## Cleveland State University

## College of Sciences and Health Professions

Bachelor of Science in Mathematics

| First Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| ASC 101 Introduction to University Life | 1 |  | INTRO | ENG 102 English II | 3 |  | w/c |
| ENG 101 English I | 3 |  | w/c | MTH 182 Calculus II | 4 | x | M/QL |
| MTH 181 Calculus I | 4 | X | M/QL | PHY 241 University Physics I (or PHY 243) | 5 | X | NS |
| Social Science Elective** | 3 |  | SS | Arts \& Humanities Elective** | 3 |  | A\&H |
| Science Elective^ | 3 | x |  | General Elective* | 2 |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 14 |  |  | Semester Total | 17 |  |  |


| Second Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| MTH 281 Multivariable Calculus | 4 | x |  | MTH 286 Differential Equations |  | 3 | x |  |
| MTH 220 Discrete Mathematics | 3 | X |  | MTH 288 Linear Algebra |  | 3 | X |  |
| PHY 242 University Physics II (or PHY 244) | 5 | X | NS | US Diversity Elective |  | 3 |  | DIV |
| Social Science Elective** | 3 |  | SS | Science Elective^ |  | 3 | X |  |
|  |  |  |  | General Elective* |  | 3 |  |  |
| Semester Total | 15 |  |  |  | Semester Total | 15 |  |  |

Third Year

| Third Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| MTH 300-Level Course | 3 | X |  | MTH 396 Junior Seminar | 2 | x |  |
| MTH 300-Level Course | 3 | X |  | MTH 358 Abstract Algebra (Recommended as 300-level elective) | 3 | x | WAC |
| Science Electiv^^ | 3 | X |  | MTH 300-Level Course | 3 | X |  |
| Arts \& Humanities Elective** | 3 |  | A\&H | African American Experience Elective | 3 |  | DIV |
| Upper-Division General Elective* | 3 |  |  | Science Elective^ | 3 | x |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  | Semester Total | 14 |  |  |


| Fourth Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| MTH 400-Level Course | 3 | $x$ |  | MTH 400-Level Course |  | 3 | $x$ |  |
| MTH 400-Level Course | 3 | x |  | MTH 496 Senior Project |  | 3 | $\times$ | WAC; CAP |
| Writing Across the Curriculum Elective | 3 |  | wac | Upper-Division General Elective* |  | 3 |  |  |
| Upper-Division General Elective* | 3 |  |  | Upper-Division General Elective* |  | 3 |  |  |
| Upper-Division General Elective* | 3 |  |  | General Elective* |  | 3 |  |  |
|  |  |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  |  | Semester Total | 15 |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of $\mathbf{1 2 0}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper division ( 300 or 400 -level courses). Depending upon other elective choices made, students may not need as many electives as indicated above, or may need additional electives.
${ }^{\wedge}$ Science Electives should be chosen from one or any combination of the following fields (courses numbered 200-level or higher): BIO, GEO, EVS, CHM, PHY, and CIS OR from MTH $347,421,431,435,436,467$. Please refer to the Undergraduate Catalog for more details.

## University Notes:

Gen Ed Key:
INTRO $=$ Introduction to University Life (one course)
INTRO = introduction to University Life (one course)
$\mathrm{W} / \mathrm{C}=$ Writing/Composition (two courses; C or better required)
SS = Social Sciences (two courses from different departments**)
$\mathrm{W} / \mathrm{C}=$ Writing/Composition (two courses; C or better requir
M/QL $=$ Mathematics/Quantitative Literacy (two courses) A\&H = Arts \& Humanities (two courses from different departments**)
DIV = Social Diversity (two courses; one US Diversity and one African American Experience)
NS = Natural Sciences (two courses, one of which must have a lab)
WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; $C$ or better required)
CAP = Capstone
${ }^{* *}$ of the four total SS and A\&H courses, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

 other subject addressed herein.

## Cleveland State University

## College of Sciences and Health Professions

Bachelor of Science in Mathematics
CSUteach (license in Education)

| First Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester |  | Credits | Major | Minor | Gen Ed | Spring Semester |  | Credits | Major | Minor | Gen Ed |
| ASC 101: Intro to University Life |  | 1 |  |  | Intro | EDC 200: Diversity in Educational Settings |  | 3 |  | x | DIV |
| ENG 101: College Writing I |  | 3 |  |  | W/C | ENG 102: College Writing II |  | 3 |  |  | W/C |
| Science Elective |  | 3 | x |  | NS | PHY 241/243/H: University Physics I |  | 5 | x |  | NS |
| PSY 221: Adolescent Psychology |  | 3 |  | x | SS | Social Science Elective (**ALAAME) |  | 3 |  |  | SS |
| MTH 181: Calculus I |  | 4 | x | x | M/QL | MTH 182: Calculus II |  | 4 | x | x | M/QL |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | Semester Total | 14 |  |  |  |  | Semester Total | 18 |  |  |  |


| Second Year |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Minor | Gen Ed | Spring Semester |  | Credits | Major | Minor | Gen Ed |
| EUT 201: Step 1: Inquiry Approaches to Teaching | 1 |  | x |  | EDB 242: Introduction to Education |  | 3 |  | x |  |
| MTH 220: Discrete Mathematics | 3 | $x$ | x |  | MTH 286: Differential Equations |  | 3 | x |  |  |
| MTH 281: Multivariable Calculus | 4 | x | x |  | MTH 288: Linear Algebra |  | 3 | x | x |  |
| Arts \& Humanities Elective (**ALAAME) | 3 |  |  | A\&H | Science Elective |  | 3 | x |  |  |
| PHY 242/244/H: University Physics II | 5 | x |  | NS | African American Experience Elective |  | 3 |  |  | DIV |
|  |  |  |  |  |  |  |  |  |  |  |
| Semester Total | 16 |  |  |  |  | Semester Total | 15 |  |  |  |


| Third Year |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Minor | Gen Ed | Spring Semester | Credits | Major | Minor | Gen Ed |
| EDB 302: Psychological Foundations of Education | 3 |  | x | WAC | EUT 305: Classroom Interactions | 3 |  | x |  |
| MTH 301: Introduction to Number Theory | 3 | x | x |  | MTH 358: Abstract Algebra | 3 | x | x | WAC |
| MTH 333: Geometry | 3 | x | x |  | MTH 4xx Elective | 3 | x |  |  |
| EDL 305: Content Area Literacy | 3 |  | x |  | MTH 201: Functions \& Modeling | 3 |  | x |  |
| MTH 323: Statistical Methods | 3 | x | x |  | Science Elective | 3 |  |  |  |
|  |  |  |  |  | ESE 400: Introduction to Special Education | 3 |  | x |  |
| Semester Total | 15 |  |  |  | Semester Total | 18 |  |  |  |


| Fourth Year |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Minor | Gen Ed | Spring Semester | Credits | Major | Minor | Gen Ed |
| EUT 415: Project Based Instruction in Mathematics | 3 |  | $x$ |  | EST 499: CSUteach STEM Apprentice Teaching II | 6 |  | x |  |
| EST 399: CSUteach STEM Apprentice Teaching I | 1 |  | x |  | EUT 210: Perspectives on Science \& Math | 3 |  | x | A\&H/WAC |
| SCI 311: Research Methods | 3 |  | $x$ | WAC | MTH 496: Senior Project | 3 | x |  | WAC/CAP |
| MTH 424: Probability Theory \& Application | 3 | x | x |  | General Elective | 3 |  |  |  |
| MTH 396: Junior Seminar | 2 | x |  |  |  |  |  |  |  |
| MTH 4xx Elective | 3 | x |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  |  | Semester Total | 15 |  |  |  |
| Degree Total: 126 |  |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## Collegel Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of $\mathbf{1 2 0}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper division ( 300 or 400 -level courses). Depending upon other elective choices made ( 3 credit hour vs. 4 credit hour courses), students may not need as many general electives as indicated above, or may need additional electives.

## University Notes:

| Gen Ed Key: | SS = Social Sciences (two courses from different departments) |
| :--- | :--- |
| INTRO = Introduction to University Life (one course) | A\&H = Arts \& Humanities (two courses from different departments) |
| W/C = Writing/Composition (two courses; C or better required) | DIV = Social Diversity (two courses; one US Diversity and one African American Experience) |
| M/QL = Mathematics/Quantitative Literacy (two courses) | WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better require |
| NS = Natural Sciences (two courses, one of which must have a lab) | CAP = Capstone |

${ }^{* *}$ of the SS and A\&H courses, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

