RUBRIC ASSESSMENT PLO OF MATHEMATICS EDUCATION STUDY PROGRAM

KKO of	Performance Criteria	Excellent (A and A-)	Good (B+, B, B-)	Satisfy (C+, C, C-)	Fail (D, E)
PLO		(Range 80-100)	(Range 65-79)	(Range 50-64)	(Value <50)
P1	Graduates can analyze the	Students can state,	Students can state,	Students can state,	Students can state,
	formal structure of simple	interpret, apply and analyze	interpret, apply and	interpret, apply and	interpret, apply and
	math problems in the areas of	mathematical problems	analyze mathematical	analyze	analyze mathematical
	basic mathematics and	with an error rate of <20%	problems with an error	mathematical	problems with an error
	advanced mathematics to		rate of <35%	problems with an	rate of> 50%
	support the professional			error rate of <50%	
	competence of teachers and				
	further studies.				
P2	Graduates are able to design	Students can state and	Students can state and	Students can state	Students can state and
	innovative learning based on	apply concepts, analyze and	apply concepts, analyze	and apply concepts,	apply concepts, analyze
	the concept of mathematics	evaluate problems related	and evaluate problems	analyze and	and evaluate problems
	education and learning	to education & learning and	related to education &	evaluate problems	related to education &
		design a mathematics	learning and design a	related to education	learning and design a
		lesson with an error rate of	mathematics lesson	& learning and	mathematics lesson with
		<20%	with an error rate of	design a	an error rate of> 50%
			<35%	mathematics lesson	

				with an error rate of	
				<50%	
P3	Graduates are able to design	Students can state and	Students can state and	Students can state	Students can state and
	mathematics learning media,	apply concepts about	apply concepts about	and apply concepts	apply concepts about
	both manipulative learning	media, analyze and	media, analyze and	about media,	media, analyze and
	media and ICT-based learning	evaluate media-related	evaluate media-related	analyze and	evaluate media-related
	media	problems and design	problems and design	evaluate	problems and design
		manipulative media and ICT	manipulative media	media-related	manipulative media and
		with an error rate of <20%	and ICT with an error	problems and	ICT with an error rate of>
			rate of <35%	design manipulative	50%
				media and ICT with	
				an error rate of	
				<50%	
P4	Graduates are able to design	Students can state and	Students can state and	Students can state	Students can state and
	research in the field of	apply concepts about	apply concepts about	and apply concepts	apply concepts about
	mathematics education	research, analyze and	research, analyze and	about research,	research, analyze and
		evaluate problems related	evaluate problems	analyze and	evaluate problems
		to educational research and	related to educational	evaluate problems	related to educational
		design a mathematics	research and design a	related to	research and design a
			mathematics education	educational	mathematics education

		education research with an	research with an error	research and design	research with an error
		error rate of <20%	rate of <35%	a mathematics	rate of> 50%
				education research	
				with an error rate of	
				<50%	
P5	Graduates are able to use	Students can mention,	Students can mention,	Students can	Students can mention,
	general knowledge concepts	explain and apply general	explain and apply	mention, explain	explain and apply
	to support professional	knowledge concepts with	general knowledge	and apply general	general knowledge
	teacher competencies	an error rate of <20%	concepts with an error	knowledge concepts	concepts with an error
			rate of <35%	with an error rate of	rate of> 50%
				<50%	
KU 1	Graduates are able to produce	Graduates are able to	Students can choose,	Students can	Students can choose, use
	innovative work, in the fields	produce innovative work, in	use and imitate the	choose, use and	and imitate the making
	of education and	the field of education and	making of a work then	imitate the making	of a work then construct
	entrepreneurship	entrepreneurship Students	construct ideas and	of a work then	ideas and materials,
		can choose, use and imitate	materials, adapt and	construct ideas and	adapt and revise a work
		the creation of a work then	revise a work so that	materials, adapt and	so that innovative work
		construct ideas and	innovative work will be	revise a work so that	will be created with an
		materials, adapt and revise	created with an	innovative work will	appropriate level of use
		a work so that innovative	appropriate level of use	be created with an	KU1 is on the percentage

		work will be created with	KU1 is on the	appropriate level of	KU1 <50%
		an appropriate level of use	percentage	use KU1 is on the	
		KU1 is at a percentage	65% ≤ KU1 <80%	percentage	
		80% ≤ KU1 ≤ 100%		50% ≤ KU1 <65%	
KU 2	Graduates are able to	Students can describe,	Students can describe,	Students can	Students can describe,
	demonstrate oral and written	explain, respond and	explain, respond and	describe, explain,	explain, respond and
	communication skills	construct an idea orally & in	construct an idea orally	respond and	construct an idea orally
		writing with an error rate	& in writing with an	construct an idea	& in writing with an
		<20%	error rate of <35%	orally & in writing	error rate of> 50%
				with an error rate of	
				<50%	
KU 3	Graduates are able to	Students can identify,	Students can identify,	Students can	Students can identify,
	demonstrate skills / skills using	process, follow procedures	process, follow	identify, process,	process, follow
	ІСТ	and organize data using ICT	procedures and	follow procedures	procedures and organize
		with an error rate <20%	organize data using ICT	and organize data	data using ICT with an
			with an error rate <35%	using ICT with an	error rate
				error rate <50%	
КК	Graduates can carry out	Students can choose,	Students can choose,	Students can	Students can choose,
	innovative mathematics	process, follow	process, follow	choose, process,	process, follow
	learning	manufacturing procedures,	manufacturing	follow	manufacturing

		organize learning devices,	procedures, organize	manufacturing	procedures, organize
		adapt and carry out	learning devices, adapt	procedures,	learning devices, adapt
		mathematics learning with	and carry out	organize learning	and carry out
		the innovative percentage	mathematics learning	devices, adapt and	mathematics learning
		level at	with the innovative	carry out	with the innovative
		80% ≤ KK ≤ 100%	percentage level at	mathematics	percentage level at
			65% ≤ KK <80%	learning with the	S2 <50%
				innovative	
				percentage level at	
				50% ≤ KK <65%	
A1	Graduates are able to show a	Students are able to meet /	Students are able to	Students are able to	Students are able to
	responsible attitude in their	show the PLO 10 (S1)	meet / show the PLO	meet / show the	meet / show the PLO 10
	own work and can be given	indicator with a percentage	10 (S1) indicator with a	PLO 10 (S1) indicator	(S1) indicator with a
	responsibility for the	80% ≤ S1 ≤ 100%	percentage	with a percentage	percentage
	achievement of group work		65% ≤ S1 <80%	50% ≤ S1 <65%	S1 <50%
					25% ≤ <i>S</i> 1 < 37,5%
A2	Graduates are able to	Students are able to meet /	Students are able to	Students are able to	Students are able to
	demonstrate good social	show the PLO 11 (S2)	meet / show the PLO	meet / show the	meet / show the PLO 11
		indicator with a percentage			

ethics in the workplace and	80% ≤ S2 ≤ 100%	11 (S2) indicator with a	PLO 11 (S2) indicator	(S2) indicator with a
socially		percentage	with a percentage	percentage
		65% ≤ S2 <80%	50% ≤ S2 <65%	S2 <50%
		62,5% ≤ <i>S</i> 2 < 87,5%	37,5% ≤ <i>S</i> 2 < 62,5%	25% ≤ <i>S</i> 2 < 37,5%