PHYS20762 - Computational Physics
Project 3 – Penetration of Neutrons Through Shielding
Assessment Form

Objective: to write a Monte-Carlo simulation of neutron penetration through shielding.

Method:

- write a MATLAB/Python program to model transmission of neutrons though slabs of three materials (water, lead, graphite)
- understand the principles and accuracy of Monte-Carlo methods;
- plot the solutions graphically;
- interpret the results to give summary information, including consideration of simulation errors.

Produced material:

- report, i.e. a short scientific paper (strongly recommended to use template as for lab reports) that includes:
- introduction/discussion/conclusions sections;
- program code (properly commented);
- all relevant graphs and summary tables of results;
- Final Work: Neutron transmission through two slabs using Woodcock tracking

Student's name:

	unsatis-factory	poor	fair	good	very good	exceptional			
	<=3	4	5	6	7	>=8	mark ex 10	weight	actual mark
Presentation, organisation, English, spelling, grammar, clarity, conciseness, scientific style								20	
Code correctness and style								35	
Use of graphics								10	
Results and interpretation								10	
Initiative, originality								15	
Bonus work								10	
Total mark (ex 100)	---	---	---	---	---	---	---	100	

Comments:

Signed: Date: