

Rencana Pembelajaran Semester / Learning Plan

	INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) FAKULTAS DEPARTEMEN					Kode Dokumen
	RENCANA PEMBELAJARAN SEMESTER					
MATA KULIAH (MK)	KODE	Rumpun MK	BOBOT (sks)		SEMESTER	Tgl Penyusunan
Matematika 1 / Mathematics 1	KM 18 4 101		3		1	
OTORISASI / PENGESAHAN	Dosen Pengembang RPS		Koordinator RMK		Ka PRODI	
			Tanda tangan		Tanda tangan	
Capaian Pembelajaran	CPL-PRODI yang dibebankan pada MK					
	CPL-1 ILO-1	[C2] Mahasiswa mampu mengidentifikasi dan menjelaskan pondasi matematika yang meliputi murni, terapan dan dasar-dasar komputasi <i>[C2] Students are able to identify and explain foundations of mathematics that include pure, applied, and the basic of computing</i>				
	CPL-2 ILO-2	[C3] Mahasiswa mampu menyelesaikan permasalahan sederhana dan praktis dengan mengaplikasikan pernyataan matematika dasar, metode dan komputasi <i>[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations</i>				
	Capaian Pembelajaran Mata Kuliah (CPMK) – Bila CP MK sebagai kemampuan pada tiap tahap pembelajaran CP MK = Sub CP MK					
	CPMK-1	Mahasiswa mampu menerapkan konsep-konsep dasar matematika yang terkait matriks dan determinan. <i>Students are able to apply basic mathematical concepts related to matrices and determinants.</i>				
	CPMK-2	Mahasiswa mampu menerapkan persamaan atau pertidaksamaan serta grafik fungsi Persamaan Linear. <i>Students are able to apply equalities or inequalities as well as graphs of Linear Equation functions.</i>				
	CPMK-3	Mahasiswa mampu mengaplikasikannya bentuk peubah kompleks dalam bentuk polar serta menarik akar-akar persamaannya. <i>Students are able to apply complex variable forms in polar form and get the roots of the equation.</i>				

	CPMK-4	Mahasiswa mampu menentukan kekontinuan fungsi dan turunanannya. <i>Students are able to determine the continuity of functions and their derivatives.</i>						
	CPMK-5	Mahasiswa mampu menerapkan integral melalui teorema fundamental kalkulus. <i>Students are able to apply integrals through the fundamental theorem of calculus.</i>						
Peta CPL – CP MK		CPL-1	CPL-2	CPL-3	CPL-4	CPL-5	CPL-6	CPL-7
	<i>CPMK-1</i>							
	<i>CPMK-2</i>							
	<i>CPMK-3</i>							
	<i>CPMK-4</i>							
	<i>CPMK-5</i>							
Diskripsi Singkat MK	Dalam Mata Kuliah ini mahasiswa akan mempelajari pokok bahasan pokok bahasan sebagai berikut: 1. Konsep dasar sistem bilangan real: pengertian sistem bilangan real, bentuk desimal bilangan real, sistem koordinat , sifat urutan, pengertian nilai mutlak, garis – grafik persamaan linear. 2. Konsep dasar bilangan kompleks: penjumlahan, perkalian, hasil bagi, bentuk polar bilangan kompleks beserta operasi aljabarnya dan penarikan akar persamaan dalam sistem bilangan kompleks. 3. Konsep dasar aljabar matrik, sifat-sifat determinan, operasi baris elementer, sistem persamaan linier dan masalah nilai eigen atau vector eigen. 4. Konsep-konsep fungsi, limit: domain, range, fungsi linier, kuadratik dan trigonometri atau transcendent, grafik fungsi, limit fungsi dan kontinuitas. 5. Diferensial/turunan: definisi turunan, aturan-aturan diferensiasi (untuk fungsi polynomial, trigonometri, tramsendent), aturan rantai dan turunan fungsi implisit. 6. Aplikasi Turunan: laju-laju berkaitan, interval naik-turun, kecekungan, sketsa grafik yang mempunyai asimtot dan puncak, nilai ekstrema dan aplikasi masalah optimasi. 7. Integral tak-tentu: turunan dan anti turunan , Theorema Fundamental Kalkulus.							

