MODULE PORTOFOLIO

EVEN SEMESTER JANUARY-JUNY 2019/2020

MODULE NAME	Advanced C	alculus	LECTURER
MODULE CODE	MAT1.61.23	301	
CLASS	2018		
SEMESTER	II		
DATE	12 July 2020)	Khairani, S.Pd, M.Pd
COURSE LEARNING	Program Le	earning Outcome (PLO)	
OUTCOMES	PLO 1	: Able to recognize the formal structure of simple mathematical problems in basics	s and advanced mathematics to
		support the professional competence of teachers and further studies.	
	PLO 10	: Able to show a responsible attitude in their own work and can be given responsi	bility for the achievement of
		group works	
	Course Lea	rning Outcome (CO)	
	CO 1	: Able to explain the concept of two and three dimension coordinates, multivariable	le function, partial derivatives,
		multiple integrals, sequences and series	
	CO 2	: Able to apply the concept of two and three dimension coordinates, multivariable	function, partial derivatives,
		multiple integrals, sequences and series	
	CO 3	: Able to analyse the problems that connect to the concept of two and three dimension	sion coordinates, multivariable
		function, partial derivatives, multiple integrals, sequences and series	
	CO 4	: Showing responsibility attitude towards works by self and by team works.	

	Correlatio	on Betweer	n PLO and	d CO								
		PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11
	CO 1											
	CO 2											
	CO 3											
	CO 4											
	Lectures, C	Broup Disc	ussions and	d Assignme	ents							
STRATEGIES												
ASSESSMENT	The assess	The assessment carried out during the lecture includes the following three components.										
	(1) Assigni	(1) Assignment, (2) Midterm Exam (UTS), (3) Final Exam (UAS) and Affective Assessment										
	1 Aggigan											
	1. Assignment											
	or Assignr	nents wer	e given as	s exercise	before U	TS and b	efore UAS	6				
	✓ Assignr	nents are g	iven as ind	ividual tasl	k and it is s	ubmitted in	n limited ti	me				
	\checkmark The assi	ignment w	as carried o	out to see th	ne achiever	nents of the	e PLO and	CO which	are in acco	rdance wit	h the chara	cteristics
	of advance	d calculus	module									
	2. Midtern	n Exam (U	J TS)									
	🖌 UTS wa	as held at tl	ne 9th meet	ting								
	✓ UTS wa	as carried o	out in the cl	assroom w	ith an impl	ementation	time of 12	20 minutes	according	to the mod	ule schedul	e

✓ The UTS was carried out to see the achievements of the PLO and CLO which are in accordance with the characteristics of the advanced calculus module

3. Final Exam (UAS)

✓ UAS was held at the 18th meeting

 \checkmark UAS was carried out in the classroom with an implementation time of 120 minutes which follows the UAS implementation schedule of the department

✓ The UAS was carried out to see the achievements of the PLO and CLO which are in accordance with the characteristics of the advanced calculus module.

4. Affective Assessment

✓ Affective assessment is held in every meeting by observing students' attitude in classroom and daily interaction at campus.

 \checkmark The assessment based on observation sheet and it was given score by affective rubric assessment.

	PLO 1	PLO 10
	UTS (1,2)	
CO 1	UAS (2,8)	
	Assignment,	
CO 2	UTS (3,5,7)	
02	UAS (4,6,7)	
	Assignment,	
	UTS (4,6,8)	
CO 3	UAS (1,3,5)	
	Assignment,	
CO 4		Affective Assessment

Assessment Plan

		0	•						
	Weight	Weight of Test Ability							
	Value		PLO 1		PLO 10				
		CO 1	CO 2	CO 3	CO 4				
Midterm Exam	0.38	0.38	0.38	0.38	0.38				
Final Exam	0.38	0.38	0.38	0.38	0.38				
Assignment	0.38	0.38	0.38	0.38	0.38				
Activities	0.38	0.38	0.38	0.38	0.38				

Weight of Test Ability

The Calculation of PLO's Weight

Total of PLO's Weight						
	PLO 1					
CO 1	CO 2	CO 3	CO 4	CO 5		
0.08	0.11	0.11	0.00	0.08		
0.09	0.13	0.13	0.00	0.09		
0.06	0.06	0.08	0.00	0.06		
			0.15			
0.22	0.30	0.32	0.15	0.22		

