

Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to teach the program learning outcomes. Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale. Levels: I = Introduction P = Proficient A = Advanced

Faculty: Faculty of Applied Science (04)

Department: Department of Biology (401)

Program: BSc Microbiology (40101)

Edition: 37

	Course Offerings NQF Learning Domains and Learning Outcomes	4011012	4012041	4012401	4012412	4012422	4012432	4012442	4012312	4013421	4013321	4013431	4013441	4013452
		1.0 Knowledge												
1.1	To know the ethics of microbiology and related areas of science	x	I	I	I	I	I	I	I	P	x	P	P	P
1.2	To design methods for analyzing and solving problems in the field of microbiology and its applications	x	x	I	I	I	I	I	I	P	x	P	P	P
1.3	To think critically in evaluating microbiological information	I	I	I	I	I	I	I	I	P	P	P	P	P
1.4	To implement projects related to his study in microbiology program.	x	x	x	x	x	x	x	X	P	P	P	P	P
2.0 Cognitive Skills														
2.1	To understand the importance of scientific research and look at the recent advances in microbiological sciences	I	I	I	I	I	I	I	I	P	P	P	P	P
2.2	To prepare, explore, identify, analyze and evaluate various scientific problems and solutions.	I	I	I	I	I	I	I	I	P	P	P	P	P
2.3	To compare and contrast the methods of scientific research and the ability to design and evaluation of scientific research	x	x	x	x	x	x	x	x	P	P	P	P	P
3.0 Interpersonal Skills & Responsibility														
3.1	To involve working independently and with multi-disciplinary teams.	x	x	I	I	I	I	I	I	P	P	P	P	P
3.2	To cooperate in providing scientific and technical services in various fields for all sectors	x	x	I	I	I	I	I	I	P	P	P	P	P
4.0 Communication, Information Technology, Numerical														
4.1	To use the computer to prepare written reports, evaluate scientific data and calculations	I	I	I	I	I	I	I	I	P	P	P	P	P
4.2	To use the internet to conduct search for published articles and books	I	I	I	I	I	I	I	I	P	P	P	P	P
5.0 Psychomotor														
5.1	To perform basic and advanced microbiological laboratory techniques	I	x	I	x	I	I	I	I	P	P	P	P	P
5.2	To be able to operate laboratory instruments	I	x	I	x	I	I	I	I	P	P	P	P	P

	Course Offerings	4013462	4013332	4013472	4013342	4014401	4014411	4014421	4014431	4014441	4014451	4014462	4014472	4014482
	NQF Learning Domains and Learning Outcomes													
1.0	Knowledge													
1.1	To know the ethics of microbiology and related areas of science	P	P	P	P	A	A	A	A	A	A	A	A	A
1.2	To design methods for analyzing and solving problems in the field of microbiology and its applications	P	P	P	P	A	A	A	A	A	A	A	A	A
1.3	To think critically in evaluating microbiological information	P	P	P	P	A	A	A	A	A	A	A	A	A
1.4	To implement projects related to his study in microbiology program.	P	P	P	P	A	A	A	A	A	A	A	A	A
2.0	Cognitive Skills													
2.1	To understand the importance of scientific research and look at the recent advances in microbiological sciences	P	P	P	P	A	A	A	A	A	A	A	A	A
2.2	To prepare, explore, identify, analyze and evaluate various scientific problems and solutions.	P	P	P	P	A	A	A	A	A	A	A	A	A
2.3	To compare and contrast the methods of scientific research and the ability to design and evaluation of scientific research	P	P	P	P	A	A	A	A	A	A	A	A	A
3.0	Interpersonal Skills & Responsibility													
3.1	To involve working independently and with multi-disciplinary teams.	P	P	P	P	A	A	A	A	A	x	x	A	X
3.2	To cooperate in providing scientific and technical services in various fields for all sectors	P	P	P	P	A	A	A	A	A	x	x	A	x
4.0	Communication, Information Technology, Numerical													
4.1	To use the computer to prepare written reports, evaluate scientific data and calculations	P	P	P	P	A	A	A	A	A	A	A	A	A
4.2	To use the internet to conduct search for published articles and books	P	P	P	P	A	A	A	A	A	A	A	A	A
5.0	Psychomotor													
5.1	To perform basic and advanced microbiological laboratory techniques	P	P	P	P	A	A	A	A	A	x	x	A	x
5.2	To be able to operate laboratory instruments	P	P	P	P	A	A	A	A	A	x	x	A	x

