

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

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|----------------------------|-----------------|
| Course name | Medical Physics |
| Course number | MDCN1213 |
| Faculty | |
| Department | |
| Course type | College Needs |
| Course level | 1 |
| Credit hours (theoretical) | 2 |
| Credit hours (practical) | 0 |
| Course Prerequisites | |

Course Objectives

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| 1 - Define the concepts of the measurements. |
| 2 - Define the concepts measuring length |
| 3 - Define the concepts of measuring time |
| 4 - Define the concepts of measuring weight |
| 5 - Differentiate between the distance, the position, and the displacement |
| 6 - Differentiate between the speed and the velocity |
| 7 - Differentiate between the average velocity and the instantaneous velocity |
| 8 - Define the concepts of the acceleration |
| 9 - Differentiate between the average acceleration and the instantaneous acceleration |
| 10 - Differentiate between the linear acceleration and the free fall acceleration |

Intended Learning Outcomes

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| Knowledge and Understanding | <ul style="list-style-type: none"> * Define the physical quantities, physical phenomena, and basic principles of physics related to the course. * Record the physical quantity at the lab * Express the physical laws related to the course using mathematics |
| Intellectual Skills | <ul style="list-style-type: none"> * Calculate the physical quantity related to the course * Solve physical problems * Determine some physical quantity at the lab. |
| Professional Skills | <ul style="list-style-type: none"> * Drive physics laws * Determine some physical quantity at the lab. |
| General Skill | <ul style="list-style-type: none"> * Work effectively in groups * Show responsibility for self-learning to be aware with recent developments in physics |

Course Contents

- 1 - Vectors and Scalars.
- 2 - Motion in one dimension
- 3 - Motion in two and three dimensions
- 4 - Force and motion
- 5 - Fluid dynamics
- 6 - Temperature, Heat and the first law of Thermodynamics.
- 7 - Reflection and refraction of light at plane surface
- 8 - Experimental part at the lab of general physics

Teaching and Learning Methods

- 1 - Lectures
- 2 - Laboratory/Studio
- 3 - Tutorial

Students Assessment

| <u>Assessment Method</u> | <u>TIME</u> | <u>MARKS</u> |
|----------------------------|-------------|--------------|
| Home works | | 5 |
| Scientific activities | | 5 |
| Midterm Exam (theoretical) | 1 hr | 20 |
| Lab. Reports (Practical) | | 10 |
| Final Exam (Practical) | | 10 |
| Final Exam (theoretical) | 2 hr | 60 |

Books and References

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| Course note | Halliday and Resnick and Jearal Walker, " Fundamental of Physics" 8 edition, Wiley, 2008. Physics, 4th edition , By: Halliday, Resnick, and Krane, Wiley (1992) Physics , 4th edition, By: J. Walker (2010) |
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