LEARNING	The Calculation PLO of Each Students						
OUTCOMES	Students		PL	01		PLO 10	
		CO 1	CO 2	CO 3	Average	Average	
	Dilla Wahyuni	49.75	51.01	50.15	50.30	70.00	
	Faul Zannah	58.78	58.75	58.77	58.77	100.00	
	Yuanda Elsa Zahara	56.66	58.11	57.12	57.30	100.00	
	Muhammad Aflahuddin	53.63	54.28	53.83	53.92	100.00	
	Gita Fitri Muzella	49.02	50.21	49.39	49.54	100.00	
	Mutafaroh	44.47	45.70	44.86	45.01	100.00	
	Yulia Rahma Fitri	40.31	42.12	40.88	41.11	100.00	
	Nurija Tomia	49.58	51.32	50.13	50.34	100.00	
	Dila Novita	58.39	59.91	58.87	59.06	100.00	
	Egi Safitri	56.22	53.78	55.46	55.15	100.00	
	Resa Perlia Anjalina Sirait	55.03	53.85	54.66	54.52	100.00	
	Hafidah Dinatul Latifah	63.70	62.98	63.47	63.38	100.00	
	Ayu Nadia Fahmi	49.75	49.04	49.53	49.44	100.00	
	Zahid Hamidi	65.29	64.43	65.02	64.92	100.00	

Ressy Fadhila Lerisma	73.76	71.17	72.95	72.63	100.00
Rafika Ulfa Hasanah	62.10	61.02	61.76	61.63	100.00
Dwita Elfri Mayani	i 60.01	61.10	60.35	60.49	100.00
Nisa Amelia Fazqurni	46.49	44.47	45.86	45.61	100.00
Sheila Octaviani	45.00	44.51	44.85	44.78	100.00
Fitriyatunnisa	56.28	57.30	56.60	56.73	100.00
Faiz Muhammad Ariq Risky	74.28	73.32	73.98	73.86	100.00
M. Nafis Arnof	66.55	67.49	66.85	66.96	100.00
Salsabila Farah Aini	61.90	62.48	62.08	62.15	100.00
				56.42	98.70
	The Predica	te of PLO fo	r Each Stud	lents	
	Studen	ts	PLO 1	PLO 10	
Dilla	a Wahyuni		S	G	-
Faul	Zannah		S	Е	1

Yuanda Elsa Zahara

Muhammad Aflahuddin

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Gita Fitri MuzellaFEMutafarohFEYulia Rahma FitriFEYulia Rahma FitriFENurija TomiaSEDila NovitaSEEgi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEZahid HamidiFERessy Fadhila LerismaGE						
MutafarohFEYulia Rahma FitriFENurija TomiaSEDila NovitaSEEgi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGE		Gita Fitri Muzella	F	Е		
Yulia Rahma FitriFENurija TomiaSEDila NovitaSEEgi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGE		Mutafaroh	F	Е		
Nurija TomiaSEDila NovitaSEEgi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEDafila Lifa Lifa Lifa Lifa Lifa Lifa Lifa Lif		Yulia Rahma Fitri	F	Е		
Dila NovitaSEEgi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEBafika Lifa HagangahSE		Nurija Tomia	S	Е		
Egi SafitriSEResa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEDafika Ulfa HacarahSE		Dila Novita	S	Е		
Resa Perlia Anjalina SiraitSEHafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEBafika Lilfa UasanahSE		Egi Safitri	S	Е		
Hafidah Dinatul LatifahSEAyu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEDafika Lifa HagarahSE		Resa Perlia Anjalina Sirait	S	Е		
Ayu Nadia FahmiFEZahid HamidiSERessy Fadhila LerismaGEDafika Ulfa HasanahSE		Hafidah Dinatul Latifah	S	Е		
Zahid Hamidi S E Ressy Fadhila Lerisma G E		Ayu Nadia Fahmi	F	Е		
Ressy Fadhila Lerisma G E Befike Llife Lesensh S E		Zahid Hamidi	S	Е		
Defile Ulfe Heseneh		Ressy Fadhila Lerisma	G	Е		
Kalika Ulia Hasanan 5 E		Rafika Ulfa Hasanah	S	Е		
Dwita Elfri MayaniSE		Dwita Elfri Mayani	S	Е		
Nisa Amelia FazqurniFE		Nisa Amelia Fazqurni	F	Е		
Sheila OctavianiFE		Sheila Octaviani	F	Е		
FitriyatunnisaSE		Fitriyatunnisa	S	Е		
Faiz Muhammad Ariq RiskyGE		Faiz Muhammad Ariq Risky	G	Е		
M. Nafis Arnof G E		M. Nafis Arnof	G	Е		
Salsabila Farah AiniSE		Salsabila Farah Aini	S	Е		
		<u> </u>			1	

