

# Course Structure

## Bachelor of Science (Biology)

Faculty of Engineering, Science and Technology



### Semester 1

| Type                  | Code   | Name                             | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|----------------------------------|---------------|---------------|--------------|
| CORE                  | SCI107 | Scientific and Analytical Skills | NIL           | 15            | 1,725        |
| CORE                  | MAT131 | Mathematics for Scientists       | NIL           | 15            | 1,725        |
| CORE                  | BIO121 | Biology of Cell and Organism     | NIL           | 15            | 1,725        |
| CORE                  | PHY113 | Principles of Physics            | NIL           | 15            | 1,725        |
| <b>Semester Total</b> |        |                                  |               | <b>60</b>     | <b>6,900</b> |

### Semester 2

| Type                  | Code   | Name                               | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|------------------------------------|---------------|---------------|--------------|
| CORE                  | CHE109 | Inorganic and Physical Chemistry I | NIL           | 15            | 1,725        |
| CORE                  | CHE111 | Organic Chemistry I                | NIL           | 15            | 1,725        |
| CORE                  | BIO123 | Life on Earth                      | NIL           | 15            | 1,725        |
| CORE                  | PHY115 | Thermodynamics and Modern Physics  | NIL           | 15            | 1,725        |
| <b>Semester Total</b> |        |                                    |               | <b>60</b>     | <b>6,900</b> |

### Semester 3

| Type                  | Code   | Name                                     | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|--|---------------|---------------|--------------|
| CORE                  | SCI205 | Research Methods and Experimental Design | NIL           | 15            | 1,725        |
| CORE                  | CHE207 | Instrumental Analysis                    | SCI107        | 15            | 1,725        |
| CORE                  | BIO219 | Biochemistry & Molecular Biology         | BIO121        | 15            | 1,725        |
| CORE                  | BIO221 | Human Anatomy, Physiology & Pharmacology | BIO121        | 15            | 1,725        |
| <b>Semester Total</b> |        |  |               | <b>60</b>     | <b>6,900</b> |

## Semester 4

| Type                  | Code   | Name                              | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|-----------------------------------|---------------|---------------|--------------|
| CORE                  | ENV219 | Ecology and Environmental Systems | NIL           | 15            | 1,725        |
| CORE                  | BIO223 | Marine Biology                    | NIL           | 15            | 1,725        |
| CORE                  | BIO225 | Microbiology                      | NIL           | 15            | 1,725        |
| CORE                  | MED209 | Human Health & Disease            | BIO121        | 15            | 2,400        |
| <b>Semester Total</b> |        |                                   |               | <b>60</b>     | <b>7,575</b> |

## Semester 5

| Type                  | Code   | Name                  | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|-----------------------|---------------|---------------|--------------|
| CORE                  | SCI319 | Science Communication | Nil           | 15            | 1,725        |
| CORE                  | SCI321 | Research Project      | SCI205        | 15            | 1,725        |
| ELECTIVE              |        | Elective              |               | 15            | 1,725        |
| ELECTIVE              |        | Elective              |               | 15            | 1,725        |
| <b>Semester Total</b> |        |                       |               | <b>60</b>     | <b>6,900</b> |

## Semester 6

| Type                  | Code   | Name                          | Prerequisites | Credit Points | Fee (MVR)    |
|-----------------------|--------|-------------------------------|---------------|---------------|--------------|
| CORE                  | SCI323 | Science and Society           | Nil           | 15            | 1,725        |
| CORE                  | SCI321 | Research Project (continuing) |               | 15            | 1,725        |
| ELECTIVE              |        | Elective                      |               | 15            | 1,725        |
| ELECTIVE              |        | Elective                      |               | 15            | 1,725        |
| <b>Semester Total</b> |        |                               |               | <b>60</b>     | <b>6,900</b> |

