

Degree Plan for B.Sc. in Mathematics

| Minimum No. of Credits for the Degree Plan = 135 | | | | | |
|--|---|--------------|---------------|-----------|------------------------------------|
| University Requirements = 24 Credits | | | | | |
| Course Code | Course Name | Credit Hours | Contact Hours | | Pre-requisites/ Co-requisites |
| | | | Theory | Practical | |
| ARAB100 | Arabic Language I | 3 | 3 | 0 | |
| ARAB101 | Arabic Language II | 3 | 3 | 0 | ARAB100 |
| HIST150 | Islamic Civilization | 3 | 3 | 0 | |
| ENGL150 | English Language | 3 | 3 | 0 | |
| ENGL152 | English Language II | 3 | 3 | 0 | ENGL150 |
| ENGL155 | Communication Skills | 3 | 3 | 0 | ENGL152 |
| COMP101/L | Computer Skills | 3 | 2 | 2 | COMP-A,COMP-B, Digital Literacy |
| MNGT100 | Entrepreneurship: Creativity and Innovation | 3 | 3 | 0 | |
| University Electives = 3 Credits | | | | | |
| College Requirements = 20 Credits | | | | | |
| MATH116 | Pre-Calculus | 4 | 3 | 2 | MATH001 |
| MATH211 | Calculus I | 4 | 3 | 2 | MATH116 |
| STAT101 | Introduction to Statistics | 4 | 3 | 2 | |
| COMP151 | Introduction to Algorithms | 4 | 3 | 2 | COMP101/L |
| CHEM101/L | General Chemistry I | 4 | 3 | 2 | |
| PHYS101/L | General Physics I | 4 | 3 | 2 | MATH116 |
| PHYS150/L | General Physics II | 4 | 3 | 2 | PHYS101/L |
| College Electives = 3 Credits | | | | | |
| Mathematics Requirements = 40 Credits | | | | | |
| MATH212 | Calculus II | 3 | 2 | 2 | MATH211 |
| MATH215 | Ordinary Differential Equations | 3 | 2 | 2 | MATH212 |
| MATH221 | Foundations of Mathematics | 3 | 2 | 2 | MATH116 |
| MATH145 | Linear Algebra I | 3 | 2 | 2 | MATH116 |
| MATH259 | Calculus III | 3 | 2 | 2 | MATH212 |
| MATH310 | Introduction to Group Theory | 3 | 2 | 2 | MATH221 |
| MATH315 | Partial Differential Equations | 3 | 2 | 2 | MATH215 |
| MATH340 | Introduction to Number Theory | 3 | 2 | 2 | MATH221 |
| MATH360 | Real Analysis I | 3 | 2 | 2 | MATH221 |
| MATH365 | Linear Algebra II | 3 | 2 | 2 | MATH145 |
| MATH410 | Complex Analysis I | 3 | 2 | 2 | MATH259 |
| MATH421 | Project in Mathematics | 6 | 0 | 12 | Complete 90 Credits |

Department Electives = 35 Credits

- At least 12 credits of electives must be from the mathematics elective courses.
- Courses from the Department of Mathematical and Physical Sciences may be taken as electives with written approval of the HOS/HOD.

Students may opt to take any of the 18-credit approved university minors.

Mathematics Elective Courses

| Course Code | Course Name | Credit Hours | Contact Hours | | Pre-requisites/ Co-requisites |
|-------------|-------------------------------------|--------------|---------------|-----------|----------------------------------|
| | | | Theory | Practical | |
| MATH320 | Computer Algebra System | 2 | 1 | 2 | COMP101 |
| MATH350 | Rings and Fields | 3 | 3 | 0 | MATH310 |
| MATH354 | Numerical Analysis | 3 | 2 | 2 | MATH212, MATH245 |
| MATH355 | Graph Theory | 3 | 3 | 0 | MATH221 |
| MATH380 | Advanced Calculus | 3 | 3 | 0 | MATH259 |
| MATH401 | Introduction to Topology | 3 | 3 | 0 | MATH221 |
| MATH402 | Linear Programming | 3 | 3 | 0 | MATH245 |
| MATH405 | Introduction to Optimization | 3 | 3 | 0 | MATH245 |
| MATH411 | Complex Analysis II | 3 | 3 | 0 | MATH410 |
| MATH440 | Measure Theory | 3 | 3 | 0 | MATH360 |
| MATH450 | Real Analysis II | 3 | 3 | 0 | MATH360 |
| MATH455 | Introduction to Functional Analysis | 3 | 3 | 0 | MATH365 |
| MATH475 | History of Mathematics | 3 | 3 | 0 | MATH212 |
| MATH491 | Topics in Mathematics I | 3 | 3 | 0 | Instructor's Approval |
| MATH492 | Topics in Mathematics II | 3 | 3 | 0 | Instructor's Approval |
| MATH493 | Topics in Mathematics III | 3 | 3 | 0 | Instructor's Approval |
| MATH494 | Topics in Mathematics IV | 3 | 3 | 0 | Instructor's Approval |

Mathematics Service Courses

| | | | | | |
|---------|--|---|---|---|---------|
| MATH222 | Discrete Mathematics | 3 | 2 | 2 | MATH116 |
| MATH228 | Mathematics for Teachers I | 3 | 2 | 2 | MATH116 |
| MATH256 | Mathematics for Teachers II | 3 | 2 | 2 | MATH116 |
| MATH312 | Differential Equations and App. for Engineers | 3 | 2 | 2 | MATH212 |
| MATH325 | Linear Algebra and Multivariate Calculus for Engineers | 3 | 2 | 2 | MATH212 |
| LOGI100 | Introduction to Logic | 3 | 2 | 2 | |