

**Alanoud M Al Talal/Pharmaceutics Department**

**Course Description**

This course is designed to introduce the basics of the atomic structure. Moreover, the production of different radionuclides are discussed, the different types of radioactive decay. The instruments for radiation detection are explained. Calculation of activity and design of a nuclear pharmacy are explained.

**Topics to be covered:**

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| Lecture 1 | Nuclear Pharmacy |
| Lecture 2 | The Atom |
| Lecture 3 | Instruments for Radiation Detection |
| Lecture 4 | Occupational Exposure/Protection of the Worker  |
| Lecture 5 | Quality Control of Radiopharmaceuticals |
| Lecture 6 | Radionuclide Production |
| Lecture 7 | Radionuclide Generators 1 |
| Lecture 8 | Radionuclide Generators2 |
| Lecture 9 | Internal Radiation Dosimetry |

**Learning** **Resources**:

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| **Title** | **Author** | **Publisher/Publication year** |
| Fundamentals of Nuclear Pharmacy | Saha, Gopal B | Springer. 6th ed., 2010 |