

B.S. in Mathematics: Plan 1 (General)

For use with the 2016-2018 General Catalog

PREPARATORY COURSES (36 - 43 units): Plan to complete these by the end of sophomore year.

Class	21A	21B	21C	21D	[22A and 108] or [67]	22B	25	[ECS 30] or [ENG 6]	PHY 9A
Grade									

MATLAB Requirement:

Chose <u>one</u> of the following:	MAT 22AL (1 unit)	EME 5 (4 units)	ENG 6 (4 units)	Other MATLAB experience
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DEPTH COURSES (47 units): Plan to complete these classes during your junior and senior years.

Category	Fall	Winter	Spring	Summer I, II	Adviser Comments
Core	125A /	125A /	125A /	125A	
Core		125B /	125B /		125B
Core	135A /	135A /	135A		
Core	150A /			150A	
Core		150B /			
Core			150C /		
Core		185A /			
Enrichment ¹					
Enrichment ¹					
Enrichment ¹					
Enrichment ¹					
Capstone ²					

¹ **Enrichment:** Choose any 4 upper-division MAT classes from MAT 111 to MAT 185B (excluding MAT 180).

- Up to four (4) units of enrichment may be taken from non-MAT courses that use math extensively, with faculty adviser approval. These classes may have prerequisites, so plan accordingly. Potential non-math courses: ATM 120, 121A, 121B, 128; CHE 110A, 110B, 110C; EEC 130A, 130B; ECI 114, 153; ECN 122, 140; ECS 120, 122A, 127; EME 115; ESP 150A; GEL 150A; LIN 177; PHY 104A, 104B, 104C, 105A, 105B, 108; 110A, 110B, 110C, 112, 115A, 115B, 116A, 116B; STA 131B, 131C, 141

² **Capstone:** Choose one of the following: MAT 189 (Advanced Problem Solving); MAT 180 (Special Topics); MAT 192 (Internship); or MAT 194 (Undergrad Thesis). Consult an adviser if you would like to satisfy this requirement by completing an internship or an undergraduate thesis. You should plan to complete the capstone during your final year.

When are classes offered?

- Academic Year: <https://www.math.ucdavis.edu/courses/academic-schedule>
- Summer Session: <https://www.math.ucdavis.edu/courses/summer>

B.S. in Mathematics: Plan 1 (General) Courses

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For additional classes not listed below (such as enrichment options), as well as for more detailed information (including course descriptions), please consult the **General Catalog** at <http://catalog.ucdavis.edu>.

Please note that the quarters that classes are offered are subject to change.

MAT classes:

	Title	Units	Prerequisite	Quarter Offered
21A	Calculus	4	Qualifying math placement exam score	F, W, S, SSI, SSII
21B	Calculus	4	21A or 21AH with C- or above; or 17A with B or above	F, W, S, SSI, SSII
21C	Calculus	4	21B, 21BH, 16C, or 17C with a C- or above; or 17B with a B or above	F, W, S, SSI, SSII
21D	Vector Analysis	4	21C or 21CH with C- or above (or 17C with B or above)	F, W, S, SSI, SSII
22A	Linear Algebra	4	21C or 21CH with C- or above; and ENG 6 or EME 5 or concurrent enrollment in MAT 22AL	F, W, S, SSI, SSII
22AL	MATLAB/Linear Algebra Computer Theory	1	16C, 17C, 21C, or 21CH	F, W, S, SSI, SSII
22B	Differential Equations	3	22A or 67 with C- or above	F, W, S, SSI, SSII
25	Advanced Calculus	4	21C or 21CH	F, W, S, SSII
67	Modern Linear Algebra	4	21C or 21CH with C- or above	F, W
108	Intro to Abstract Math	4	21B	F, W, S, SSII
125A	Real Analysis	4	25	F, W, S, SSI
125B	Real Analysis	4	125A; 67 or both 22A and 108	W, S, SSII
135A	Probability	4	25 or 67 or 108	F, W, S
150A	Modern Algebra	4	67 or both 22A and 108	F, SSII
150B	Modern Algebra	4	150A	W
150C	Modern Algebra	4	150B	S
185A	Complex Analysis	4	67 or both 22A and 108; 125A	W

Outside MAT classes:

	Title	Units	Prerequisite	Quarter Offered*
ECS 30	Programming and Problem Solving	4	MAT 16A or 21A (may be taken concurrently); prior experience with basic programming concepts recommended	F, W, S
ENG 6	Engineering Problem Solving	4	MAT 16A, 17A or 21A, C- or above; MAT 16B, 17B or 21B, C- or above (may be taken concurrently)	F, W, S
EME 5	Computer Programming for Engineering Applications	4	MAT 16A or 21A (may be taken concurrently)	F, W, S
PHY 9A	Classical Physics	5	MAT 21B	F, S