**Department of Agriculture Engineering & Soil Science**

**Course Units – Special Modules**

**Proposed Specialized Subjects – Agricultural Engineering Module**

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| Compulsory | Optional |
| Year III Semester II |
| ES 3201 | Agricultural Engineering Systems Design and Construction (2) | ES 3203 | Computer Programming and Engineering Graphic Design (2) |
| ES 3204 | Food Process Engineering (2) | ES 3220 | Waste Management (2) |
| ES 3221 | Water Quality Assessment and Modelling (2) | ES 3202 | Climate Change and Environmental Sustainability (2) |
| ES 3207 | Irrigation Engineering (2) | ES 3205 | Innovation and Product Development (2) |
| ES 3222 | Watershed Management and Modelling (2) | ES 3208 | Mechatronics and Precision Agriculture (2) |
| CC XX | Research Methodologies and Scientific Writing | ES 3206 | Integrated management of water resources in Sri Lanka (2) |
|  | ES 3209 | Remote Sensing and GIS (2) |
|  | ES 3219 | Thermodynamics (2) |
|  | ES 3210 | Renewable Energy Technology and Management (2) |
|  | AS 32xx | Human Resource Management (2) |
| Year IV Semester I |
| Compulsory | **Optional** |
| ES 4101 | Advanced Agricultural Engineering (2) |  |

**Proposed Specialized Subjects – Environmental Soil Management Module**

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| Year III Semester II |
| Compulsory | **Optional** |
| ES 3218 | Sustainable Soil Management in Agriculture (2) | ES 3220 | Waste Management (2) |
| ES 3213 | Soil and Ecosystems (2) | ES 3202 | Climate Change and Environmental Sustainability (2)  |
| ES 3214 | Soil Microbiology (2)  | ES 3217 | Sustainable Land Use Planning for Agriculture (2) |
| ES 3215 | Soil Survey and Classification (2) | ES 3206 | Integrated Management of Water Resources in Sri Lanka (2)  |
| ES 3216 | Soils of Sri Lanka (2) | ES 3211 | Management of Degraded Lands (2) |
| CCXX | Research Methodologies and Scientific Writing | ES 3209 | Remote Sensing and GIS (2)  |
|  | ES 3212 | Rice Soil Management (2) |
|  | ES 3222 | Watershed Management and Modelling (2) |
|  | PS 32xx | Organic Farming (2) |
|  | AS 32xx | Human Resource Management (2) |
| Year IV Semester I |
| Compulsory | **Optional** |
| ES 4102 | Advanced Analytical Techniques for Environmental Studies (2) |  |