Short Description of Course	<i>In this course, students will learn the following subjects:</i> <i>1. Basic concept of real number system: definition of real number system, decimal form of real number, coordinate system, nature of sequence, definition of absolute value, graph of linear equations.</i> <i>2. The basic concept of complex numbers: addition, multiplication, quotient, polar form of complex numbers and their algebraic operations and the drawing of equations in complex number systems.</i> <i>3. The basic concept of matrix algebra, determinant properties, elementary line operations, systems of linear equations and the problem of eigenvalues or eigenvectors.</i> <i>4. The concepts of function, limit: domain, range, linear, quadratic and trigonometric or transcendent function, function graph, limit function and continuity.</i> <i>5. Differential / derivative: definition of derivatives, referenced rules (for polynomial, trigonometric, transendent functions), chain rules and implicit derivatives of functions.</i> <i>6. Derivative Applications: corresponding rates, increment interval, slope, graph sketch having asymptotes and peaks, extrema values and application of optimization problems.</i> <i>7. Indefinite integral: Derivative and anti-derivative, Fundamental Theorems of Calculus.</i>				
Bahan Kajian: Materi pembelajaran Course Materials:	• Matrik dan Determinan. / <i>Matrix and Determinant</i> • Persamaan, pertidaksamaan, grafik fungsi parabola, lingkaran atau elips./ <i>Equations, inequalities, graphs of functions of a parabola, circle or ellipse</i> • Bilangan kompleks dan bentuk polarnya./ <i>Complex numbers and their polar coordinates.</i> • Kekontinuan fungsi dan turunannya. / <i>Continuity of functions and their derivatives.</i> • Integral dan Theorema Fundamental Kalkulus. / <i>Integral and Fundamental Theorems of Calculus.</i>				
Pustaka: References:	<table border="1"> <tr> <td data-bbox="371 960 645 997">Utama/Main:</td> <td data-bbox="649 960 2161 1069"> 1. Tim Dosen Jurusan Matematika ITS, <i>Diktat Matematika 1</i> , Edisi ke-5 Jurusan Matematika ITS, 2020 2. Anton, H. dkk, <i>Calculus</i>, 10-th edition, John Wiley & Sons, New York, 2012 </td> </tr> <tr> <td data-bbox="371 1072 645 1145">Pendukung / Supporting:</td> <td data-bbox="649 1072 2161 1252"> 1. Kreyzig, E, <i>Advanced Engineering Mathematics</i>, 10-th edition, John Wiley & Sons, Singapore, 2011 2. Purcell, J, E, Rigdon, S., E., <i>Calculus</i>, 9-th edition, Prentice-Hall, New Jersey, 2006 3. James Stewart , <i>Calculus</i>, ed.7, Brooks/cole-Cengage Learning, Canada,2012 </td> </tr> </table>	Utama/Main:	1. Tim Dosen Jurusan Matematika ITS, <i>Diktat Matematika 1</i> , Edisi ke-5 Jurusan Matematika ITS, 2020 2. Anton, H. dkk, <i>Calculus</i>, 10-th edition, John Wiley & Sons, New York, 2012	Pendukung / Supporting:	1. Kreyzig, E, <i>Advanced Engineering Mathematics</i>, 10-th edition, John Wiley & Sons, Singapore, 2011 2. Purcell, J, E, Rigdon, S., E., <i>Calculus</i>, 9-th edition, Prentice-Hall, New Jersey, 2006 3. James Stewart , <i>Calculus</i>, ed.7, Brooks/cole-Cengage Learning, Canada,2012
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Dosen Pengampu: Lecturers:					

