

Capitalizing on Cross-Disciplinary Curricular Options to Customize and Strengthen a Graduate Technology Management Program

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**Engineering
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MS-TMGT Degree Plan - 36 SCH

Research (3 semester hours)

<u>TMGT 595</u>	Applied Research in Engineering & Technology	3
Pre-/Co-requisite for TMGT Core Courses. Must be taken in the first long-semester of enrollment in the program.		

Required Core Courses (18 semester hours)

<u>TMGT 510</u>	Strategic & Financial Planning in Technology Organizations	3
<u>TMGT 511</u>	Management of AI & Emerging Technologies	3
<u>TMGT 512</u>	Leadership in Engineering and Technology	3
<u>TMGT 514</u>	Engineering and Technology Project Management	3
<u>TMGT 515</u>	Project Management Tools & Techniques	3
<u>TMGT 516</u>	Staff Development in Technology Organizations	3
<u>TMGT 519</u>	Ethics & AI	3

Practicum (3 semester hours)

<u>TMGT 599</u>	Technology Management Practicum	3
Must be taken after completion of major core or may be taken concurrently with no more than one remaining core course. Master's Comprehensive Examination is administered within this course.		

Elective Courses (12 semester hours)

12 semester hours from the following approved elective courses or specified options: 12



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Primary Goals

- Utilize existing Certificates and Minors to build customization and efficiency into the Graduate Technology Management (TMGT) Degree
- Permit majors to formally emphasize an additional area of academic focus to enhance their skills and marketability in their desired career path.
- Ensure course options are available when enrollment numbers within the major cannot support multiple elective sections within the major.
- Allow stronger marketing of the program by emphasizing its versatility.

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Selection and Approval of options

- Assembled list of available certificates and minors along with the curricular requirements of each
- Examined included courses to identify complimentary content.
- Took queues from previous students' academic interests.
- Most certificate and minor course blocks are 12 hours which matches the 12-hour elective block on the TMGT MS degree plan.
- Generated list of acceptable minors or course combinations to pre-approve for seamless inclusion in degree plan.

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Advantages

- Allows students to customize the program's elective emphasis to meet their career goals and strengthen their marketability in their selected field/job sector.
- Higher return on investment for students through their ability to show an additional focus area on their academic transcript without the expense of additional coursework.
- Anticipated growth in number of majors.
- Anticipated improved student satisfaction with academic preparation for career advancement.
- Certain minors may allow students who need in-person classes to take classes in this modality.
 - International Students studying on student Visas (F-1, J-1).
(At least 50% of courses must be in face-to-face format each long-semester.)
 - Military and Veteran students receiving assistance through G.I. Bill.
(One face to face course is required each semester to qualify for GI Bill funding.)
- Options not considered a “substantive change” to the program, so approvals beyond the institution not required. (THECB & SACS approval not required)



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Other Considerations

- Could experience delay in implementation, modification, or removal of options due to the nature of the curriculum revision process.
 - Might not be aware of changes in minor curriculum until they are published a year after they are approved.
- Important to develop and maintain a good working relationship with members of the curriculum change workflow.
- Options limited for students who transfer in courses from other institutions as electives.
 - At least 2/3 of program curriculum must be taken at the awarding university.
 - Some programs may not permit transfer substitutions on their certificates or minors.
- Provided opportunity for program to collaborate with several other department and colleges and break-down the perception of internal “silos.”

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Certificate Programs

- **Graduate Certificate in Operational Excellence** (12 hours)
offered by the Department of Management & Economics
 - MGT 555 - Project Management
 - MGT 575 - Operations Management
 - MGT 576 - Global Supply Chain Management
 - MGT 591 - Quality Management & Six Sigma
 - **Business Analytics Graduate Certificate** (12 hours) *Effective AY 2027.*
offered by the Department of Marketing & Business Analytics
 - BUSA 511 - Business Analytics for Managers or BUSA 542 - Applied Decision Modeling
 - BUSA 526 - Database Management or BUSA 532 - Data Warehousing
 - BUSA 523 - Business Analytics Programming or BUSA 537 - Business Data Science
- Elective Options: 3 semester hours required**
- BUSA 516 - Emerging Technologies and Business Innovations
 - BUSA 545 - Machine Learning
 - BUSA 547 - Data Visualization



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Minor Programs (12 SCH)

- ~~Educational Technology~~ – ~~Educational Technology Minor~~, *Removed effective AY 2027.*
- Mathematics – [Applied Mathematics Minor](#),
- Physics – [Physics Minor](#),
- Accounting & Finance – [Finance Minor](#),
- Accounting & Finance – [Financial Planning Minor](#),
- Accounting & Finance – [Real Estate Minor](#),
- Management & Economics – [Corporate Management Minor](#),
- Management & Economics – [Economics Minor](#),
- Management & Economics – [Economics of US Healthcare Minor](#),
- Marketing & Business Analytics – [Business Analytics Minor](#),
- Marketing & Business Analytics – [Cyber Security Minor](#),
- Marketing & Business Analytics – [Digital Marketing Minor](#),
- Marketing & Business Analytics – [Marketing Decision Analytics Minor](#),
- or other relevant curriculum block as approved by MS-TMGT Program Advisory Committee.

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Individual, Approved Elective Courses

Twelve semester hours (four courses) chosen from the following:

Priority elective recommendations for TMGT Majors...

- [TMGT 513](#) Knowledge Management in Engr & Tech Organizations
- [TMGT 516](#) Staff Development in Technology Organizations (AY 2027)
- [TMGT 517](#) Vendor & Value Chain Management
- [TMGT 589](#) Independent Study (3 SCH) (AY 2027)
- [TMGT 590](#) Technology Management Seminar
- [TMGT 597](#) Special Topics (May take multiple times for credit when topics vary.)

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Individual, Approved Elective Courses (continued)

Twelve semester hours (four courses) chosen from the following:
Alternative elective options for TMGT Majors...

[ACCT 501](#) Accounting for Managers

[AI 500](#) Foundations of Artificial Intelligence (4 SCH) *Effective AY 2027.*

[BUSA 542](#) Applied Decision Modeling

[CSCI 5--](#) Any Master's-level CSCI courses excluding 505, 518, 589, & 595

[ECO 501](#) Economics for Decision Makers [ECO 502](#) Quantitative Analysis for Managers

[FIN 501](#) Finance for Decision Makers [FIN 504](#) Financial Management

[MGT 501](#) Foundations of Management [MGT 581](#) Entrepreneurship

[MKT 501](#) Marketing Environment

[PSY 594](#) Ethical Issues in Organizations

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Fall	Spring	Summer	
		I	II
595 W/595A W	595 W	597.01W/Elective	597.01W/Elective
510 W&B	512 W&B/512A W&B	597.02W/Elective	597.02W/Elective
511 W&B	515 W		
514 W	516 W&B		
	517 W		
599 W	599 W	599 W	
<i>Note: Class offerings contingent upon meeting minimum enrollment thresholds.</i>			
BOLD	<i>M.S. Degree core requirement</i>		
A	<i>Section for students in ACTM Fast-Track BS+MS program only</i>		
W	<i>Web format (no physical meetings)</i>		
B	<i>Blended format (considered a Face-to-Face course for VISA compliance)</i>		
GCLT	<i>Technology Leadership Graduate Certificate course requirements</i>		
GCOP	<i>Organizational Planning Graduate Certificate – ENDING 2026</i>		



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Thank You!

- Presentation and Resource Materials:

<http://ATMAE.JDavis.us>

- Contact:

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- Questions?

