

## Courses with related Topics and MCs

| Topic / related course                                                      |                                         |                           | BCHE2000:<br>Frontiers in<br>Biochemistry | BCHE3030:<br>Methods in<br>Biochemistry | BCHE3070:<br>Recombinant<br>DNA<br>Techniques | BCHE3080:<br>Bioenergetics<br>and<br>Metabolism | BCHE3090:<br>Self-study<br>Modules in<br>Biochemistry | BCHE3650:<br>Molecular<br>Biology and<br>Recombinant<br>DNA | BCHE3680:<br>Bioenergetics and<br>Metabolism<br>Laboratory | BCHE3730:<br>Analytical<br>Biochemistry<br>Laboratory | BCHE4610:<br>Molecular<br>Biology<br>Laboratory | BCHE4760:<br>Immunology<br>and<br>Haematology<br>Laboratory | BCHE4830:<br>Medical<br>Biochemistry<br>Laboratory | BCHE4901:<br>Senior<br>Experimental<br>Project I | BCHE4902:<br>Senior<br>Experimental<br>Project II | BCHE4903:<br>Senior<br>Experimental<br>Project III | LSC10002:<br>Introduction to<br>Biological<br>Sciences | LSC12002:<br>Basic Lab<br>Techniques in<br>Life Sciences | LSC14000:<br>Literature<br>Research | MBTE 4033:<br>Methods in<br>Molecular<br>Biotechnology<br>Laboratory I | MBTE 4034:<br>Methods in<br>Molecular<br>Biotechnology<br>Laboratory II |
|-----------------------------------------------------------------------------|-----------------------------------------|---------------------------|-------------------------------------------|-----------------------------------------|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                                                                             | <a href="#">Video/<br/>Module links</a> | <a href="#">MCQ links</a> |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    |                                                  |                                                   |                                                    |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 1 Lyophilization                                                            | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 2 Dialysis                                                                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 3 ELISA (Enzyme-linked immunosorbent assay)                                 | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 4 DNA sequencing                                                            | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     | Y                                                                      |                                                                         |
| 5 Bacterial transformation                                                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     | Y                                                                      | Y                                                                       |
| 6 Protein expression                                                        | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     | Y                                                                      |                                                                         |
| 7 Isolation of mitochondria                                                 | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             | Y                                                          | Y                                                     |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 8 Isolation of chloroplast                                                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               | Y                                               |                                                       |                                                             | Y                                                          |                                                       |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 9 Handling of Toxic Chemical                                                | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     |                                                                        |                                                                         |
| 10 Handling of Liquid nitrogen                                              | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 11 Gel filtration chromatography                                            | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            | Y                                                     |                                                 | Y                                                           |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     |                                                                        |                                                                         |
| 12 Centrifugation                                                           | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            | Y                                                     |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 13 SDS-PAGE                                                                 | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       | Y                                             |                                                 |                                                       | Y                                                           |                                                            | Y                                                     | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     | Y                                                                      |                                                                         |
| 14 Bradford assay                                                           | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            | Y                                                     |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     | Y                                                                      |                                                                         |
| 15 Absorbance assay                                                         | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               |                                                 |                                                       |                                                             |                                                            | Y                                                     |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     |                                                                        |                                                                         |
| 16 Isolation of DNA                                                         | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 17 PCR mixture preparation                                                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     | Y                                                                      | Y                                                                       |
| 18 Spectrophotometric determination of nucleic acid concentration           | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            | Y                                                     | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     | Y                                                                      |                                                                         |
| 19 Spectrophotometric determination of nucleic acid purity                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     | Y                                                                      |                                                                         |
| 20 Agarose gel electrophoresis                                              | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       | Y                                             |                                                 |                                                       | Y                                                           |                                                            |                                                       | Y                                               |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     | Y                                                                      | Y                                                                       |
| 21 Toxicology study of cholinesterase by spectrophotometer                  | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 22 Effect of tea antioxidants on lipid oxidation in red blood cell membrane | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               | Y                                               |                                                       |                                                             | Y                                                          |                                                       |                                                 |                                                             |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 23 Cell culture technique                                                   | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           | Y                                       |                                               | Y                                               |                                                       |                                                             | Y                                                          | Y                                                     |                                                 | Y                                                           |                                                    | Y                                                | Y                                                 | Y                                                  |                                                        |                                                          |                                     |                                                                        | Y                                                                       |
| 24 Preparation of buffer solution                                           | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     |                                                                        |                                                                         |
| 25 How to use pH meters                                                     | <a href="#">Link</a>                    | <a href="#">Link</a>      |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 | Y                                                           | Y                                                  | Y                                                | Y                                                 | Y                                                  |                                                        | Y                                                        |                                     |                                                                        |                                                                         |
| 26 Self Study Skills                                                        | <a href="#">Link</a>                    |                           |                                           |                                         |                                               |                                                 | Y                                                     |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    |                                                  |                                                   |                                                    |                                                        |                                                          | Y                                   |                                                                        |                                                                         |
| 27 Virtual labs on Frontiers in Biochemistry                                | <a href="#">Link</a>                    |                           | Y                                         |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    |                                                  |                                                   |                                                    |                                                        |                                                          |                                     |                                                                        |                                                                         |
| 28 Virtual labs for NSS                                                     | <a href="#">Link</a>                    |                           |                                           |                                         |                                               |                                                 |                                                       |                                                             |                                                            |                                                       |                                                 |                                                             |                                                    |                                                  |                                                   |                                                    | Y                                                      |                                                          |                                     |                                                                        |                                                                         |

Y= Topics related to course