Matakuliah syarat: <i>Prerequisite</i>		-					
mgg/ Week	Kemampuan akhir tiap tahapan belajar (Sub-CPMK) / <i>Final ability of each learning stage (LLO)</i>	Penilaian / <i>Assessment</i>		Bantuk Pembelajaran; Metode Pembelajaran; Penugasan Mahasiswa; [<i>Estimasi Waktu</i>] / <i>Form of Learning; Learning Method;</i> <i>Student Assignment;</i> [<i>Estimated Time</i>]		Materi Pembelajaran [<i>Pustaka</i>] / <i>Learning Material</i> [<i>Reference</i>]	Bobot Penilaian / <i>Assess- ment Load (%)</i>
		Indikator / <i>Indicator</i>	Kriteria & Teknik / <i>Criteria & Techniques</i>				
(1)	(2)	(3)	(4)	Tatap Muka / <i>In-class</i> (5)	Daring / <i>Online</i> (6)	(7)	(8)
	Pengantar Kuliah <i>Introduction of Learning</i>	Motivasi belajar, menyampaikan RPS, aturan perkuliahan dan sistem penilaian macam Evaluasi dan Prosentase masing masing evaluasi, Buku Ajar / sumber pustaka <i>Learning motivation, delivering learning plan, lectures rules and assessment systems such as evaluation and percentage of each evaluation, textbooks / library sources</i>					
1	Mahasiswa mampu memahami pengertian sistem bilangan real, menyelesaikan suatu persamaan atau pertidaksamaan , Nilai Mutlak dan Persamaan Linear. <i>Students are able to understand the real number system, solve an equation or inequality, Absolute</i>	Ketepatan menyelesaikan persamaan atau pertidaksamaan dan mensketsa persamaan linear. <i>The precision of solving equations or inequalities and sketching out linear equations.</i>	Tugas 1 : Latihan soal tentang sistem bilangan, nilai mutlak, grafik persamaan dan garis, persamaan linear. <i>Task 1 : Exercises on the real number systems, absolute values, graphs of</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asynconous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous /</i>	Sistem Bilangan Real, Persamaan atau pertidaksamaan , Nilai Mutlak dan mengaplikasikan persamaan linear. [1] Hal. 1 – 18 <i>The real number system, Equalities or inequalities, Absolute Value and apply Linear equations.</i>	

	<i>Value and Linear Equation.</i>		<i>equations and lines, linear equations.</i>	<i>[SA : 3 x 60"] [SS : 3 x 60"]</i>	<i>asynchronous in MyITS Classroom.</i>	<i>[1] pp. 1 – 18</i>	
	Mahasiswa mampu menyelesaikan operasi peubah kompleks dan bentuk polar serta menarik akar-akar persamaan peubah kompleks. <i>Students are able to complete the operation of complex variables and their polar shapes and draw the roots of complex variable equations.</i>	Ketepatan menyelesaikan: operasi peubah kompleks dan bentuk polar serta menarik akar-akar persamaan peubah kompleks. <i>Accuracy to solving: the operation of complex variables and their polar forms and get the roots of complex variable equations.</i>	Tugas 2: Latihan soal tentang bilangan kompleks dan teorema De Moivre. <i>Task 2: Exercises on complex numbers and the De Moivre theorem</i>			Operasi peubah kompleks dan bentuk polar serta menarik akar-akar persamaan peubah kompleks <i>[1] Hal. 19 – 30</i> <i>The operation of complex variables and their polar shapes and draw the roots of complex variable equations</i> <i>[1] pp. 19 – 30</i>	
2	Mahasiswa mampu menyelesaikan Sistem persamaan liner dalam bentuk matriks dengan menggunakan OBE <i>Students are able to solve systems of linear</i>	Ketepatan menyatakan Sitem persamaan liner dalam bentuk matriks dan menyelesaikanya dengan OBE. <i>Accuracy expresses a system of linear</i>	Tugas 3: Latihan Soal tentang matriks dan operasinya, operasi baris elementer, sistem persamaan linear. <i>Task 3: Exercises about matrices and their operations, elementary row</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asynconous di MyITS Classroom. <i>Tutorial activities, exercises and provide</i>	Ikhtisar Matriks , dan persamaan linier. [1] hal: 31 – 50 <i>Overview Matrix and linear equation</i>	

[illegible]

	<i>equations using determinants.</i>	<i>linear equations with the determinant</i>	<i>cofactors and Cramer's rule.</i>	<i>provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	<i>synchronous / asynchronous in MyITS Classroom.</i>	<i>[1] pp: 52 – 68</i>	
4	Mahasiswa mampu menentukan nilai eigen dan vektor eigen. <i>Students are able to determine eigenvalues and eigenvectors.</i>	Ketepatan menemukan Nilai Eigen dan Vektor Eigen dari suatu matriks. <i>The accuracy of finding Eigenvalues and Eigenvectors of a matrix.</i>	Tugas 4: Latihan soal tentang nilai eigen dan vektor eigen <i>Task 4: Exercises on eigenvalues and eigenvectors</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asynchronous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Nilai eigen atau vektor eigen. [1] hal: 52 – 68 <i>Eigenvalues and eigenvectors. [1] pp: 52 – 68</i>	
ASISTENSI KE 2 / 2nd Assistance Latihan soal-soal [TM : 2 x 50"] Practice- Exercises [FF : 2 x 50"]							
5	Evaluasi ke 2	KUIS 2, Bahan: Bab 3	Ketajaman menyelesaikan soal yang terkait dengan materi Bab 3.	TES TERTULIS	TES TERTULIS melalui MyITS Classroom		

	<i>2nd Evaluation</i>	QUIZ 2, The material is Chapter 3	Acuity in solving problems related to the material in Chapter 3.	WRITTEN TEST	WRITTEN TEST via MyITS Classroom		
	Mahasiswa mampu menyelesaikan operasi pada fungsi dan mampu mensketsa grafik fungsi. <i>Students are able to complete operations on functions and are able to sketch graph of functions.</i>	Ketepatan menghitung operasi pada fungsi dan mampu mensketsa grafik fungsi. <i>Precise calculating operations on functions and capable of sketching graph of functions.</i>	Tugas 5: Latihan soal tentang definisi dan notasi fungsi, operasi pada fungsi dan sketsa grafik fungsi <i>Task 5: Exercise on the definition and notation of functions, operations on functions and graph sketches of functions</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Operasi pada fungsi dan sketsa grafik fungsi. [1] hal: 69 – 85 <i>Function operations and graph of functions [1] pp: 69 – 85</i>	
6	Mahasiswa mampu memahami Sifat-sifat grafik fungsi dan mencari fungsi Invers. <i>Students are able to understand the properties of the function graph and</i>	Ketepatan menerapkan Sifat-sifat grafik fungsi dan memperoleh Fungsi Invers. <i>The precision of applying the Properties of the function graph and</i>	Tugas 6: Latihan Soal tentang sifat-sifat grafik fungsi dan fungsi invers <i>Task 6: Exercises on the properties of the graph of functions and inverse functions</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous /</i>	Sifat-sifat grafik fungsi dan Fungsi Invers. [1] hal: 86 – 99 <i>Graph properties of functions and Inverse Functions. [1] page: 86-99</i>	

	<i>look for the inverse function.</i>	<i>obtaining the Inverse Function.</i>		<i>[SA : 3 x 60"] [SS : 3 x 60"]</i>	<i>asynchronous in MyITS Classroom.</i>		
	ASISTESI KE 3 / 3th Assistance Latihan soal-soal [TM : 2 x 50"] Practice- Exercises [FF : 2 x 50"]						
7	Mahasiswa mampu menghitung Limit fungsi. <i>Students are able to calculate the function limit</i>	Ketepatan menghitung Limit fungsi. <i>The accuracy of calculating the Limit function.</i>	Tugas 7: Latihan soal tentang notasi dan perhitungan limit. <i>Task 7: Exercises about limit notation and calculation</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asynconous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Limit fungsi. [1] hal: 101 - 114 <i>Limit Function. [1] page: 101-114</i>	
	Mahasiswa mampu menghitung limit tak hingga dan kekontinuan fungsi. <i>Students are able to calculate infinite limit and continuity.</i>	Ketepatan menghitung limit tak hingga dan kekontinuan fungsi . <i>The accuracy of calculating the infinite limit and the continuity.</i>	Tugas 8: Latihan soal tentang Limit di tak hingga dan kekontinuan <i>Task 8: Exercises about infinite limits and continuity.</i>			Limit tak hingga dan kekontinuan fungsi . [1] hal: 115 – 134 <i>Infinite limit and continuity. [1] pp: 115 – 134</i>	
8	EVALUASI KE-3	UJIAN TENGAH SEMESTER	Ketajaman menyelesaikan soal soal yang terkait dengan bilangan, fungsi, limit dan kekontinuan suatu fungsi.	TERJADWAL Ujian tertulis Waktu: 100 "	TERJADWAL Daring asinkronus Waktu: 90"		25

