**BBS 3220 Application of Radioimmunoassay and Imaging techniques**

**Course description**

This course covers the instruments, reagents and methods used in radioimmunoassay and radio imaging of internal organs. It also brings out the major diagnostic and therapeutic procedures carried out using radioisotopes. They will demonstrate the diagnostic and therapeutic uses of radioisotope machines and instruments. The course involves tutorials, lectures, seminars and practical sessions.

**Course Objectives**

* To describe the principles of radioimmunoassay and imaging
* To discuss the instruments, materials and reagents used in radioimmunoassay and imaging.
* To outline the safety measures used in radioimmunoassay, imaging and radiotherapy.
* To demonstrate the ability of use of radioimmunoassay and imaging machines.

**Learning outcomes:**

At the end of the course students will be able to protect themselves and the subjects against irradiation. They will be able to use radioimmunoassay and imaging to diagnose and treat diseases, order materials and regents from the manufacturers and manage a radioimmunoassay, imaging and radiotherapy lab.

**Content outline**

Radio isotopes, radioimmunoassay, radio-imaging, radiotherapy, nuclear medicine, radioisotopes used in nuclear medicine manufacturers of radioisotopes used in nuclear medicine. Sample collection for radioimmunoassay, patient/subject preparation for imaging and radiotherapy. Safety measures while in radiotherapy, radioimmunoassay and imaging labs. Companies that manufacturer radioactive kits and reagents.

**Requirements:**

4 Weeks, 60 CH

**Mode of assessment**

Practical examination 40%

Final summative examination 60%

**Course coordinator**

Mr. Hannington Kasozi, BSc Zoology, MSc (MUK)

**Reading materials**

1. [Textbook of medical physiology](http://81.199.17.5:8000/cgi-bin/gw_42_20a/chameleon?host=81.199.17.5%2b1111%2bDEFAULT&search=KEYWORD&function=INITREQ&SourceScreen=INITREQ&sessionid=2006101717302405175&skin=default&conf=.%2fchameleon.conf&lng=en&itemu1=2000&scant1=Textbook%20of%20medical%20physiology%20%2f&scanu1=4&u1=2000&t1=@23812&pos=1&prevpos=1&), [Philadelphia: Saunders, 2000](http://81.199.17.5:8000/cgi-bin/gw_42_20a/chameleon?host=81.199.17.5%2b1111%2bDEFAULT&search=SCAN&function=INITREQ&SourceScreen=INITREQ&sessionid=2006101717302405175&skin=default&conf=.%2fchameleon.conf&lng=en&itemu1=2009&u1=2009&t1=Philadelphia%20%3a%20Saunders,%20c2000.&pos=1&prevpos=1&beginsrch=1)