LEARNING	PLO Asses	ssment Rubric						
OUTCOMES	PLO	Description	Ex	cellent		Good	Satisfy	Fail
ANALYSIS	1	Graduates can analyze the formal structure of simple math problems in the areas of basic mathematics and advanced mathematics to support the professional competence of teachers and further studies.	Students interpre analyze mathem problem error rat	s can state, t, apply and atical as with an e of <20%	Stu inte ana ma pro err	udents can state, erpret, apply and alyze athematical oblems with an or rate of <35%	Students can state, interpret, apply and analyze mathematical problems with an error rate of <50%	Students can state, interpret, apply and analyze mathematical problems with an error rate of> 50%
	10	Able to show a responsible attitude in their own work and can be given responsibility for the achievement of group works (S1)	Students meet / si PLO 10 indicato percenta $80\% \le 5$	s are able to how the (S1) r with a age $S1 \le 100\%$	Stu me PL ind per 65 ^o	adents are able to eet / show the O 10 (S1) licator with a rcentage $\% \le S1 < 80\%$	Students are able to meet / show the PLO 10 (S1) indicator with a percentage $50\% \le S1 < 65\%$	Students are able to meet / show the PLO 10 (S1) indicator with a percentage S1 <50%
				Classical Va	alue	e of PLO		
				Classi	cal V	/alue of PLO]	
				PLO 1		PLO 10		
			Max	73.86		100.00		
			Average	56.42		98.70		
			Min	41.11		70.00		
				Achievem	nent	Number of PLO	_	
			E		0	22		
			G		3	1		
			S		14	0		
			F		6	0		



RECOMMENDATIO	No recommendation
N FOR INSTITUTION	



UNIVERSITAS NEGERI PADANG FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM JURUSAN MATEMATIKA JI.Prof. Dr. Hamka Air Tawar Padang, 25131, Telp. (0751) 444648.

MIDTERM TEST SEMESTER JANUARY-JUNE 2020

Course	: Advanced Calculus
Department	: Mathematics Education
Time	: 120 minute
Lecturer	: Team

Directions:

- a. Pray before starting the test
- b. Answer the following questions with detailed answers on the paper provided
- c. Avoid cheating in exams, because cheating is a sin.

Questions:

- 1. Ubahlah persamaan polar berikut menjadi persamaan kartesius dan gambarkanlah grafik dari persamaan kartesiusnya !(CO 1)
 - a) $r^2 = 4r\sin\theta$
 - b) $r = \csc \theta e^{r \cos \theta}$

2. Ubahlah : (CO 1)

a) Pers. kartesius berikut menjadi pers. koord. tabung

$$x^2 - x + y^2 + z^2 = 1$$

- b) Pers. koord. bola berikut menjadi pers. kartesius $\rho^2 (\sin^2 \varphi \sin^2 \theta + \cos^2 \varphi) = 9$
- 3. Gambarkanlah peta kontur dari fungsi berikut berdasarkan nilai *c* yang diberikan !(CO 2) f(x, y) = xy, dengan c = -9, -4, -1, 0, 1, 4, 9
- 4. Selidikilah, apakah fungsi berikut memiliki nilai limit atau tidak !Jika iya, definisikanlah fungsi tersebut agar kontinu di mana-mana!(CO 3)

a)
$$\lim_{(x,y)\to(1,-1)} \frac{xy+1}{x^2 - y^2}$$

b)
$$\lim_{(x,y)\to(0,0)} \frac{3x^2y}{x^2 + y^2}$$

5. Tentukanlah nilai dari semua turunan pertama fungsi berikut berdasarkan nilai variabel yang tersedia !(CO 2)

- a) $w = z \sin xy$, x = t, $y = \ln t$, $z = e^{t-1}$, t = 1b) $z^3 - xy + yz + y^3 - 2 = 0$, (1,1,1)
- 6. Tentukanlah nilai ekstrem dari fungsi:(CO 3)

$$f(x, y) = x^2 - xy + y^2 + 1$$

yang terletak di atas bidang berbentuk segitiga pada kuadran pertama yang dibatasi oleh garis x = 0, y = 4, dan y = x