	3th Evaluation	MIDTERM EXAM	TES TERTULIS <i>Sharpness in solving problems related to the number, function, limit and continuity of a function.</i> WRITTEN TEST	SCHEDULED Written examination Time: 100 "	SCHEDULED Asynchronous Time: 90"		
9	Mahasiswa mampu menentukan Garis singgung dan laju perubahan serta menentukan turunan fungsi. <i>Students are able to determine tangent lines and rates of change and determine derivative functions</i>	Ketepatan menentukan Garis singgung dan laju perubahan serta menentukan turunan fungsi. <i>The precision determines the tangent lines and rates of change and determines the derivative of the function.</i>	Tugas 9: Latihan soal tentang garis singgung dan laju perubahan, fungsi turunan. <i>Task 9:</i> <i>Exercises on tangent lines and rates of change, the derivative function.</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment .</i> [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Garis singgung dan laju perubahan serta menentukan turunan fungsi. [1] hal: 135 – 146 <i>Tangent lines and rates of change and determine the derivative of the function.</i> [1] pp: 155-146	
10	Mahasiswa mampu menentukan Turunan dengan diferensial implisit dan menganalisa grafik fungsi.	Ketepatan menentukan Turunan dengan diferensial implisit dan menganalisa grafik fungsi.	Tugas 10: Latihan soal tentang diferensiasi, aturan rantai dan diferensiasi implisit <i>Task 10:</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"]	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom.	Menentukan turunan dengan diferensial implisit dan menganalisa grafik fungsi. [1] hal: 147 – 164	

	<i>Students are able to determine derivatives with implicit differentials and analyze graphs of functions.</i>	<i>Determine the accuracy of the derivative by implicit differential and analyze the graph of the function.</i>	<i>Exercises on differentiation, chain rule and implicit differentiation.</i>	<i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	<i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	<i>Determine the derivative with implicit differential and analyze the graph of the function. [1] page: 147 – 164</i>	
	ASISTENSI KE 4 / 4th Asistence Latihan soal-soal [TM : 2 x 50"] Practice- Exercises [FF : 2 x 50"]						
11	Mahasiswa mampu Menyelesaikan laju-laju yang berkaitan dan menentukan selang naik/turunnya fungsi dan kecekungannya dengan menggunakan uji turunan pertama dan kedua. <i>Students are able to complete the rates associated with and determine the increase / decrease interval of the function and its concave by using the</i>	Ketepatan menghitung laju-laju yang berkaitan dan menentukan selang naik/turunnya fungsi dan kecekungannya dengan menggunakan uji turunan pertama dan kedua. <i>The accuracy of calculating the corresponding rates and determining the increase / decrease of the function's interval and its proportions using the first and second derivative tests.</i>	Tugas 11: Latihan soal tentang laju – laju yang berkaitan, selang naik dan selang turun, kecekungan fungsi, ekstrim relatif, uji turunan pertama dan kedua. <i>Task 11: Exercises on the associated rates, the rise and fall intervals, the concavity of the function, the relative extremes, the first and second derivative tests.</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom . <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Laju-laju yang berkaitan dan menentukan selang naik/turunnya fungsi dan kecekungannya dengan menggunakan uji turunan pertama dan kedua. [1] hal: 165 – 190 <i>Related rates and determine the increase / decrease interval of the function and its proportions using the first and second derivative tests.</i>	

