

Accelerated MS in Telecommunications Programs

These degree program may be taken as part of an accelerated MS in Telecommunications Program with three undergraduate degree programs: BS in systems engineering, computer science, information technology, and integrative studies. The four accelerated MS/BS programs are described below.

Systems Engineering, BS/Telecommunications, Accelerated MS

Highly-qualified students in the [Systems Engineering, BS](#) [1] have the option of obtaining an accelerated Telecommunications, MS. Students in an accelerated degree program must fulfill all university requirements for the master's degree. For more detailed information, see [AP.6.7 Bachelor's/Accelerated Master's Degrees](#) [2]. For policies governing all graduate degrees, see the [Academic Policies](#) [3] section of the catalog.

Admission Requirements

Students in the [Systems Engineering, BS](#) [1] program who preferably have chosen to take the systems engineering of telecommunications elective sequence may apply to this option if they have earned 90 undergraduate credits with an overall GPA of at least 3.30 and completed all MATH and PHYS requirements. Other students will be considered on their individual merit. Criteria for admission are identical to criteria for admission to the [Telecommunications, MS](#) [4] program.

Accelerated Option Requirements

Students must complete all credits that satisfy requirements for the BS and MS programs, with 6 credits overlap selected from the following courses:

- [TCOM 500 - Modern Telecommunications](#) [5] (3 credits)
- [TCOM 530 - Data Communications Fundamentals](#) [5] (3 credits)
- [OR 541 - Operations Research: Deterministic Models](#) [5] (3 credits)
- [SYST 530 - Systems Engineering Management I](#) [5] (3 credits)

- [SYST 573 - Decision and Risk Analysis](#) [5] (3 credits) (if taken, replaces [TCOM 521](#) [6] in the telecommunications core requirements)

Degree Conferral

Students must apply the semester before they expect to complete the BS requirements to have the BS degree conferred. In addition, at the beginning of the student's final undergraduate semester, students must complete a Bachelor's/accelerated Master's Transition form that is submitted to the Office of the University Registrar and the VSE Graduate Admissions Office. At the completion of MS requirements, a master's degree is conferred.

BS in Information Technology/ Accelerated MS in

Telecommunications

Highly-qualified students in the [Information Technology](#) [7], BS have the option of obtaining an accelerated [Telecommunications, MS](#) [4]. Students in an accelerated degree program must fulfill all university requirements for the master's degree. For more detailed information, see [AP.6.7 Bachelor's/Accelerated Master's Degrees](#) [2]. For policies governing all graduate degrees, see the [Academic Policies](#) [3] section of the catalog.

Admission Requirements

Students in the [Information Technology](#) [7], BS program may apply for this option if they have earned 90 undergraduate credits with an overall GPA of at least 3.25. Criteria for admission are identical to criteria for admission to the [Telecommunications, MS](#) [4] program.

Accelerated Option Requirements

Students must complete all credits that satisfy requirements for the BS and MS programs.

Choose six credits from the following courses (the TCOM courses listed for 1.5 credits must be taken in pairs):

- [TCOM 500- Modern Telecommunications](#) [8] (3 credits) (To satisfy the [IT 300](#) [8] BS, AIT requirement)
- [TCOM 530 - Data Communications Fundamentals](#) [8] (3 credits) (To satisfy the [IT 341](#) [8] BS, AIT requirement)
- [TCOM 535 - The TCP/IP Suite of Internet Protocols](#) [8] (3 credits) (To satisfy the [IT 441](#) [8] BS, AIT requirement)
- [TCOM 631 - Voice Over IP](#) [8] (3 credits) (To satisfy the [IT 484](#) [8] BS, AIT requirement)

Note:

Students in the accelerated option who have passed [IT 341](#) [9] with a grade of B or higher will not be required to take [TCOM 530](#) [8], which is listed in the MS TCOM core. Alternative sections of TCOM courses to satisfy requirements in the AIT undergraduate program may be made with the approval of the undergraduate academic advisor.