7. Tentukanlah :(CO 2)

a)
$$\int_{0}^{3} \int_{-2}^{0} (x^{2}y - 2xy) dy dx$$

b)
$$\int_{-1}^{2} \int_{1}^{2} x \ln y \, dy dx$$

8. Tentukanlah volume dari ruang tertutup yang bagian atasnya dibatasi oleh tabung $z = x^2$, bagian bawahnya dibatasi oleh parabola $y = 2 - x^2$ dan garis y = x pada bidang-xy.(CO 3)

*****Good Luck****



UNIVERSITAS NEGERI PADANG FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM JURUSAN MATEMATIKA

Jl.Prof. Dr. Hamka Air Tawar Padang, 25131, Telp. (0751) 444648.

FINAL EXAMINATION SEMESTER JANUARY-JUNE 2020

Course	: Advanced Calculus
Department	: Mathematics Education
Time	: 120 minute
Lecturer	: Team

Directions:

- a. Pray before starting the test
- b. Answer the following questions with detailed answers on the paper provided
- c. Avoid cheating in exams, because cheating is a sin.

Questions:

- 1. Tentukanlah volume dari benda solid yang berada di bawah paraboloid $z = 18 2x^2 2y^2$ dan di atas bidang xy. (CO 3)
- 2. Tentukan apakah barisan dan deret di bawah ini adalah konvergen atau divergen !(CO 1)

c)
$$a_n = \sqrt[n]{3^{2n+1}}$$

d) $\sum_{n=1}^{\infty} \frac{2}{1+e^n}$

- 3. Tentukanlah massa dan pusat massa dari lamina atas daerah D yang terbentukdari titik (0,0), (2,1) dan (0,3) dengan $\delta(x, y) = x + y$ (CO 3)
- 4. Tentukan apakah deret di bawah ini konvergen mutlak, konvergen bersyarat atau divergen! (CO 2)

$$\sum_{n=1}^{\infty} (-1)^n \, \frac{(n\,!)^2 \, 3^n}{(2n+1)!}$$

5. Tentukanlah volume atasdaerah pada oktan pertama yang dibatasi oleh bidang koordinat, bidang x + z = 1 dan y + 2z = 2 (CO 3)



- 6. Tentukanlah jari-jari kekonvergenan dan interval kekonvergenan dari deret di bawah ini: $\sum_{n=1}^{\infty} (\ln n) x^n$ (CO 2)
- 7. Ubahlah integral kartesius berikut menjadi integral dalam koordinat tabung dan tentukanlah hasil integralnya !(CO 2) $\int_{0}^{1} \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} \int_{-(x^2+y^2)}^{(x^2+y^2)} 21xy^2 dz dy dx$
- 8. Tentukanlah deret Taylor dari fungsi berikut saat x = a

 $f(x) = 2^x, a = 1$ (CO 1)

*****Good Luck****

AFECTIVE/ATTITUDE ASSESSMENT FORMAT

Section	:
Course Name	:
Course Code	:
Lecturer	:
Students	:
NIM	:

Instructions :

a) This assessment is carried out based on observations / observations of students carried out while attending lectures in 1 semester .

b) The assessment is carried out by giving a checklist ($\sqrt{}$) in the appropriate column.

No	Attitude Assessment Indicators	4	3	2	1	0	Score
•							
1.	Students follow the instructions given by the lecturer						
2.	Students participate in class discussions						
3.	Students complete each assignment given by the lecturer						
4.	Students maintain attendance rates above 80% in 1 semester						
5.	Students demonstrate punctuality when attending lectures						
6.	Students demonstrate punctuality when submitting each personal assignment						
7.	Students follow the instructions given in group work						
8.	Students participate in group discussions						
9.	Students fulfill / complete the assignments / responsibilities given by the group						
10.	Students organize tasks for each group member (leadership)						
11. Students demonstrate punctuality when collecting each group assignment							
	SCORE TOTAL						
	AVERAGE SCORE						

