University of diyala / College of basic education / department of math

Curriculum of academic year 2019/2020

All these required are compulsory

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| First stage | | | | | |
| Type of curriculum | Subject title | Theory hr | Practical hr | No of units | Subject code |
| First stage | | | | | |
| Department required | Foundations of Mathematics ' | 3 | 0 | 3 | MATH101 |
| Calculus 1 | 2 | 2 | 3 | MATH102 |
| Calculus 2 | 2 | 2 | 3 | MATH103 |
| Number Theory | 3 | 0 | 3 | MATH104 |
| Matrices | 3 | 0 | 3 | MATH105 |
| Second stage | | | | | |
| Department required | Calculus 3 | 2 | 2 | 3 | MATH201 |
| Calculus 4 | 2 | 2 | 3 | MATH202 |
| Probability | 3 | 0 | 3 | MATH203 |
| Linear Algebra | 3 | 0 | 3 | MATH204 |
| MATLAB | 1 | 2 | 2 | MATH205 |
| Third stage | | | | | |
| Department required | Group Theory | 3 | 0 | 3 | MATH301 |
| Euclidean and Non- Euclidean Geometry | 3 | 0 | 3 | MATH302 |
| Analytic Geometry | 3 | 0 | 3 | MATH303 |
| Ordinary Differential Equation 1 | 2 | 2 | 3 | MATH304 |
| Numerical Analysis | 2 | 2 | 3 | MATH305 |
| Real Analysis | 4 | 0 | 4 | MATH306 |
| Mathematics Teaching Met od | 3 | 0 | 3 | MATH307 |
| Ring Theory | 3 | 0 | 3 | MATH308 |
| Fourth stage | | | | | |
| Department required | Mathematical Statistics | 3 | 0 | 3 | MATH401 |
| Modern Trends in Teaching Mathematics | 3 | 0 | 3 | MATH402 |
| Linear Pr0graming | 2 | 2 | 3 | MATH403 |
| Topology1 | 3 | 0 | 3 | MATH404 |
| Complex Analysis1 | 3 | 0 | 3 | MATH405 |
| Graduation Project |  |  | 3 | MATH411 |

Optional required

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Curriculum | | | | | |
| Type of curriculum | Subject title | Theory hr | Practical hr | No of units | Subject code |
| First stage | | | | | |
| Department required | History of Mathematics | 3 | 0 | 3 | MATH106 |
| Second stage | | | | | |
| Department required | Graph Theory | 3 | 0 | 3 | MATH206 |
| Third stage | | | | | |
| Department required | Group Theory | 3 | 0 | 3 | MATH301 |
| Real Analysis 2 | 3 | 0 | 3 | MATH309 |
| Ordinary Differential Equation 2 | 2 | 2 | 3 | MATH310 |
| Differential Geometry | 3 | 0 | 3 | MATH311 |
| Mathematical Thinking | 3 | 0 | 3 | MATH312 |
| Applied Mathematics | 3 | 0 | 3 | MATH313 |
| Fourth stage | | | | | |
| Department required | Mathematical Statistics | 3 | 0 | 3 | MATH401 |
| Topology 2 | 3 | 0 | 3 | MATH406 |
| Complex Analysis 2 | 3 | 0 | 3 | MATH407 |
| Operation Research | 3 | 0 | 3 | MATH408 |
| Statistical Package for Social Sciences | 2 | 2 | 3 | MATH409 |
| Partial Differential Equations | 2 | 2 | 3 | MATH410 |