Degree Conferral

Students must apply the semester before they expect to complete the BS requirements to have the BS degree conferred. In addition, at the beginning of the student's final undergraduate semester, students must complete a Bachelor's/Accelerated Master's Transition form that is submitted to the Office of the University Registrar and the VSE Graduate Admissions Office. At the completion of MS requirements, a master's degree is conferred.

Individualized Study, BIS/Telecommunications, Accelerated MS

Highly-qualified students in the [Information Technology](#) [7], BS have the option of obtaining an accelerated [Telecommunications, MS](#) [4]. Students in an accelerated degree program must fulfill all university requirements for the master's degree. For more detailed information, see [AP.6.7 Bachelor's/Accelerated Master's Degrees](#) [2]. For policies governing all graduate degrees, see the [Academic Policies](#) [3] section of the catalog.

Admission Requirements

Students in the [Individualized Study, BIS](#) [10], program may apply for this option if they have earned 90 undergraduate credits (including 15 Mason resident credits) with an overall GPA of at least 3.25. Criteria for admission are identical to

criteria for admission to the [Telecommunications, MS](#) [4] program.

Accelerated Option Requirements

Students must complete all requirements for the BS and MS programs, with 6 credits overlap.

Students select TCOM courses from the list below to meet the requirements of the accelerated program. Six credits of TCOM courses will be applied to meet the requirements of both the BIS and MS TCOM programs. An additional three credits of TCOM courses is required for the BIS Individualized Concentration (IND) with emphasis on telecommunication. Note that accelerated students can only take the courses in the list below if they passed the listed prerequisite course with a B or higher.

BIS Concentration: 34-46 credits

Students who are pursuing the Individualized Study, BIS, Individualized concentration (IND) with an emphasis on telecommunications must take:

- Additional 500-level TCOM course(s) from the list below. (3 credits)
- [BIS 300 - Understanding Interdisciplinary Studies](#) [11] (3 credits)
- [BIS 390 - The Research Process](#) [11] (3 credits)
- [BIS 490 - RS: Senior Project](#) [11] (3 credits)
- [BIS 491 - Senior Project Presentation](#) [11] (3 credits)
- [ECE 301 - Digital Electronics](#) [11] (3 credits)
- [IT 341 - Data Communications and Network Principles](#) [11] (3 credits)
- [TCOM 500 - Modern Telecommunications](#) [11] (3 credits)
- Additional courses related to telecommunication*: Credits: 9-21

*Required to reach the necessary number of credits for the BIS Individualized concentration.

Telecommunications Courses:

- [TCOM 500- Modern Telecommunications](#) [8] (3 credits)
- [TCOM 505 Networked Multicomputer Systems](#) [11] (1.5 credits)
- [TCOM 510 Client Server Architectures and Applications](#) [11] (prerequisite: TCOM 505)
- [TCOM 530 - Data Communications Fundamentals](#) [8] (3 credits)
- [TCOM 535 - The TCP/IP Suite of Internet Protocols](#) [8] (3 credits)
- [TCOM 551 Digital Communication Systems](#) [11] (3 credits)
- [TCOM 607 Satellite Communications](#) [11] (3 credits)
- [TCOM 608 Optical Communications Systems](#) [11] (3 credits)
- [TCOM 631 - Voice Over IP](#) [8] (3 credits)

Note:

Accelerated students who have passed [IT 341](#) [9] with a grade of B or higher will not be required to take [TCOM 530](#) [8] in the [Telecommunication, MS core](#) [4]. Other TCOM courses may be approved on a case-by-case basis. See each course for individual prerequisite requirements.

Degree Conferral

Students must apply the semester before they expect to complete the BS requirements to have the BS degree conferred. In addition, at the beginning of the student's final undergraduate semester, students must complete a Bachelor's/Accelerated Master's Transition form that is submitted to the Office of the University Registrar and the VSE Graduate Admissions Office. At the completion of MS requirements, a master's degree is conferred.

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