## Elective

| Type     | Code   | Name   | Prerequisites | Credit Points | Fee (MVR) |
|----------|--------|--|---------------|---------------|-----------|
| ELECTIVE | BIO219 | Biochemistry and Molecular Biology           | BIO121        | 15            | 1,725     |
| ELECTIVE | BIO221 | Human Anatomy, Physiology and Pharmacology   | BIO121        | 15            | 1,725     |
| ELECTIVE | ENV223 | Ecology and Environmental Systems            | Nil           | 15            | 1,725     |
| ELECTIVE | BIO223 | Marine Biology                               | Nil           | 15            | 1,725     |
| ELECTIVE | BIO225 | Microbiology                                 | Nil           | 15            | 1,725     |
| ELECTIVE | BIO2XX | Human Health and Disease                     | BIO121        | 15            | 1,725     |
| ELECTIVE | BIO303 | Concepts of Forensic Biology                 | BIO121        | 15            | 1,725     |
| ELECTIVE | BIO305 | Applied Ecology                              | Nil           | 15            | 1,725     |
| ELECTIVE | BIO307 | Marine Ecosystems                            | Nil           | 15            | 1,725     |
| ELECTIVE | BIO309 | Biodiversity and Conservation                | Nil           | 15            | 1,725     |
| ELECTIVE | BIO3XX | Resource Security and Sustainability         | Nil           | 15            | 1,725     |
| ELECTIVE | BIO311 | Food and Environmental Microbiology          | BIO225        | 15            | 1,725     |
| ELECTIVE | BIO313 | Applied Molecular Biology and Bioinformatics | BIO219        | 15            | 1,725     |
| ELECTIVE | BIO3XX | Infectious Disease Control                   | BIO225        | 15            | 1,725     |
| ELECTIVE | PUB321 | Health Promotion and Public Health           | Nil           | 15            | 2,400     |
| ELECTIVE | BIO315 | Blood and Tissue Science                     | BIO221        | 15            | 1,725     |
| ELECTIVE | BIO317 | Pharmacology and Toxicology                  | BIO221        | 15            | 1,725     |
| ELECTIVE | CHE207 | Instrumental Analysis                        | SCI107        | 15            | 1,725     |
| ELECTIVE | CHE209 | Organic Chemistry II                         | CHE111        | 15            | 1,725     |
| ELECTIVE | CHE211 | Environmental Chemistry                      | Nil           | 15            | 1,725     |
| ELECTIVE | CHE213 | Fundamentals of Analytical Chemistry         | Nil           | 15            | 1,725     |
| ELECTIVE | CHE219 | Material Science                             | Nil           | 15            | 1,725     |
| ELECTIVE | CHE215 | Medicinal Chemistry                          | CHE111        | 15            | 1,725     |

|                     |        |  |        |            |               |
|---------------------|--------|--|--------|------------|---------------|
| ELECTIVE            | CHE217 | Inorganic and Physical Chemistry II                    | CHE109 | 15         | 1,725         |
| ELECTIVE            | CHE301 | Plant and Soil Science                                 | Nil    | 15         | 1,725         |
| ELECTIVE            | CHE303 | Forensic Chemistry                                     | CHE207 | 15         | 1,725         |
| ELECTIVE            | CHE305 | Food Chemistry and Analysis                            | Nil    | 15         | 1,725         |
| ELECTIVE            | CHE307 | Analytical Chemistry                                   | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV219 | Green Buildings and Sustainability                     | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV221 | Earth System Science                                   | Nil    | 15         | 1,725         |
| ELECTIVE            | PHY211 | Electrical Technology                                  | PHY113 | 15         | 1,725         |
| ELECTIVE            | PHY209 | Electronics and Electrical Principals                  | Nil    | 15         | 1,725         |
| ELECTIVE            | PHY213 | Power Generation                                       | Nil    | 15         | 1,725         |
| ELECTIVE            | PHY207 | Quantum Physics  | PHY115 | 15         | 1,725         |
| ELECTIVE            | PHY301 | Simulations  | Nil    | 15         | 1,725         |
| ELECTIVE            | PHY303 | Atmosphere and Oceans                                  | PHY2XX | 15         | 1,725         |
| ELECTIVE            | PHY305 | Medical Physics  | PHY113 | 15         | 1,725         |
| ELECTIVE            | PHY311 | Electronics  | PHY2XX | 15         | 1,725         |
| ELECTIVE            | PHY303 | Mechatronics   | PHY113 | 15         | 1,725         |
| ELECTIVE            | PHY313 | Telecommunication Systems                              | PHY113 | 15         | 1,725         |
| ELECTIVE            | PHY307 | Renewable Energy                                       | Nil    | 15         | 1,725         |
| ELECTIVE            | PHY309 | Digital Circuits                                       | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV319 | Earth System Science                                   | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV321 | Fisheries Management and Agriculture                   | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV323 | Pollution Prevention and Control                       | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV325 | Meteorology  | Nil    | 15         | 1,725         |
| ELECTIVE            | ENV221 | Geographic Information System (GIS) and Remote Sensing | Nil    | 15         | 1,725         |
| <b>Course Total</b> |        |  |        | <b>360</b> | <b>42,075</b> |

Fees stated above are tuition fees for local students. Fees for international students is twice the stated fees. All fees are quoted in MVR.

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