AFECTIVE ASSESSMENT ANALYSIS

Assessment of the Affective Value / Attitude of Subjects

 $AffectiveValue = \frac{ScoreTotal \ x \ 100}{44}$

Percentage of Achievement PLO 10 (Affective / Attitude) (symbolized by S1)

$$S1 = \frac{ScoreTotal}{44} x100\%$$

Conclusion on the PLO 10 Achievement Assessment (affective) can use the interval from the Mean Affective Score (RS1) or the interval from the percentage of achievement of PLO 10 (S1)

Range/Interval	Percentage	Conclusion
$0 \le RS1 < 1,5$	$0\% \le S1 < 37,5\%$	Fail
$1,5 \le RS1 < 2,5$	$37,5\% \le S1 < 62,,5\%$	Satisfy
$2,5 \le RS1 < 3,5$	$62,5\% \le S1 < 87,5\%$	Good
$3,5 \le RS1 \le 4$	$87,5\% \le S1 \le 100\%$	Excellent

RUBRIC TO DETERMINE AFECTIVE ASSESSMENT SCORES

No.	Affective	Score 4	Score 3	Score 2	Score 1	Score 0
	Indicators					
1.	Students follow the	Students follow	Students follow	Students follow the	Students follow the	Students never follow
1	instructions given	instructions given by the	instructions given by			

	by the lecturer	lecturer, both in class	lecturer, both in class	lecturer, both in class	lecturer, but only	lecturers, both inside and
		and outside the	and outside the	and outside the class, but	instructions are given in	outside the classroom.
		classroom with a	classroom with a fairly	the response is carried	the classroom.	
		relatively fast response	fast response	out after the instructions	Instructions outside the	
		(direct instruction is	(instructions are carried	are reminded again to	classroom, are not	
		carried out)	out but with a time lag)	the students.	carried out.	
2.	Students	Students participate in	Students participate in	Students participate in	Students participate in	Students do not
	participate in	class discussions, by	class discussions, by	class discussions, by	class discussions, by	participate in class
	class discussions	showing 4 attitudes:	showing 3 attitudes	showing 2 attitudes:	showing 1 attitude:	discussions, by not
		1) Pay attention to class	from:	1) Pay close attention to	1) Pay close attention to	showing these four
		discussions well	1) Pay attention to class	class discussions	class discussions	attitudes.
		2) Participate in	discussions well	2) Participate in	2) Participate in	
		submitting	2) Participate in	submitting	submitting	
		suggestions /	submitting	suggestions /	suggestions /	
		comments / ideas	suggestions /	comments / ideas	comments / ideas	
		3) Do not do other	comments / ideas	3) Do not do other	3) Do not do other	
		things that have	3) Do not do other	things that have	things that have	
		nothing to do with	things that have	nothing to do with	nothing to do with	
		the discussion	nothing to do with	the discussion	the discussion	
		4) Participate in	the discussion	4) Participate in	4) Participate in	
		maintaining class	4) Participate in	maintaining class	maintaining class	
		conditions so that it	maintaining class	conditions so that it	conditions so that it	
		is conducive to	conditions so that it	is conducive to	is conducive to	
		discussion	is conducive to	discussion	discussion	

			discussion			
3.	Students complete	Students complete each	Students complete each	Students complete each	Students complete each	Students complete each
	each assignment	assignment given by the	assignment given by the			
	given by the	lecturer with a 100%	lecturer with the	lecturer with the	lecturer with the	lecturer with a
	lecturer	percentage of complete	percentage of	percentage of	percentage of	percentage of
		files / assignments	completeness of files /	completeness of files /	completeness of files /	completeness of files /
			assignments> 90%	assignments> 80%	assignments> 70%	assignments <70%
4.	Students maintain	Students maintain class	Students maintain class	Students maintain class	Students maintain class	Students maintain class
	attendance rates	attendance rates for 1	attendance rates for 1			
	above 80% in 1	semester with a	semester with a	semester with a	semester with a	semester with a
	semester	percentage of 100%	percentage of> 90%	percentage of> 85%	percentage of> 80%	percentage of <80%
5.	Students	Students have been	Students attend class at	Students attend class	Students attend class	Students are present in
	demonstrate	present in class before	the same time as the	when the lecturer is	when the lecturer has	class when the lecturer
	punctuality when	the lecturer arrives.	lecturer.	already in class but is	stood in front of the class	has lectured in front of
	attending lectures			preparing for college.	but has not delivered a	the class.
					lecture.	
6.	Students	The percentage of	The percentage of	The percentage of	The percentage of	The percentage of
	demonstratepunct	personal assignments	personal assignments	personal assignments	personal assignments	personal assignments
	uality when	submitted by students	submitted by students	submitted by students	submitted by students	submitted by students
	submitting each	before the deadline is	before the deadline is>	before the deadline is>	before the deadline is>	before the deadline is
	personal	100%.	90%.	80%.	70%.	<70%.
	assignment					
7.	Students follow the	Students follow	Students follow the	Students follow the	Students follow the	Students never follow
	instructions given	instructions given during	instructions given during	instructions given during	instructions given during	the instructions given

