

ALG Calculus II Syllabus

MATH 2254 Calculus II

(prerequisite MATH 2253)

4-0-4

A continuation of MATH 2253. Topics include differentiation and integration of transcendental functions, integration techniques, indeterminate forms, infinite sequences and series, Taylor and Maclaurin series, parametric equations, L'Hopital's Rule, improper integrals, and polar coordinates.

Actual assigned homework problems may vary by instructor.

[G] indicates the text *Calculus: Late Transcendentals* by Guichard and friends

[H] indicates *APEX Calculus I* or *APEX Calculus II* by Hartman et al.

Table 1 Chapter A: Transcendental Functions

Section	Text (page) ¹	Problems
A.1	[G] pg. 182	1, 2, 4, 6, 7, 11-15all
A.2	[G] pg. 187	2, 5-8, 10-14all, 15-20all
A.3	[G] pg. 193	2-5, 7, 8, 13, 14, 15-19
A.4	[G] pg. 193	2, 3, 8-12all, 14
A.5	[G] pg. 196	1, 2, 5-16all
	[H] pg. 119	15-29odd

Table 2 Chapter B: Techniques of Integration

Section	Text (page)	Problems
B.1	[G] pg. 205	1-10all
	[H] pg. 285	5, 7, 9, 10, 17, 19-25odd, 28, 29
B.2	[G] pg. 208	1-12all
	[H] pg. 294	5, 7, 9, 15, 17, 21, 23, 25, 31
B.3	[G] pg. 211	1-14all
	[H] pg. 275	5, 7, 11, 19-27odd, 35, 40, 42, 46
B.4	[G] pg. 216	1-10all
	[H] pg. 302	1-19odd, 22, 27, 29

¹ Page numbers for the Guichard text refer to the page numbering in the complete pdf version of the text. The navigable html version does not have page numbers. [Click here to access the pdf version.](#)

B.5 ²	[G] pg. 221	1-11odd
B.6	[G] pg. 87	1-11odd, 21, 23, 31
	[H] pg. 320	9, 13, 17, 21, 25, 29, 35, 37, 43, 45
B.7	[G] pg. 232	1-9all
	[H] pg. 330	7-13odd, 19, 21, 23, 27, 29
B.8	[G] pg. 221	1-28all

Table 3 Chapter C: Polar Coordinates, Parametric Equations

Section	Text (page)	Problems
C.1	[G] pg. 254	1, 3, 5, 9, 10, 13, 15, 23
C.2	[G] pg. 256	1-6all, 7, 9, 11
C.3	[G] pg. 259	1, 3, 8, 14, 16, 19
C.4	[G] pg. 262	1-5all
C.5	[G] pg. 265	1, 4, 7

Table 4 Chapter D: Sequences and Series

Section	Text (page)	Problems
D.1	[G] pg. 274	3-6all
	[H] pg. 394	1-4all, 5-13odd, 17-27odd, 29, 31, 35, 37
D.2	[G] pg. 277	1-9all
	[H] pg. 408	1-5all, 9, 11, 15-19odd, 21-29odd, 33, 37, 39
D.3	[G] pg. 282	1-8all
	[H] pg. 417	1, 5-12all
D.4	[G] pg. 285	1-4all
	[H] pg. 433	1, 2, 5-19odd, part (a) only for 5-19odd
D.5	[G] pg. 287	1-10all
	[H] pg. 417	13-31odd
D.6	[G] pg. 289	1-8all
	[H] pg. 433	3, 5-19odd, parts (b) and (c) for 5-19odd
D.7	[G] pg. 292	1, 2, 5-8all
	[H] pg. 423	5, 7, 9, 13, 25-31odd
D.8	[G] pg. 295	1-6all
	[H] pg. 445	1-4all, 5, 7, 9-23odd, 25, 27, 29
D.9	[G] pg. 296	1-5all

² Optional section included at the discretion of the instructor.

D.10	[G] pg. 300	1-10all
	[H] pg. 467	1-11odd, 15, 17, 25, 29, 31
D.11	[G] pg. 305	1, 4, 5
	[H] pg. 455	5, 7, 11, 13, 15, 17, 29, 31
D.12	[G] pg. 306	1-31odd