------------------|-----------------------------------------------|--|--|--|
| Actions proposed in the most recent previous course | State whether each action was undertaken, the | | | |
| report(s) | impact, and if the proposed action was not | | | |
| Giving the course more time | undertaken or completed, give reasons. | | | |
| Offering the suitable text books | | | | |
| Preparing the class rooms with the data show | | | | |
| devices to make the lecture presentation possible> | | | | |
| Offering experimental section for the course | | | | |

2. Other action taken to improve the course this semester/year Provide a brief summary of any other action taken to improve the course and the results achieved. (For example, professional development for faculty, modifications to the course, new equipment, new teaching techniques etc.)

The course must be teached with the experienced teacher not by any body

| 3. Action Plan for Next Semester/Year | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|--|--|--|
| Actions Required Experimental section is Required | Completion Date | Person Responsible | | | |
| 4. Recommendations to Program Coordinator (if Required) | | | | | |
| (Recommendations by the instructor to the program coordinator if any proposed action to improve the course would require approval at program, department or institutional level or that might affect other courses in the program.). | | | | | |

| Name of Course Instructor: | Prof. | Y.M. MOUSTAFA |
|----------------------------|-------|---------------|
|----------------------------|-------|---------------|

| Signature: | Date Report | Completed: | |
|------------|-------------|------------|--|
| 0 | - 1 | 1 . | |

Received by Program Coordinator

Date:_____