MATHEMATICS B.S. (Plan 2 - Secondary Teaching)
SAMPLE SCHEDULE

YEAR 1	YEAR 2
FALL QUARTER: MAT 21A	FALL QUARTER: MAT 21D, PHY 7A/9A or STA 13/32/100
WINTER QUARTER: MAT 21B	WINTER QUARTER: MAT 22/27A, MAT 108
SPRING QUARTER: MAT 21C, ENG 6	SPRING QUARTER: MAT 22/27B, MAT 127A
YEAR 3	**YEAR 4**
FALL QUARTER: MAT 127B, MAT 115A	FALL QUARTER: MAT 150A, MAT 135A
WINTER QUARTER: MAT 127C, MAT 111	WINTER QUARTER: 2 Enrichment classes
SPRING QUARTER: MAT 141, 1 Enrichment class	SPRING QUARTER: 1 Enrichment class, Capstone

2020-2021 Requirements

PREPARATORY COURSEWORK (31-36 units): Plan to complete these by the end of sophomore year.

	Course	Units	Qtr(s) Offered	Year	Prerequisites & Enrollment Restrictions
☐	MAT 21A (Calculus: Differential Calculus)	4	F W S SSI SSII		Math placement exam score of 35 or higher (& 3 or higher on trig subscore)
☐	MAT 21B (Calculus: Integral Calculus)	4	F W S SSI SSII		21A or 21AH with C- or above; or 17A with B or above
☐	MAT 21C (Calculus: Partial Derivatives & Series)	4	F W S SSI SSII		21B, 21BH, 16C, or 17C with a C- or above; or 17B with a B or above
☐	MAT 21D (Vector Analysis)	4	F W S SSI SSII		21C or 21CH with a C- or above; or 17C with a B or above
☐	*Choose between (22A/27A and 108) or 67:*				
	☐ MAT 22A (Linear Algebra) **OR**	3	F W S SSI SSII		21C or 21CH with a C- or above; AND ENG 6 or concurrent enrollment in 22AL
	MAT/BIS 27A (Linear Algebra w/ Applications to Bio)	4	W		17C or 21C or 21CH C- or above
	☐ **AND** MAT 108 (Intro to Abstract Math)	4	F W S SSI SSII		21B (but not recommended until you complete 21C)
	☐ **OR** MAT 67 (Modern Linear Algebra)**	4	W		21C or 21CH with a C- or above. *See note below.*
☐	MAT 22B (Differential Equations) **OR**	3	F W S SSI SSII		22/27A or 67 with C- or above
	MAT/BIS 27B (Differential Equations w/ Applications to Bio)	4	S		27A C- or above; or 22/27A C- or above AND (22AL or ENG 6 OR EME 5 C- or above)
☐	ENG 6 (Engineering Problem Solving), **OR**	4	F W S SSII		16A, 17A, or 21A, C- or above; AND 16B, 17B, or 21B with a C- or above (may be taken concurrently)
	ECS 32A (Intro to Programming)***	4	F W S		Please wait to take this class until after your first quarter.
☐	Choose one of the following:	4-5			Check General Catalog (catalog.ucdavis.edu) for prerequisites.
	PHY 7A, PHY 9A, STA 13, STA 32, or STA 100				Check Schedule Builder or dept. websites for quarters offered.
☐	MAT 22AL, **OR**	1	F W S SSI SSII		16C, 17C, or 21CH
	ENG 6 (Engineering Problem Solving) - *or EME 5 or ECH 60*	4	F W S SSII		16A, 17A, or 21A, C- or above; AND 16B, 17B, or 21B with a C- or above (may be taken concurrently)

Information above is subject to change, based on changes to course offerings, prerequisites, etc.

NOTES

** MAT 67 is a more abstract, rigorous version of 22A and 108. Recommended if you earn all A's in MAT 21ABC and like theory.

***ECS 32A can be replaced by ECS 10, 30, 40, 32B, 34, 36A, 36B, or 36C.

If you are interested in teaching high school or junior high, consider a Single Subject Waiver. math.ucdavis.edu/undergrad/degree-requirements/teaching-credential

DEPTH COURSEWORK (51 units): Plan to complete these during your junior and senior years.

	Course	Units	Qtr(s) Offered	Year	Prerequisites & Enrollment Restrictions
☐	MAT 127A (Real Analysis)	4	F W S SSI		21C or 21CH; and (22/27A and 108) or 67
☐	MAT 127B (Real Analysis)	4	F W S SSII		127A
☐	MAT 127C (Real Analysis)	4	F W S SSI		127B
☐	MAT 135A (Probability)	4	F W S SSI		21C and (108 or 127A)
☐	MAT 150A (Modern Algebra)	4	F W SSI		(22/27A and 108) or 67
☐	MAT 111 (History of Math)	4	W		8 units of upper division MAT
☐	MAT 115A (Number Theory)	4	F SSI SSII		21B
☐	MAT 141 (Euclidian Geometry)	4	W S		21B and (22/27A or 67)
☐	Enrichment Class (MAT 111 - 185B, excluding 180)	4			
☐	Enrichment Class (MAT 111 - 185B, excluding 180)	4	See below for more information about Enrichment options.		
☐	Enrichment Class (MAT 111 - 185B, excluding 180)	4			
☐	Enrichment Class (MAT 111 - 185B, excluding 180)	4			
☐	Capstone	3	See below for more information about Capstone options.		

Information above is subject to change, based on changes to course offerings, prerequisites, etc.

ENRICHMENT CLASSES

You are required to take 4 Enrichment Classes.

- 3-4 of your Enrichment classes must be from the Math Department. Any class from **MAT 111 through MAT 185B** will count, **excluding MAT 180 and any core classes** (e.g. MAT 127ABC, 135A).

  How do I pick my Math Enrichment classes?
  - *See catalog.ucdavis.edu/programs/MAT/MATcourses.html for a list of all possible Math Enrichment classes & their prereqs. Pick ones that look interesting!*
    Note: your faculty advisor can also help with this. Find their contact info here: https://www.math.ucdavis.edu/undergrad/advising/advisers/
  - *Find out when the classes you're interested in are offered:*
    - *Academic Year: https://www.math.ucdavis.edu/courses/academic-schedule   - Summer: https://www.math.ucdavis.edu/courses/summer*

- Up to 1 Enrichment class may be outside the Math Department, as long as it uses math extensively and has been approved by a faculty adviser. These classes often have additional prerequisites, so plan accordingly.

  Pre-approved non-math enrichment classes are: ATM 120, 121A, 121B; 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, 154; STA 131B, 131C, 141ABC

CAPSTONE

You are required to complete 1 of the following options before graduation (typically in your last year).

- One of the in-depth math courses: **MAT 115B, 118B, 119B, 135B, 146, 150B, 150C, or 185B.**
- **MAT 180** (Special Topics class). Offered F, W, S. Topic changes every quarter: https://www.math.ucdavis.edu/courses/syllabi/special-topics/
- **MAT 189** (Advanced Problem Solving). Offered irregularly (usually spring). Project-based class with written and verbal presentations.
- **MAT 192** (Internship in Applied Math). Requires faculty advisor approval and 90 hours of internship. You must find internship; ICC can help.
- **MAT 194** (Undergrad Thesis). Requires that you find a faculty member who will work with you. 2 quarter commitment minimum.
  https://www.math.ucdavis.edu/undergrad/research/thesis/
- **EDU/GEL 183** (Teaching High School Math). Teaching class & internship through CalTeach/MAST (Math and Science Teaching) Program.