

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

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|----------------------------|----------------------------|
| Course name | Medical Imaging Equipments |
| Course number | AMSR3262 |
| Faculty | |
| Department | |
| Course type | Major Needs |
| Course level | 3 |
| Credit hours (theoretical) | 2 |
| Credit hours (practical) | 0 |
| Course Prerequisites | |

Course Objectives

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| 1 - to learn the basic physics of US waves, the types of US waves. |
| 2 - to learn the types of US modes, how does each one work |
| 3 - to get a good idea about the construction of us machine. |
| 4 - to learn the basic principle of CT work. |
| 5 - to learn the construction of CT machine |
| 6 - to learn the different types of detectors |
| 7 - how does computer system work |

Intended Learning Outcomes

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|-----------------------------|---|
| Knowledge and Understanding | <ul style="list-style-type: none"> * at the end of this course, the student will be able to deal with the machine. * at the end of this course, the student will be able to diagnosis the problem associated with machine or image. * at the end of this course, the student, will have a good knowledge of ct generation * at the end of this course, the student will have the benefits of using MDCT |
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Course Contents

- 1 - construction of IIT
- 2 - construction of video camera tube
- 3 - construction of video camera monitor
- 4 - factors affect of flourosopic image quality
- 5 - artifacts in flourosopic image.
- 6 - history of CT
- 7 - ct generation scanner
- 8 - ct number
- 9 - factors affect image quality
- 10 - artifacts in ct image
- 11 - CT radiation protection

Teaching and Learning Methods

- 1 - reference book
- 2 - power point for image presentation

Students Assessment

| <u>Assessment Method</u> | <u>TIME</u> | <u>MARKS</u> |
|----------------------------|---------------------------------------|--------------|
| first midterm | after one month of starting the term | 20 |
| second midterm | after two months of starting the term | 20 |
| homeworks and presentation | | 10 |
| final exam | at the end of term | 50 |

Books and References

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|-------------------|----------------------------|
| Course note | website |
| Essential books | medical imaging equipments |
| Recommended books | CT equipments and physics |