	<i>first and second derivative tests.</i>					<i>[1] pp: 165 – 190</i>	
	Mahasiswa mampu menentukan nilai maksimum/ minimum fungsi serta mampu mensketsa grafik fungsi polinomial, rasional dan grafik yang lainnya. <i>Students are able to determine the maximum / minimum value of functions and are able to sketch polynomial, rational and other graphical graphs of functions.</i>	Ketepatan menghitung nilai maksimum/ minimum fungsi serta mampu mensketsa grafik fungsi polinomial, rasional dan grafik yang lainnya. <i>Accuracy in calculating the maximum / minimum value of functions and being able to sketch polynomial, rational and other graphical functions.</i>	Tugas 12: Latihan soal tentang grafik polinomial dan fungsi rasional, nilai maksimum atau minimum suatu fungsi. <i>Task 12: Exercises on graphing polynomials and rational functions, the maximum or minimum values of a function.</i>			Nilai maksimum/ minimum fungsi serta mampu mensketsa grafik fungsi polinomial, rasional dan grafik yang lainnya . <i>[1] hal: 191 - 211</i> <i>The maximum / minimum value of the function and able to sketch polynomial, rational and other graphical graphical functions.</i> <i>[1] pp: 191 – 211</i>	
12	ASISTENSI KE-5 / 5th Assistance Latihan soal-soal [TM : 2 x 50"] Practice- Exercises [FF : 2 x 50"]						
	EVALUASI KE-4	KUIS KE_3: Bahan Turunan Fungsi dan laju-laju yang terkait. 3th QUIZ:	Ketajaman menyelesaikan soal soal yang terkait dengan turunan fungsi dan laju-laju yang terkait.	TES TERTULIS Waktu: 60 menit	TES TERTULIS Waktu: 50 menit melalui MyITS Classroom		

	4th Evaluation	Materials: Derived Functions and their associated rates.	Sharpness in solving problems related to the derivative of the function and its associated rates.	WRITTEN TEST Time: 60 minutes	WRITTEN TEST Time: 50 minutes In myITS classroom		
13	Mahasiswa mampu menyelesaikan masalah yang berkaitan dengan persoalan-persoalan maksimum/minimum. <i>Students are able to solve problems related to maximum / minimum problems.</i>	Ketepatan menyelesaikan masalah yang berkaitan dengan persoalan-persoalan maksimum/minimum. <i>Accuracy in solving problems related to maximum / minimum problems</i>	Tugas 13: Latihan soal tentang Aplikasi masalah maksimum atau minimum, teorema rolle dan teorema nilai rata-rata Task 13: Exercises on the application of the maximum or minimum problem, the rolle theorem and the mean value theorem	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment .</i> [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asyncornous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Masalah yang berkaitan dengan persoalan-persoalan maksimum/minimum. [1] hal: 212 - 236 <i>Problems relating to maximum / minimum issues.</i> [1] pp: 212 – 236	
	Mahasiswa mampu menentukan Anti turunan fungsi dan Luas sebagai limit jumlahan. <i>Students are able to determine the derivative of the function and area as the sum limit.</i>	Ketepatan menentukan Anti turunan fungsi dan Luas sebagai limit jumlahan. <i>The precision of determining the derivative of function and Area as the sum limit.</i>	Tugas 14: Latihan soal tentang anti turunan, integral tak tentu, integrasi dengan substitusi dan luas sebagai limit Task 14: Exercise on anti-derivative, indefinite integral, integration with			Anti turunan fungsi dan Luas sebagai limit jumlahan. [1] hal: 237 - 259 <i>Anti derivative function and Area as the sum limit.</i> [1] pp: 237 – 259	

			<i>substitution and area as limit</i>				
14	Mahasiswa mampu menentukan Turunan dengan menggunakan Teorema Fundamental Kalkulus I dan II . <i>Students are able to determine the derivative using the Fundamental Theorem of Calculus I and II.</i>	Ketepatan menentukan Turunan dengan menggunakan Teorema Fundamental Kalkulus I dan II . <i>The accuracy of determining the derivative using the fundamental Theorem of Calculus I and II.</i>	Tugas 15: Latihan soal tentang integral tertentu, Teorema Fundamental Kalkulus I, integral tertentu dengan substitusi, hampiran jumlahan Riemann, Teorema Fundamental Kalkulus II <i>Task 15: Exercises on certain integrals, fundamental theorem of Calculus I, certain integrals with substitutions, Riemann sum approximation, the fundamental Theorem of Calculus II</i>	Kuliah, latihan soal-soal serta memberikan soal tugas [TM : 3 x 50"] [BM : 3 x 60"] [PT : 3 x 60"] <i>Tutorial activities, exercises and provide assignment . [FF : 3 x 50"] [SA : 3 x 60"] [SS : 3 x 60"]</i>	Kuliah, latihan soal-soal serta memberikan soal tugas melalui synchronous / asynconous di MyITS Classroom. <i>Tutorial activities, exercises and provide assignment via synchronous / asynchronous in MyITS Classroom.</i>	Theorema Fundamental Kalkulus I dan II [1] hal: 260 - 297 <i>The Fundamental Theorems of Calculus I and II</i> [1] page: 260 – 297	
ASISTENSI KE 6 / 6th Assistance Latihan soal-soal [TM : 2 x 50"] Practice- Exercises [FF : 2 x 50"]							
15 – 16	EVALUASI KE_5	UJIAN AKHIR SEMESTER	Ketajaman menyelesaikan soal soal yang terkait dengan turunan dan anti turunan.	TERJADWAL Ujian tertulis Waktu: 100"	TERJADWAL Daring asinkronus Waktu: 90"		25