	in group work	group work, both inside	group work, both in class	group work, both in class	group work, but only	during group work, both
		and outside the	and outside the	and outside the	instructions are given in	inside and outside the
		classroom with a	classroom with a fairly	classroom, but the	class. Instructions	classroom.
		relatively fast response	fast response	response is carried out	outside the classroom,	
		(direct instructions are	(instructions are carried	after the instructions are	are not carried out.	
		carried out)	out but with time lag)	reminded again to the		
				students.		
8.	Students	Students participate in	Students participate in	Students participate in	Students participate in	Students do not
	participate in	group discussions, by	group discussions, by	group discussions, by	group discussions, by	participate in group
	group discussions	showing 4 attitudes:	showing 3 attitudes:	showing 2 attitudes:	showing 1 attitude:	discussions, by not
		1) Pay close attention to	1) Pay close attention to	1) Pay close attention to	1) Pay close attention to	showing these four
		group discussions	group discussions	group discussions	group discussions	attitudes.
		2) Participate in	2) Participate in	2) Participate in	2) Participate in	
		submitting	submitting	submitting	submitting	
		suggestions /	suggestions /	suggestions /	suggestions /	
		comments / ideas	comments / ideas	comments / ideas	comments / ideas	
		3) Do not do other	3) Do not do other	3) Do not do other	3) Do not do other	
		things that have	things that have	things that have	things that have	
		nothing to do with	nothing to do with	nothing to do with	nothing to do with	
		the discussion	the discussion	the discussion	the discussion	
		4) Participate in work	4) Participate in work	4) Participate in work	4) Participate in work	
		according to their	according to their	according to their	according to their	
		role in the group	role in the group	role in the group	role in the group	
9.	Students fulfill /	Tasks / responsibilities	The tasks /	Tasks / responsibilities	Tasks / responsibilities	Students do not do

	complete the	given by the group can	responsibilities given by	given by the group, can	given by the group	assignments that are the
	assignments /	be completed properly	the group cannot be	be completed properly	cannot be completed	responsibility of the
	responsibilities	and help in completing	completed properly but	but do not contribute to	properly and do not	group.
	given by the group	the tasks /	they help to complete the	completing the tasks /	contribute to completing	
		responsibilities of other	tasks / responsibilities of	responsibilities of other	the tasks /	
		members of the group.	other members of the	members of the group.	responsibilities of other	
			group.		members.	
10.	Students organize	Students show roles such	Students show a role like	Students show a role as	Students show a role as	Students do not show a
	tasks for each	as group leaders, who	group leaders, but have	members who actively	members who are less	role like chairman and do
	group member	have the initiative to act,	not been able to fulfill all	provide responses and	active in providing	not show a role as
	(leadership)	lead discussions, divide	of the following	ideas in discussions and	responses and ideas in	members who contribute
		roles / tasks among	attitudes, namely those	contribute to the	discussions but	to group work
		members & maintain	who have the initiative	completion of group	contributing to the	
		group cohesiveness	to act, lead discussions,	assignments.	completion of group	
			divide roles / tasks		assignments.	
			among members &			
			maintain group			
			cohesiveness			
11.	Students	The percentage of group	The percentage of group	The percentage of group	The percentage of group	The percentage of group
	demonstrate	assignments submitted	assignments submitted	assignments collected by	assignments collected by	assignments collected by
	punctuality when	by students before the	by students before the	students before the	students before the	students before the
	collecting each	deadline is 100%.	deadline is> 90%.	deadline is> 80%.	deadline is> 70%.	deadline is <70%.
	group assignment					