

# **Unofficial Degree Planning Worksheet**

# *Catalog Year: 2022-2023*

# BS in MATHEMATICS WITH COMPUTER SCIENCE

| This worksheet is designed to help you plan and track your progress toward your degree. It lists all the graduation requirements. For full course descriptions, please refer to the current undergraduate [Catalog](https://www.ut.edu/academics/university-catalogs). | Course Taken or Transferred In | Semester Taken or Course Remaining |
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| UNIVERSITY GRADUATION REQUIREMENTS |
| [ ] Students must earn 124 hours to be eligible for graduation.[ ] Students must maintain an overall GPA of a 2.0 to be eligible for graduation.[ ] Students must complete 31 of the last 35 hours in residency at UT. |
| BACCALAUREATE EXPERIENCE REQUIREMENTS***Courses used for Baccalaureate Experience may not be used in the major (unless otherwise stated in the catalog).*** |
| Two-Year Learning Community |
| BAC 100 (0cr) – Digital Skills |  |  |
| BAC/HON 101/102 (2cr) – First-Year Seminar (two semester sequence)BAC 103 (1cr) – Transfer Student Seminar (one semester course) *- Optional*BAC 104 (1cr) – Veteran Student Seminar (one semester course) |  |  |
| AWR 101 (4cr) – Writing and Inquiry* *Domestic Students may be required to take AWR 100 based on English Placement.*
* *International Students may be required to take AWR 110 before AWR 101 or AWR 111 in conjunction with AWR 101 based on English Placement.*
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| AWR 201 (4cr) – Writing and Research *Recommended to take in the second year* |  |  |
| Mathematics – MAT 260 (4cr) – **FULFILLED BY MAJOR** |  |  |
| Natural Science – NS (6 Credits)***Must be lecture course, not a lab.*** |
| Biological Science (3cr) |  |  |
| Chemical or Physical Science (3cr)  |  |  |
| Humanities – HFA (11 Credits) |
| * *Must have at least two different disciplines represented.*
* *May only apply up to 4 credits of Studio/Performance courses.*

*Courses to fulfill this requirement may be found in the following disciplines: animation, dance, English/literature, film, foreign languages, linguistics, music, new media, philosophy, religion, speech and theatre, plus those art, communication, writing and women’s and gender studies courses so designated in the Course Descriptions section of the catalog.* |  |  |
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| Social Science – SS (11 Credits) |
| * *Must have at least two different disciplines represented.*

*Courses to fulfill this requirement may be found in the following disciplines:* *economics, geography, history, political science, psychology, sociology, and urban studies, plus those communication, criminology, law justice and advocacy, and women’s and gender studies courses so designated in the Course Descriptions section of the catalog.* |  |  |
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|  | Course Taken or Transferred In | Semester Taken or Course Remaining |
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| Art/Aesthetic – A (3 Credits)***Can come from anywhere in the curriculum.*** |
| *Art/aesthetic courses are devoted primarily to the development of skills in human expression for the purpose of engaging the aesthetic sense, or courses devoted primarily to the development of students’ critical appreciation of aesthetics. Courses can be found in multiple disciplines, see Course Search or Catalog to find courses.* |  |  |
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| Non-Western and International/Global Awareness – NW/IG (9 Credits)***Can come from anywhere in the curriculum.*** |
| Non-Western (3cr) *Deal in either a direct or comparative way with political, social, or cultural issues within the context of non-Western or Third World concerns.* |  |  |
| International/Global Awareness (3cr)*Deal in a direct or comparative way with political, social, cultural or economic issues impacting the international and/or global arena.* |  |  |
| Non-Western or International/Global Awareness (3cr) |  |  |
| Writing Intensive – W (9 Credits)***Can come from anywhere in the curriculum.*** |
| *Courses in addition to AWR 101 and AWR 201 that emphasize writing as a process of learning and communicating. Some credits may be waived for transfer students, please refer to the Catalog for more information.* |  |  |
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| **MAJOR REQUIREMENTS (57 Credits)** |
| *Students must maintain a Major GPA of a 2.0 to be eligible for graduation.* |
| Core Courses (45 Credits) |
| CSC 101 (4cr) – The Science of Computing I (1) |  |  |
| CSC 102 (4cr) – The Science of Computing II (2)***Pre-Req:*** *CSC 101 with a grade of “C” or higher, or equivalent* |  |  |
| CSC 201 (4cr) – Data Structures and Algorithm Analysis***Pre-req****: CSC 102 with a grade of “C” or higher* |  |  |
| CSC 220 (4cr) Operating Systems and Systems Planning***Pre-req****: CSC 201 with a grade of “C” or higher*ORCSC 230 (4cr) – Software Design and Engineering***Pre-req****: CSC 201 with a grade of “C” or higher* |  |  |
| MAT 260 (4cr) – Calculus I (1)***Pre-Req:*** *MAT 170 with a grade of “C” or higher, or equivalent* |  |  |
| MAT 261 (4cr) – Calculus II (2)***Pre-Req:*** *MAT 260 with a grade of “C” or higher* |  |  |
| MAT 262 (4cr) – Calculus III (3)***Pre-Req:*** *MAT 261 with a grade of “C” or higher* |  |  |
| MAT 272 (4cr) – Applied Statistics***Pre-Req****: MAT 225 or MAT 260 with a grade of “C” or higher, or equivalent* |  |  |
| MAT 299 (4cr) – Introduction to Higher Mathematics***Pre-Req:*** *MAT 262 with a grade of “C” or higher* |  |  |

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| --- | --- | --- |
| MAT 301 (4cr) – Discrete Mathematics***Pre-Req:*** *MAT 299 with a grade of “C” or higher* |  |  |
| MAT 308 (4cr) – Linear Algebra***Pre-Req:*** *MAT 299 with a grade of “C” or higher* |  |  |
| MAT 490 (1cr) – Senior Seminar ***Pre-Req:*** *Senior standing in Mathematics, Mathematics with Computer Science Data Science, or Actuarial Science. Permission of the department chair required.*ORMAT 495 (1-4cr) - Internship in Mathematics***Pre-Req:*** *Junior or senior standing with a GPA of 2.25 or higher* |  |  |
| Major Elective Mathematics (4cr)Choose any **one** from the following mathematics courses:* MAT 300 – Differential Equations *(Pre-Req: MAT 262 with a grade of “C” or higher)*
* MAT 310 – Probability *(Pre-Req: MAT 262 with a grade of “C” or higher)*
* MAT 402 – Applied Regression Analysis *(Pre-Req: MAT 310 or equivalent)*
* MAT 425 – Mathematics Statistics *(Pre-Req: MAT 272 and MAT 310 with a grade of “C” or higher)*
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| MAT Major Elective (4cr) |  |  |
| **Major Elective Computer Science (8cr)**Choose any **two** from the following computer science courses:* CSC 301 – Advanced Data Structures and Algorithms *(Pre-Req: CSC 230 with a grade of “C” or better)*
* CSC 330 – Introduction to Computer Network Security *(Pre-Req: CSC 201 with a grade of “C” or better)*
* CSC 340 – Database Management Systems *(Pre-Req: CSC 201 with a grade of “C” or better)*
* CSC 410 – Artificial Intelligence and Machine Learning *(Pre-Req: CSC 301 with a grade of “C” or better)*
* CSC 420 – Programming Languages and Compliers *(Pre-Req: CSC 301 with a grade of “C” or better)*
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| CSC Major Elective (4cr) |  |  |
| CSC Major Elective (4cr) |  |  |
| Major Residency Requirements (15 Credits) |
| *Students must complete at least 15 credit hours in the student’s major.* |