	5th Evaluation	Final Exam	TES TERTULIS <i>Sharpness in solving problems related to derivatives and anti derivatives.</i> WRITTEN TEST	SCHEDULED Written examination Time: 100"	SCHEDULED <i>Written examination asynchronous my ITS classroom.</i> Time: 90"		
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Catatan sesuai dengan SN Dikti Permendikbud No 3/2020:

1. Capaian Pembelajaran Lulusan PRODI (CPL-PRODI) adalah kemampuan yang dimiliki oleh setiap lulusan PRODI yang merupakan internalisasi dari sikap, penguasaan pengetahuan dan ketrampilan sesuai dengan jenjang prodinya yang diperoleh melalui proses pembelajaran.
2. CPL yang dibebankan pada mata kuliah adalah beberapa capaian pembelajaran lulusan program studi (CPL-PRODI) yang digunakan untuk pembentukan/pengembangan sebuah mata kuliah yang terdiri dari aspek sikap, ketrampilan umum, ketrampilan khusus dan pengetahuan.
3. CP Mata kuliah (CPMK) adalah kemampuan yang dijabarkan secara spesifik dari CPL yang dibebankan pada mata kuliah, dan bersifat spesifik terhadap bahan kajian atau materi pembelajaran mata kuliah tersebut.
4. Sub-CP Mata kuliah (Sub-CPMK) adalah kemampuan yang dijabarkan secara spesifik dari CPMK yang dapat diukur atau diamati dan merupakan kemampuan akhir yang direncanakan pada tiap tahap pembelajaran, dan bersifat spesifik terhadap materi pembelajaran mata kuliah tersebut.
5. Indikator penilaian kemampuan dalam proses maupun hasil belajar mahasiswa adalah pernyataan spesifik dan terukur yang mengidentifikasi kemampuan atau kinerja hasil belajar mahasiswa yang disertai bukti-bukti.
6. Kreteria Penilaian adalah patokan yang digunakan sebagai ukuran atau tolok ukur ketercapaian pembelajaran dalam penilaian berdasarkan indikator-indikator yang telah ditetapkan. Kreteria penilaian merupakan pedoman bagi penilai agar penilaian konsisten dan tidak bias. Kreteria dapat berupa kuantitatif ataupun kualitatif.
7. Teknik penilaian: tes dan non-tes.
8. Bentuk pembelajaran: Kuliah, Responsi, Tutorial, Seminar atau yang setara, Praktikum, Praktik Studio, Praktik Bengkel, Praktik Lapangan, Penelitian, Pengabdian Kepada Masyarakat dan/atau bentuk pembelajaran lain yang setara.
9. Metode Pembelajaran: *Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning*, dan metode lainnya yg setara.
10. Materi Pembelajaran adalah rincian atau uraian dari bahan kajian yg dapat disajikan dalam bentuk beberapa pokok dan sub-pokok bahasan.
11. Bobot penilaian adalah prosentasi penilaian terhadap setiap pencapaian sub-CPMK yang besarnya proposional dengan tingkat kesulitan pencapaian sub-CPMK tsb., dan totalnya 100%.
12. **TM**=Tatap Muka, **PT**=Penugasan Terstuktur, **BM**=Belajar Mandiri. / **FF** = *Face to Face*, **SA** = *Structured Assignment*, **SS** = *Self Study*